

National Association of County Agricultural Agents



Proceedings

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Professional Improvement Conference

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NACAA

Report To The Membership

2008

NACAA President

N. Fred Miller
North Carolina



North Carolina and our host city of Greensboro were certainly a "Place to Grow" for more than 1400 agents, family members and guests who attended this year's Annual Meeting and Professional Improvement Conference. Whether it was the professional improvement sessions, seminars, workshops, tours and other special events, or the bountiful meals provided, everyone had the opportunity for a personal growth experience! I join everyone who attended the 93rd Annual Meeting of NACAA in expressing our thanks and appreciation to 2008 AM/PIC co-chairs Karen Neill and Mark Tucker and the great team of North Carolina agents, life members and volunteers for a job well done! I could not be more proud of what you accomplished and sincerely appreciate the opportunity to be a member of your team.

While the North Carolina agents played a key role in making this a successful meeting, they could not have accomplished this task without the support of the NACAA Committees. With guidance from the Council Chairs, the National Committee Chairs and Vice Chairs, in tandem with each State's committee leadership, effectively managed the wide array of awards and professional improvement programs offered by NACAA. The work of these "volunteers" is essential; for NACAA would cease to "grow" without the continuing efforts of our Committees.

As exemplified by the individuals who are willing to step up and "make it happen", the talent and dedication within NACAA is huge. Despite this fact, every year requires a struggle to identify members who will assume leadership roles in our organization. One of the objectives identified by the Futuring Committee was ensuring creativity and the influx of new ideas by continually incorporating "new blood" within our

committee structure. This objective can only be achieved if every member acknowledges the value of this organization and takes advantage of the growth opportunities it provides relative to their professional and leadership development. It is easy to be an armchair quarterback and sit back and critique without taking action. I hold in high regard those individuals who are willing to give it their best shot for the good of the organization.

Another objective identified by the Futuring Committee was discovering ways to increase the support for promotion and tenure of NACAA members. One aspect of this objective is the opportunity to take advantage of national leadership opportunities. Professional public service, outreach, and national reputation are recognized components of most promotion processes. What organization is better able to provide these types of opportunities for agents with agricultural responsibilities than NACAA?

We had a record number of first-timers attend this year's AM/PIC. It should be an excellent time to get them permanently engaged in our association and taking advantage of the aforementioned opportunities. NACAA needs experienced leaders at every level and the sooner these first timers get on board, the more likely they can move up the ladder both in NACAA and their Extension jobs. I encourage every NACAA member to take time to promote NACAA to their co-workers while taking an introspective look at your current level of participation. There are plenty of opportunities to put your skills to work in this organization, and I can say from my own personal experience that the reward far exceeds the cost.

Another group of pioneering individuals has been working to provide new opportunities for our members to publish and be recognized for their work. Under the leadership of Mickey Cummings, the Electronic Journal Committee (comprised of Glenn Rogers, Elmo Collum, Janet Schmidt, Mike Christian and Allen Hogan) published their first edition as a part of this year's AM/

PIC Proceedings. Please join me in thanking the members of this committee and others who assisted in this process by reviewing papers or performing other duties. While work remains to ensure the electronic journal becomes a permanent opportunity available for our membership, this committee has successfully laid the foundation. Thank you for your leadership! Also, "Congratulations" to this year's inaugural group of eighteen NACAA members whose papers were selected.

Another "new" program being offered to NACAA members is participation in Galaxy III scheduled to be held in a few months. The need to build relationships with the Joint Council of Extension Professionals (JCEP) and our sister organizations was another priority identified by the Futuring Committee. The decision by the NACAA voting delegates a few years back to join our sister associations and participate in Galaxy III has opened new windows of opportunity for NACAA and helped us make progress toward meeting this objective. Patrick Hogue, Mahlon Peterson, and Chuck Schwartau have been the chief architects of NACAA's participation in Galaxy III, although other NACAA members played important roles either as representatives of other associations or in additional support functions from the host state perspective. We owe them all a deep debt of gratitude for the work they have done. Their active participation and leadership in Galaxy III will reap dividends for NACAA for years to come.

In addition to Galaxy III, NACAA members provided leadership for two of JCEP's premier events. First, NACAA was responsible for coordinating the Regional Leadership Workshops in Orlando and San Diego. The Regional Directors did a great job organizing the details of these meetings and received rave reviews on the evaluations. The other event was the Public Issues Leadership Development conference (PILD) where Stan Moore was the first NACAA PILD Chair in recent memory and both James Devillier and Paul Craig played key roles on the PILD Planning Committee. Each of these individuals represented NACAA well. Their participation ensured the quality of these programs and helped build the legacy of NACAA while adding to our reputation as an Association that works well with the JCEP team.

This is the seventh individual Report to the Membership that I have had the opportunity to write and as I reflect on my past and current NACAA experience, it is difficult to resist becoming emotional. The associated experiences and people met and with whom lifelong

friendships have been forged will continue to have an impact on my life. Indeed I feel fortunate that John Carroll, the County Director who started me on this journey back in 1981, insisted I become a member of this organization. As a new agent, I had little appreciation for extension work or the value of participating in a professional organization, but with John's guidance and the support of other mentors along the way, a kernel of appreciation began to develop and grow. This process has been replicated repeatedly within our organization and every past National Officer or State Leader can likely share a similar story. While the new generation of agents has different skill sets and will have different challenges and opportunities during their careers, I remain convinced that their participation in NACAA will add value to their work experience. The only proviso is they need to be encouraged to get involved and "make it happen". If they choose this course of action, I can guarantee that NACAA will be a "place to grow".

In closing, I'd like to express my appreciation to everyone who supported me during this past year as President. You know who you are! I would like to especially thank my Catawba County Extension staff, District Director Deborah Crandall, Assistant Catawba County Manager Lee Worsley, NCCES Administration, Catawba County Government, the members of NCACAA, and all those aforementioned mentors. Finally, I would be remiss if I did not thank Debbie, (my "First Lady"), Riane, Hope and the rest of my family for their support throughout this experience. Only y'all can fully understand the sacrifice or appreciate and enjoy the results!

President-Elect

Rick Gibson
Arizona

Serving as your President-Elect this past year has been an exciting and fulfilling opportunity.



I love to meet new people and make new friends. I think that is one of the reasons that I so greatly enjoy working as a county Extension agent. Every day brings a chance to meet and visit with new people, as well as with established friends. I also like to learn about food and fiber production systems different from the one in which I live and work. Traveling in the service of NACAA, I have had the wonderful opportunity to meet new people, make new friends and learn more about agriculture. I have had a great time this year.

I have enjoyed working with the NACAA Board; our Executive Director, Scott Hawbaker; and you the membership. I thank all of you for your time, effort and enthusiasm as together we strive to strengthen NACAA. Through our united efforts, we strengthen our capacity to become better Cooperative Extension professionals.

Let me give you an example of what I mean. The program year of 2007-08 has been one of extremes in several ways. I think we can all agree that it has been a difficult time for producers nationwide, particularly because of the weather and economics. From economic uncertainty in some areas to euphoria at record prices for grains in others, producers are struggling to make key decisions, many of which demand new knowledge and experience. Floods in the Mid-West, drought in the Southeast and hard freezes in the colder areas have all created challenging situations for those who put seed in the ground and animals on feed. The demand for new knowledge places you and me in a position of critical importance as we help guide our clientele in their decision-making processes. To be successful, we need to stay up-to-date in our knowledge and skills. Our professional development organization, NACAA, is important to us because it helps us stay on the cutting edge; it helps us become better Cooperative Extension professionals.

A major responsibility of the President-Elect is to help new and existing sponsors mesh their specific goals with those of NACAA. This challenge and opportunity is important because these partnerships help maintain the financial viability and educational integrity of NACAA. I am pleased to report that our sponsors, even in these uncertain economic times, continue to support and sustain our organization and programs.

This year, twenty-two of our long-term sponsors have once again donated financial support to our organization. In 2007-08, existing sponsors have presented to NACAA \$122,200 in support, an increase of \$1,500 over last year. This increase occurred even though two donors from last year were unable to participate. In addition, we have been fortunate to add financial support from two new donors who have provided \$3,750 in support. All of this is above and beyond the significant budget set aside by the USDA Sustainable Agriculture Research and Education program to support the new SARE Fellows Program which was launched this year. The total of all 2007-08 donations to NACAA from existing and new sponsors is \$125,950. If we add in the \$38,000 SARE dollars set aside to cover the costs of the Fellows program, our total donations swell to \$163,950!

We are grateful for the support of all of our sponsors and I encourage you to join with us in expressing our thanks to them for their continued friendship. They are vital to NACAA!

I have found that much of our strength as a professional development organization lies in the passion and synergy that we all bring to NACAA. This is true especially for fund raising. The President-Elect has a limited number of personal contacts, but the opportunity for increasing financial support increases greatly as all members of NACAA pool their combined resources. In 2002, the NACAA Board recognized the important roll that every member can play in the fundraising effort and provided an incentive program to reward members who help secure new sponsors for association programs.

Here is how the incentive program works. Those members finding new sponsors who choose to contribute at the \$2,000 to \$4,999 level receive their AM/PIC registration fee reimbursed. Those who identify sponsors contributing at the \$5,000 to \$9,999 level are rewarded with not only their AM/PIC registration fee reimbursed, but also a \$500 travel voucher to attend the AM/PIC. For finding new sponsors donating \$10,000 and up, they receive an AM/PIC registration fee reimbursement and a \$1,000 travel voucher to attend the AM/PIC. These significant benefits to members make the effort to help recruit new sponsors truly worthwhile.

Other President-Elect officers have found and reported that a key element of any successful fund raising campaign within NACAA is the enthusiasm of member participation in programs and educational opportunities. Sponsors always look to see if the programs where their resources are used are well attended and effective. As we take advantage of the wide array of opportunities presented to us by our membership in NACAA, we demonstrate to our sponsors our appreciation for their support. We also demonstrate that we individually and collectively are committed and dedicated to professional improvement. As we work together to take advantage of the programs offered to us as members of NACAA, I am sure that we can continue to attract and retain sponsors who bring the financial support so important to our organization's success.

As I conclude my report, I wish to offer my sincere congratulations to the North Carolina AM/PIC team for their excellent work. It has been a truly memorable AM/PIC. We have learned much, recharged our Extension

batteries and had fun in the process. I wish to thank all who worked on this great project and extend, on behalf of the entire membership, our heartfelt appreciation for your time, dedication and efforts. It has been a great meeting!

Next year, we meet in September, a beautiful time in the Pacific Northwest. Portland, Oregon will be our host site and the September 20-24, 2009 date should be a welcome change for our members who normally cannot come in July. The theme is "A New Corps of Discovery," celebrating the Lewis and Clark journey from one end of the country to the other. Just as the Lewis and Clark odyssey tied together the land from coast to coast and began a movement of people and ideas that truly united our country, so can you and I make our own journey west in search of new ideas and friendships. Come and see what we can discover together in the great Pacific Northwest. The Oregon team is pulling out all the stops to make sure that we have a wonderful time!

I am looking forward to serving as President during this coming year and I appreciate the trust placed in me by you, my colleagues. The members of the NACAA Board and NACAA Committees are anxious to move forward into a new year and we will strive to continue to help bring excellent learning opportunities to you.

NACAA Vice President

Phil Pratt
Oklahoma



Teamwork, communication and committee work are three areas of focus for the NACAA Vice President and the following is a report on my observations concerning these three areas.

Our association's existence depends on the teamwork between the national and state associations. The key ingredient for successful teamwork is communication. Good communication promotes the efficient and timely movement of information between the national and state associations. Effective communication within NACAA starts with knowing who to contact at the state level. Current and accurate listing of state officers and state committee chairs is critical in maintaining communication lines between national and state associations.

During the past year, increased emphasis was placed on state association officers utilizing the NACAA Web

site to update their state's committee chair listing. Through this effort state associations have become more proficient in updating of their state committee chair listings. When the NACAA AM/PIC convened in Greensboro, NC all states had current committee chair listings; however, many states will have a slate of new committee chairs in the next few months. I encourage state officers to keep the listing of their state's committee chairs current.

I realize communication is not a one-way street. The national board, national committee chairs and vice chairs need to improve efforts to communicate with state officers and state committee chairs. Often times those on the national level assume everyone has the current information. We overlook the need to keep open, active and timely communication between ourselves and the state officers and state committee chairs. In today's electronic world it is easy to stay in contact with someone. It will be a point of emphasis for national committee chairs and vice chairs to increase and improve their communication with the states.

A third and equally important issue is committee work. I want to thank NACAA committee chairs and vice chairs for all of their efforts during the past year. However we chronically deal with a shortage of NACAA members willing to serve in NACAA committee chair and vice-chair positions. We need to determine ways to encourage more NACAA members to serve as committee vice chairs. These positions are extremely critical to NACAA's ability to perform as a high quality professional improvement association. My personal experience as a national committee chair and a regional vice chair was rewarding because it provided me an opportunity to work with other Extension Educators from across the nation and it gave me the opportunity to have input into the inner workings of the association. NACAA members who are interested in helping move the association forward should apply for these openings. They provide excellent opportunities for those who are interested in helping maintain the foundation of NACAA.

To become a more efficient team, improve communications and increase members' willingness to step into leadership positions it will take a commitment to serve with word and work. It is incumbent on all of us to encourage one another and to be involved in our association

NACAA Secretary

Leon J. Church
Texas



2008 has been an extremely eventful year for the Association and for me as your secretary. This has been the third and final year serving as NACAA Secretary and what an experience these past three years have been. Let me just tell you that each of the past three boards of directors has been dedicated to the purposes of NACAA. Each has done great work to promote professional improvement; leadership development; recognition programs for extension programming excellence; and has acted as an advocate for the Extension Agent/Educator profession. I don't think there could have been better people to work with.

As I stated at the beginning of this report, this has been an eventful year for NACAA. As you all know we are involved in both the AM/PIC and Galaxy this year, which has made for some very interesting discussions on the board. Both I'm sure are excellent professional opportunities. I wish to express to the North Carolina Association a great deal of gratitude. They have been gracious hosts and such a positive group of people to work with. During last winter's board of directors meeting in Greensboro they showed us a great time as they are now for the entire AM/PIC attendees. Congratulations on a job well done! We kicked off the SARE Fellowship program with the first training being held in Arizona. We worked very hard to improve communications throughout the committee structure. We initiated the first ever electronic journal which is a part of this proceeding. Thanks to Mickey Cummings GA, Elmo Collum MS, Janet Schmidt WA, Mike Christian KS, Glenn Rogers VT and Alan Hogan LA for all their efforts on this project. I know we are working hard to implement the majority of the recommendations of the Futuring Committee report from three years ago.

Personally this has also been a challenging year. This spring for the first time I faced a situation that proved that I was not indestructible. I was diagnosed with a thick heart wall (there is a long medical term for this but I know this is more descriptive). It caused the electrical system in my heart to not act correctly. In any event a defibrillator was implanted in my chest to make sure that I don't go into what is called V-fibrillation. The doctors tell me this is the same conditions that some athletes have who die while participating in sports.

Everything is going great at this time, just don't stand too close if it goes off, you might get a shock.

I want to take this opportunity to thank the members of NACAA for allowing me to serve as your NACAA Secretary for the past three years. This has been one of the most rewarding experiences of my 36 year extension career. The friendships that I have made are priceless. I know that where ever I am in this country I have friends to call upon. In fact watch out I might just be doing that, as I will be retiring from Extension on August 31, 2008.

Thanks again for all your support.

Treasurer

Paul D. Wigley
Georgia



Ladies and Gentlemen it has been a pleasure and honor to serve as your treasurer for the past year. In my second year as your treasurer I have become more familiar and comfortable with the duties and responsibilities of the job. The job has been rewarding as well as an educational experience for me.

I have gained insight as to the workings of our association and how simple decisions are sometimes very complex when all regions of the country are included. What's best for your home region may not be the best thing for the entire organization. My skills of listening and compromising have been sharpened during the two years I have served as your treasurer.

At the present time our organization is on sound financial ground. This is due to the NACAA Board's diligent efforts to control costs and the so und fiscal policies established by this and previous Boards. Unfortunately, not everything is under our control and I feel compelled to highlight some issues that will continue to challenge us for the foreseeable future.

As all of you are fully aware of, the cost of travel and energy in general continues to spiral upward at an unprecedented rate. This will impact our organization in at least two ways. First, the cost of travel for your officers and directors to represent you at numerous functions will increase. If you bought an airline ticket you realize this already. It impacts us daily at the gas pump as we refuel our vehicles. We as a board are looking at ways to reduce travel expenses while still maintaining a presence at necessary functions.

The second way that this will have an impact on our organization is AM/PIC attendance. As travel costs for the membership continue to rise, will we still have as many members attending the AM/PIC as in the past. This will have an effect on the budget process of future AM/PIC meetings. Presently we don't have a concrete answer as to what attendance figures will do over the next three to five years.

The board is trying to keep travel expense down without reducing the effectiveness of the organization. Energy costs have an impact on almost every other expenditure the board must make. Whether it is an increase in meal costs due to an increase in trucking cost or an increase in airfare due to fuel costs or an increase in supplies due to higher freight costs, all of our inputs continue to rise. This is a fact that you are made aware of daily as you purchase groceries, fuel, utilities, and any other commodity that must be transported.

Belt tightening has already started. Once the belt has been tightened as much as possible, you have no choice but to look for more revenue. This may become necessary in the next three years. All of our revenue comes from donations, dues, and interest from our checking account. It doesn't take a lot of imagination to see that donations and dues are the two sources that we have the most control over.

Once again let me state that we are currently on sound financial ground, but the changing economy is having an impact on our future financial health.

Past President

Chuck Otte
Kansas



When you hand off the gavel to the new President, at the end of the DSA Banquet, you have this wonderful feeling of accomplishment, success and relief that washes over you. It's a great feeling and you suddenly wonder what you're going to do with all your spare time. That feeling lasts about 24 hours until the responsibilities of being Past President kick in and you get back to work!

All of the bills and vouchers for the AM/PIC are the responsibility of the person who was President during the AM/PIC. So it wasn't long after returning home before I started getting flooded with these vouchers to

be checked over, approved and sent on to the Treasurer for payment. Then you start having conference calls with the host state to sort out the bills, determining who paid, or pays, for what and making sure that nothing gets overlooked. And while we're already through another AM/PIC, just let me say one last time what a pleasure it was to work with Phil Durst and all the great NACAA members from Michigan!

As chair of the fiscal committee, I was also working with North Carolina to prepare a budget for the 2008 AM/PIC so that could be presented to the NACAA Board at winter board meeting. It was a pleasure to work with the North Carolina members on the budget and I think you can all agree that they did a great job of hosting the AM/PIC! Unfortunately, I had to present the AM/PIC budget to the board via conference call as I was stuck at home in Kansas in the middle of an ice storm and was not able to attend the winter board meeting.

One of the highlights of my year as Past President was representing NACAA on the Outstanding Young Farmer selection committee and traveling to their Awards Congress, this year in sunny downtown Madison, WI, the end of January. Normally the chairman of the Agricultural Issues and Public Relations committee would accompany the past president to this event. Scheduling conflicts prevent that from happening this year so I was accompanied by NACAA President Fred Miller.

OYF is a truly outstanding program. We partner with John Deere, the United States Junior Chamber and Outstanding Farmers of America Fraternity. Their annual awards congress is extremely high energy and will definitely recharge your batteries! As NACAA members we have the opportunity to nominate farmers between the ages of 21 and 40 to compete in this program. The ten finalists that come in for the final interviews are certainly the cream of the crop and all ten of them are winners that any of us would be pleased to have in our county, parish or state! This year three of the four national winners were nominated by NACAA members. If you nominate a young farmer candidate then they are a national winner, you get to have your registration to the next AM/PIC paid by NACAA. The nomination deadline is August 1st, so start recruiting nominees now for next year's competition!

The Joint Council of Extension Professionals (JCEP) is comprised of the six Extension professional associations. NACAA is one of the original members of this group and we view our involvement in this

organization as crucial to the success of our members and our association. JCEP is the coordinating entity for the Regional Leadership conferences, the Public Issues Leadership Development Conference, and the Galaxy Conference. I currently serve as Treasurer of JCEP and Fred Miller will soon be serving as President of the JCEP board. At the summer board meeting, Rick Gibson was elected to serve as Treasurer elect and will be serving as treasurer during the 2010 calendar year.

The JCEP Board is comprised of the President Elect, President and Past President of the six associations. We also have representatives from CSREES (Cooperative State Research Extension and Education System), NASULGC (National Association of State Universities and Land Grant Colleges) and ECOP (Extension Committee on Organization and Planning). JCEP also appoints a liaison to serve on the ECOP Budget Committee.

JCEP's most important role, in my opinion, is in serving as a communication link among the Extension professional organizations and our many partners. There are many old sayings about "we all hang together or we all hang separately" or "insert your favorite similar phrase here". With JCEP we are trying to help everyone understand that the success of any one member of any of our six associations translates into success for all of us in the Extension system. Cooperation takes many forms in our daily work. When we all strive to help our coworkers, anywhere in the system, do better, it raises the professionalism, and accountability of the entire system!

The Fiscal Committee spent a lot of time this past year talking about NACAA's financial position. Treasurer Paul Wigley has addressed it and I have alluded to it. We are in sound shape, but we are also keeping a wary eye on developments. As board members we try to be very frugal in all of our travels. We look for ways to reduce or cut costs. Before we take on anything the first question is "what positive impact will this have on the association" and the second question is "what will it cost the association?" Cost benefit analyses are constantly being done by all of us in many ways. We all pay dues and we don't want to see "our" money wasted and none of us want to be responsible for any waste. We hold in highest esteem the responsibility of helping all NACAA members to become better professionals. We also feel that our contact with the membership in each state to be crucial. Many of the other JCEP organizations have reduced their presence

in each state. Your NACAA Board feels that we can cut costs elsewhere just so we can keep getting a regional director out to each state association every year. In some future year, we will have to raise dues again. In the meantime, I encourage you to work with your National Board in helping to keep costs down but not at the expense of professional development!

In closing, I want to thank NACAA, and each of you, for the opportunity to serve for the past four years as one of your officers. It is an experience that I wish all of you could have. It's a great deal of travel and work, but the experiences and the professional development opportunities are second to none. The time has gone by very quickly, but it's time for me to refocus 100% of my time on Geary County, Kansas. Thank you for the opportunity and thank you for coming along with me on the trip, and thank you Jaye for all your support and encouragement!

Southern Region **Director**

James E. Devillier
Louisiana



As I sit to write this article, many thoughts are swirling through my mind—long deliberative NACAA board meetings, exciting state association visits, meeting county agents and becoming close friends, regional JCEP and national PILD meetings and so on. What an enriching experience it has been to represent you, the NACAA member, on the board of directors, on national and regional committees and at other related functions. I am truly honored and humbled by the experience.

Since the Grand Rapids AM/PIC, the board has been actively engaged in developing greater professional development opportunities for you. We've initiated the SARE Fellows program and held the first training seminar last April. The board is on track to instituting measures identified by the Futuring Committee. The Planning and Development committee established a timeline for adopting the committee recommendations and the board has already put some recommendations into effect. Your NACAA board is actively pursuing and adopting technology to enhance communication within the organization. We continue to stress the importance of communication as it is the foundation on which we will continue to grow and thrive. Other examples of board engagement can be found in the other board member and officer reports.

As your representative on the PILD committee (along with Paul Craig and Mark Stewart), the focus has been, is and will be to provide NACAA attendees cutting edge information on agricultural issues. Along with this focus is the opportunity to relay agricultural concerns to elected officials and visit with USDA partners. Congratulations to Stan Moore for chairing an excellent 2008 educational conference that had 309 participants.

The 2008 JCEP conference was a joint meeting of the NACAA Northeast and Southern regions. Integrating generational diversity in programming efforts and applying emerging technology to these programming efforts highlighted the conference. Dirk, Alan, Charles and I were pleased to host the Southern region officers and learn of their state association activities. States in the Southern region are in the hands of good officers and even though state organizations experience peaks and valleys in membership, sponsorships and activities, the officers are steadfast and are plotting and traveling a true and steady course.

Following the Grand Rapids AM/PIC, I took part in the Texas, Florida, Georgia, Tennessee, South Carolina and Kentucky state meetings. Each of these associations had outstanding AM/PIC's. In Texas, I had the opportunity to witness SWAT team training and participate in a training exercise where on the fourth attempt to have a supposedly armed suspect exit a stolen car, I shot an unarmed man. Needless to say, that exercise deepened my appreciation for the challenges faced by law enforcement personnel. Congratulations to the Florida county agents for encouraging their members to submit abstracts and present papers at their annual meeting. Papers were presented in various categories—horticulture, wildlife, livestock, etc. —during concurrent sessions. As I listened to some of the papers, it reaffirmed the commonality I've seen among county agents and programs in the Southern region. For the Georgia meeting, I was unfortunately distracted and missed the skeet shoot but did participate in the important sessions. Georgia agents do an excellent job with a poster contest that had more than 30 competing entries. The Georgia association also recognizes and financially rewards those members who develop and conduct outstanding programs. Tennessee provided its members with excellent program training while also slipping in a little fun (golf and fishing tournaments) during their meeting at Pickwick Lake State Park. I must confess that even though I didn't fish in the tournament, I was out-fished from the lake bank by my wife! The South Carolina and Kentucky members conducted excellent meetings

with liberal doses of professional improvement activities while also adding splashes of entertainment. It was good to visit with Doug Wilson again. Doug is a past NACAA Southern Region Director and provided the encouragement for my serving on the NACAA board. Thank you Dirk Webb and Alan Galloway for filling in for me at the Virginia and North Carolina meetings, respectively.

As my term on the NACAA board concludes, there are many, many people to thank for this tremendous opportunity to serve the county agents of this nation. Thank-you LCAAA members for selecting me as your delegate four years ago. Thank-you Paul Coreil and Pam Hodson for approving my time away from the office to represent Louisiana and the Southern Region of NACAA. Thank-you to my office colleagues and co-workers—Pam, Brian, Beverly, Ken, Ursula, Andre', Lauren, Faye, Patsy and Sheree—for your patience and understanding as I traveled out-of-state to conduct NACAA business. Thank-you Southern Region members for your warm hospitality and firm commitment to the profession of county extension agent. Finally thank-you to past and present board members for your friendship and close-knit working relationship. I look forward to joining Leon and the Life Member group in 2011. Once again, *"Merci beaucoup pour les bon temp et les bon memoires"*.

Southern Region

Director

Dirk Webb
Oklahoma



Serving NACAA and the Southern Region this past year has been eventful and outstanding opportunity for me. I want to thank the Oklahoma Association of Extension Agriculture Agents for having nominated me in 2005 in New York. I also want to thank the other Southern Region states for their support and help during my first year as Director.

It has been a pleasure to represent NACAA at the state meetings I have attended. I have come away from each state's meeting impressed with the professional attitude the agents have, not only for their state association, but for our national one, as well. I feel fortunate to able share in professional improvement, making new friends, and experience first-hand the willingness to work together that most agriculture agents exhibit.

Throughout my Extension career, I have always felt that extension agents have had a profound influence on agriculture. As members of NACAA, we have reason to be proud of our national organization that brings members from all corners of the United States together to share ideas, methods, issues and concerns, as we all strive to improve professionally.

I admire the Norman Rockwell painting of the county agent talking to the farm family. We all know that he is addressing changes that will help improve their quality on life. That is our strength in Cooperative Extension—strong, local, “grassroots” connections, plus our efforts to provide the best unbiased information straight from our land grant universities.

We have seen agriculture experience a phenomenal transformation over our lifetimes. Extensions agents play major roles in this transformation. We bring cutting edge technology, plus we are known as individuals that tirelessly work to improve the quality of life of those we serve. This past year as a NACAA director, and, more importantly, as a NACAA member, I have seen the high quality of our members and the strong commitment in their work. We truly have a long-lasting impact on the families in the communities we serve.

As I close this report, I would like to charge all members of our association, to think not only of today when making decisions. Think of the future and the agents that will follow us. We too, must be willing to listen and to communicate with each other.

Western Region

Director

Michele Hebert
Alaska



What a year it has been! I have had the opportunity to travel all over the western region this year from the high plains camping in Wyoming to the hot desert on the boarder of Arizona. My 2 years as the Western Director for NACAA can be summed up in the words of this famous person...

“Its kind of fun to do the impossible.” Walt Disney

Sometimes I think, instead of calling us extension agents, they should call us OVER extended agents. Isn't that the truth! But in reality being on the NACAA board and Western Director was one of the highlights

of my career. I met more outstanding folks and felt even prouder to be part of an association of such great minds and hearts.

The West has great diversity in topography, climate and scenery but what it does share is a dedication to our jobs. I have met more hard working dedicated folks in my NACAA travels then every before. I will miss folks but will be glad to spend more time at home with clientele.

I am leaving you in good hands with Virginia Knerr. She has a warm heart and lots of enthusiasm to share. Hope all the western folks will invite her for state visits and show her the hospitality that was shown to me.

Thanks to all the NACAA board members, who are truly remarkable folks with high integrity. Each taught me a lot about greatness. Thanks to my family and all the other board members' family for their continued understanding and support. This made the hard work possible.

That brings me to another quote “No man is an island” John Donne. Mankind is interconnected. That can also be the metaphor for NACAA. Hope all of you use the association to the fullest to strengthen your connectiveness to professional opportunities. As you all enjoy the AM/PIC connecting to your colleges and travel back home let me leave you with my favorite quote of all times:

Happy trails to you, until we meet again”

North Central Region

Director

Chuck Schwartau
Minnesota



It has been an interesting transition from treasurer to regional director. There is a whole new set of contacts to make roles to fill with them as we all work together for a beneficial professional association in our states.

It has been my pleasure to visit several state meetings since I became your regional director last summer. There are a couple observations that are very encouraging to me.

State associations are taking their role as a provider of good professional development seriously. All the state meetings I attended included a good development program. Some were in cooperation with sister

Extension organizations and others were totally independent. Illinois and Kansas are just two of the states that include excellent educational tours as part of their meeting.

Kansas offers several tour options including livestock, crop, natural resources and horticultural topics. In Illinois we had an excellent, close-up tour of the lock and dam on the Mississippi River. We visited with the operating staff to learn the history, workings and future issues of the lock and dam system. Many had never seen a tow lock-through as we did that day. We also visited an immense underground warehouse facility that is in a limestone cavern. Portions of the cavern are still being actively mined, while older sections are available for secure, climate controlled storage of all kinds of goods from soybean seed to frozen foods to be put in local grocery freezers tomorrow.

The other significant observation was the support enjoyed by most of our state associations from their Extension administrators. At some state meetings, administrators were in attendance for the entire session. That does not mean we can take that support for granted, but it is certainly easier to talk to our administrators about our programs when they are supportive and participating in the first place. Keep up those good contacts.

Since last fall, Mark Stewart, regional vice-director, and I have visited Minnesota, Iowa, Missouri, Kansas, Nebraska, North Dakota, Indiana, Illinois, South Dakota and Wisconsin. We look forward to the other states yet in the near future. One road trip last fall had Chuck in Minnesota, Missouri, Iowa, Nebraska and North Dakota in a ten day period, plus Mark visited Indiana while Chuck was on the road between states. While it can be a long, tiring trip, it is good to visit with members and administrators on their home ground, and see the geographic areas in which they work. I only wish we had a little more time on some of those trips.

I thank the North Central members for stepping up to the plate and filling committee slots this past spring. When we made appointment recommendations at the spring board meeting, the NC region had only one position still open. That is excellent response and makes the director's job much easier. Involvement on a national committee is an excellent way to learn more of what the association does for us as professionals. It is the work of these committees that we can show to potential new members, selling them on the professional benefits of membership.

The North Central region has the added opportunity and challenge of hosting the Galaxy III this September. We

know many members have to make the choice between our annual meeting and professional improvement conference and Galaxy III as their one professional meeting this year. Regardless of your choice, congratulations on taking the opportunity to participate. I was appointed by the NACAA board to develop the NACAA portion of the Galaxy III program. With the help of others, I believe we have formulated a good solid program, and one that will make it worth your while to attend. At the time of this writing, there are six confirmed seminars on a variety of topics, plus one more invited speaker from ECOP. If Galaxy III attendance is still an option for you, I encourage you to attend.

North East Region

Director

**Paul H. Craig
Pennsylvania**



This July will mark the completion of my first year in the role of Northeast Regional Director and what a year it has been. I am thankful for the leadership examples and assistance provided to me during this transitional year. Dave Myers from Maryland has provided me with encouragement and guidance during my term as vice director and he has continued to provide assistance to me. I would also like to express my sincere appreciation to the leadership of NACAA and Scott Hawbaker for assisting me in transitioning into this exceptional leadership opportunity. I am also thankful for the support provided to me from all of the state associations in the Northeast region.

I began my Extension career in Washington County in Southwestern PA in late 1979. I can still recall my CED, Ed Woods, coming into my office and telling me I needed to join the County Agents Association. I wrote that check from my first paycheck and have reflected many times on what invaluable experiences and benefits I have gained since then.

I looked up the word "association" and found many different definitions. I think many apply to NACAA. In the dictionary or rather in the research section of Word, you will find the following definitions: a group of people joined together for a purpose; a linking or joining of people; coming together and social interaction between people. To me these were among the most important reasons for joining NACAA. I quickly discovered during my early Extension years that the county agents association provided me with the opportunity to connect

with individuals who had many similar interests and challenges that I experienced every day. It was the time I made for participating in regional and state activities of the Pennsylvania Association of County Agricultural Agents that helped to make me a better educator. When I finally attended my first Annual Meeting in Nashville, TN I discovered so many more opportunities and “associates” from across the United States. To the past and present members of PACAA, NACAA members from across the Northeast Region and across the United States that I have had the opportunity to meet and share experiences with I say thank you for contributing to my career. You may not realize it but in some small and even many large ways lots of individuals have contributed to my professional development. I cannot imagine what it would be like to be an extension worker and not have the network of peers and associates that the County Agent Association has provided to me. Thank you all.

During the past year in my role of Northeast Director I have been able to attend state association meetings of the New York, New Jersey, Maryland, Delaware and Pennsylvania. Due to conflict of dates Vice Director Betsy Greene was able to attend the meeting of the Maine Association on my behalf. I serve on the planning committee for the Public Issues Leadership Development Conference coordinated by the JCEP team and held annually in Washington DC. I participated in the JCEP Regional meeting in Orlando, FL and have attended the Pre and Post Annual Meeting, the Winter and Spring Board meetings of NACAA and the monthly conference calls.

Finally I would like to express my appreciation to the leadership and teamwork demonstrated by the states in the Northeast Region. Although small in numbers, compared to other regions within NACAA, the membership and leadership in states across the NE has evolved into an outstanding example of associations working together. The history of this teamwork goes back to the AMPIC meeting held in Vermont in 1997, repeated during the meeting in New York in 2005 and continues today with efforts to consolidate regional funds and to plan for the next annual meeting in the Northeast Region in 2013. It makes me proud to be a member of the National Association of County Agricultural Agents and to have the opportunity to become involved, get connected and associate with my peers.

Professional Improvement Council Chair

**Tom Benton
Texas**



The Professional Improvement Council offers NACAA members an opportunity to participate in professional improvement presentations to the membership as well as being able to gain information from these presentations. The Professional Improvement Council has again provided excellent opportunities for professional improvement at the AM/PIC in Greensboro, North Carolina.

The six committees that make up the Professional Improvement Council are: Horticulture and Turfgrass; Animal Science; Agronomy and Pest Management; Natural Resources/Aquaculture and Sea Grant, Agricultural Economics and Community Development and Sustainable Ag. Each committee except the Sustainable Ag Committee conducted excellent professional improvement workshops for NACAA Members of the AM/PIC meeting in Greensboro. The Sustainable Ag Committee coordinates the fellows program with seminars being held in each of the four regions.

The sixty-four (64) workshops that were held on Tuesday, July 15th not only allowed NACAA members to learn from their peers who conducted excellent programs, but also to hear top quality speakers from industry and other professions.

Activities were also offered outside the time frame of the AM/PIC. The Animal Science Committee conducted a pre-conference tour on July 10th & 13th with 16 participants. The North Carolina delegation did a great job of assisting the Animal Science Committee with some excellent tour stops, including stops at Kingsmill Dairy Farm, Smithfield Packing Company, Inc., Prestage Farms, Nichols Farms, James Fuller Horse Farm, Robbie Harrington Farm, and the Bob Myrick Farm.

The Horticulture and Turfgrass Committee also sponsored a pre-conference tour with twelve attending. The tour included several stops including a mushroom farm, New Garden Nursery, Metroling Greenhouses and the Daniel Stowe Botanical Garden.

The Agronomy and Pest Management Committee, in addition to the regular presentations, offered continuing education credits. The committee also coordinated the On Target Seminar with a NACAA Member from each region participating.

The Natural Resources/Aquaculture and Sea Grant Committee provided an excellent slate of presenters at the workshops on Tuesday, July 15th.

I would like to take this opportunity to thank the committee chairs and vice-chairs that put these programs together.

Agricultural Economics and Community Development

Mary Sobba
Missouri



Committee Members:

Northeast Region Vice Chair – Stephen Hadcock (NY)
Southern Region Vice Chair – E. Lanier Jordan (GA)
Western Region Vice Chair – Lyle Holmgren (UT)
North Central Vice Chair and National Chair – Mary Sobba (MO)

The Agricultural Economics and Community Development committee met at Grand Rapids in July 2007. Several ideas and suggestions were discussed including promoting the presentation opportunities, potential educational seminar and general needs of extension educators working with ag economics and community development.

This year all abstracts were peer reviewed twice. They were reviewed at the regional level and again at the national level. Eleven abstracts were chosen for presentations in Greensboro. The topics varied from farm succession to farm profitability through cut sunflowers to economic feasibility of rangeland improvements.

The New York Cotton Exchange was contacted for possible sponsorship of a marketing seminar, but since it is under new ownership education funds have decreased in their budget. Another firm in North Carolina was contacted for a marketing seminar, but details could

not be worked out, but contacts have been made for potential educational opportunities. Thank you to Stephen Hadcock for setting up the Ag Economics/Community Development wiki and we hope to use more in the future.

Much of the work of this committee was conducted electronically via e-mail. The National Vice Chairs did an outstanding job in communicating with state chairs about the presentation opportunities and making sure members had access to application details. This past year was the first time for members to apply electronically. Overall, it worked well. We are working on minor improvements and hope to make it even easier and better for 2009.

Thank you to the National Vice Chairs for their leadership, assistance and ideas. I hope many of the ideas from this past year will be implemented in the future.

Agronomy and Pest Management

Gary L. Cramer
Kansas



Committee Members:

Northeast Region Vice Chair –
Vacant
North Central Region Vice Chair and National Chair –
Gary Cramer - KS
Western Region Vice Chair – Paul Carter – WA
Southern Region Vice Chair - Johnny Whiddon– GA

The Agronomy and Pest Management Committee had a productive year. There were fifteen presentation applicants for the 2008 NACAAAM/PIC. Twelve papers were accepted by the Agronomy & Pest Management Committee, two were transferred to another committee and one application was withdrawn.

The following were presenters at the 2008 AM/PIC:

Wade Parker - GA
William Hogan - LA
Sam Angima - OR
Clark Israelsen – UT, Mike Pace - UT
Tara Smith - LA
Dale Dewing – NY
Ron Patterson - UT

Kevin Lawson - AR
Ned Birkey - MI
Boyd Padgett - LA
Craig Allen - AR
Aaron Esser - WA

The Agronomy and Pest Management Committee conducted two concurrent seminar sessions consisting of 30 minute presentations at the AM/PIC. Our speaker schedule

was expanded in 2007 to 30 minute per presentation to meet the requirements for each speaker to earn Certified Crop Adviser credits (CEU). Each presentation offered 0.5 credits. Since a growing number of NACAA members are becoming Certified Crop Advisers, the committee feels it is important to continue offering CEUs.

It was encouraging to have the number of applicants we received since the NACAA is one of few opportunities that many members have to highlight their programs at the national level.

The committee also supervises the selection of applicants to the On-Target Remote Sensing and GIS Decision Support Seminar. Dr. Phil Rasmussen at Utah State University organizes and conducts this seminar as well as completing the difficult job securing continued funding. We appreciate his efforts towards the continuation of this excellent professional development program. Seven applications were present for the committee's review. Selection of recipients was difficult as indicated by the scores. In order to keep this quality program viable we need to continue to encourage participation of agents and involvement by the Association.

This year we had the following entries by region:

Northeast – 2
North Central – 1
Southern – 2
Western – 2

It has been my honor and a great pleasure to serve as vice chair and chair for the Agronomy & Pest Management Committee. I have had the pleasure to work with many hard-working individuals who have the interests of the NACAA at heart. I would like to thank the Regional Vice Chairs for their responsiveness and quality of their effort in putting together this years program. We had an excellent and hard working committee and they made my job easier.

I encourage all members to get involved in the NACAA whether it is through presentation, poster or committee involvement, but get involved.

Animal Science

Eugene Schurman
Pennsylvania



Committee Members:

Northeast Region Vice-Chair and
National Chair – Eugene Schurman, PA
North Central Region Vice-Chair – Ron Graber, KS
Southern Region Vice-Chair – Tammy Cheely, GA
Western Region Vice-Chair – Randy Mills, OR

The Animal Science Committee is responsible for planning and conducting the Pre-AM/PIC Animal Science Seminar and Tour. The committee would like to thank Barry Foushee from North Carolina for helping to plan and coordinate the 2008 Seminar and Tour. We know that Barry already had a very busy year serving as Secretary and Publicity Chair for the 2008 NACAA AM/PIC. Also, we would like to thank Tiffanee Acuna and Becky Spearman who served as our North Carolina tour guides and hosts.

We would like to thank our financial sponsors, Alltech and Elanco Animal Health for helping to make the tour a success.

Tour stops included:

Kingsmill Dairy Farm, LLC – Large Registered Holstein Breeder marketing elite genetic embryos worldwide.

Smithfield Packing Company, Inc. – Large slaughter and meat processing company known for the Smithfield Ham.

Prestage Farms – Large contract grower of pork and poultry.

Nichols Farms LTD – Large Angus, Simmental, South Devon, and Composite Cattle beef breeding business.

James Fuller Horse Farm – Specializes in training and rehabilitation of race horses.

Robbie Harrington's Farm – The HeatWatch® Estrus Detection System is used to manage their beef cattle AI breeding program.

Bob Myrick Farm – Large Boer Goat breeder.

Whitaker Farms – Diversified grower of field tomatoes, greenhouse tomatoes, strawberries, bedding plants, and tobacco.

Tour participants included Anna-Marie Chamberlain, OR, Troy Downing, OR, Shelby Filley, OR, Henry Grant, FL, Stephen Komar, NJ, Robert Mickel, NJ, Cory Parsons, OR, Carol Schurman, PA, and Richard Smith, PA. Animal Science committee members who attended the tour included Tammy Cheely, GA, Ron Graber, KS, Randy Mills, OR, and Gene Schurman, PA.

Tammy Cheely, Animal Science Vice-Chair from the Southern Region, took the lead on the animal science professional improvement seminars this year. Once again, the AM/PIC Animal Science Seminars were exceptional! The 16 extension agents/educators representing 12 states who presented are to be commended for their educational efforts. They are Richard Brzozowski, ME, C. Taylor Clarke & Cynthia Gregg, VA, Robert Goodling, PA, Henry Dorrough, AL, Mark Heitstuman, WA, Clark Israelsen, UT, Scott Jensen, ID, Susan Kerr, WA, Stephen Komar, NJ, Robert Mickel, NJ, John Pope, GA, Amie Schleicher, MO, M. Kent Stanford, AL, Mary Schwarz & Jean Bonhotal, NY, and Rebecca Thomas, AK. A complete list of the presentations and the corresponding abstracts can be found elsewhere in these proceedings.

Randy Mills, Animal Science Vice-Chair from the Western Region, arranged for NACAA members to take the American Registry for Professional Animal Scientists (ARPAS) exam to become a Professional Animal Scientist (PAS). Randy also arranged for 3 hours of ARPAS continuing education credits for those NACAA members attending the 15 Animal Science Professional Improvement Seminars. The Animal Science Committee plans to continue to offer CEU's for ARPAS credits as well as offer members the opportunity to take ARPAS species specific exams and qualify for ARPAS membership.

NACAA has formed a partnership with the American Dairy Science Association which will allow NACAA members to join S-PAC at a reduced rate. What is S-PAC? S-PAC stands for “**Searchable Proceedings of Animal Conferences**” and is a searchable electronic database of proceedings from major animal production conferences held in the U.S. and Canada.

The proceedings in S-PAC put additional resources at your fingertips by connecting you to the information

made available at multiple animal conferences. A search engine allows you, as a subscriber, to search all the proceedings in the database for the specific information that you need. The list of proceedings will continue to grow as additional proceedings are posted to the site.

A calendar is also provided to help keep you current on dates and locations for upcoming conferences. The link to conference web pages included in this section provides additional information about the particular conferences, including registration information on many and details on how to order hard copies of several of the conference proceedings.

As part of our agreement, NACAAAM/PIC proceedings will be listed on the S-PAC database too. Checkout how to subscribe to S-PAC at <http://spac.adsa.org>.

Natural Resources/ Aquaculture

Bill Sciarappa
New Jersey



2007-2008 was an exciting and successful year for the Natural Resources Committee as we expanded our program reach and were renamed as the Natural Resources and Aquaculture Committee. Our 2008 sessions reflected this increasing emphasis on water quality, fisheries and aquaculture. Our plan of work was completed. Yearly highlights included evaluations for speakers in our concurrent sessions, evaluation summaries and individualized thank you letters. The peer evaluations were shared with the presenters and provided valuable feedback. This helps ratchet up our professional standards and encourage continued abstracts submissions for the 2009 AM/PIC.

We held two telephone conference calls to conduct committee work and numerous e-mail communications to select 10 presentation applications for our natural resources and aquaculture professional improvement sessions. Applications again represented very current and pertinent topics, a wide geographic distribution, and high quality extension programs. Topics and presenters in the Extension Education Orientation Session included : Ecosystem monitoring to evaluate grazing plan influence on rangeland health - Tipton Hudson, Working with animal feeding operations to implement best management practices - Michael L. Christian, Barriers and opportunities for low impact development:

case studies from three Oregon communities - Derek Godwin, Cossatot forestry clinic: a collaborative effort to educate people in Howard, Polk, and Sevier counties - Sherry Beaty, and Income opportunities with botanical herbs - Bill Worrell. The water quality and aquaculture orientation session included What the bay hinges on: teaching ecology and stewardship through shellfish restoration - Cara Muscio, Capture the flow and watch it grow - demonstration rain gardens in northwest Arkansas - Katie Teague, Remediating stormwater runoff with manufactured treatment devices, agricultural management practices and rain gardens - William Sciarappa, Tracking human pathogens with optical brighteners - Cara Muscio and Successful land use planning education addressing multiple jurisdictions – Neil Clark.

Our Committee designed a concurrent presentation schedule that ended the professional improvement presentations by 3:30p.m. which avoided the attendance issue that sometimes occurs when professional improvement sessions encroach upon State's Night Out or In in this case. The Society of American Foresters Continuing Forestry Education were offered credit for natural resources related sessions held at the 2008 AM/PIC. Extension professionals that maintain forestry and natural resources related certifications or registrations benefited from this new approach.

Horticulture and Turfgrass

Jim Hruskoci
Nebraska



Committee Members:

Jim Hruskoci, North Central Region,
Committee Chair

R. David Myers, Eastern Region Vice-Chair

Jo Ann Robbins, Western Region Vice-Chair

Brian Jervis, Southern Region Vice-Chair

Participation in the Horticulture and Turfgrass committee activities of the NACAA provides members with excellent professional improvement opportunities in all areas of horticulture, from landscaping and turfgrass to commercial fruit and vegetable production, and more.

The goal of this committee is to attract membership attendance to the AM/PIC of individuals with horticulture interests. Whether your job responsibilities in horticulture are full or part time, we believe there is

something at the NACAA AM/PIC for you. While many horticulture members have the option of attending the ASHS meetings held at approximately the same time, we believe the AM/PIC can provide a more direct application to meet your horticulture professional improvement needs and at a more affordable cost.

The committee plans a Horticulture Pre-conference tour for the Saturday prior to the AM/PIC. The tour is funded by NACAA members, unless commercial donors can be found. For the second year Ball Horticulture partially supported the tour, saving members some money on lodging costs. Thanks go out to North Carolina Educator Terry Garwood for helping to plan and organize the tour, as well as Michael Hylton who also helped make arrangements and for serving as our local host. Fourteen NACAA members attended the pre-conference tour which was held Saturday, July 12. Tour stops included a mushroom farm of Deb and Randy Bettini and the New Garden Nursery both near Greensboro, the Metrolina Greenhouses and the Daniel Stowe Botanical Garden in Huntersville and Belmont, and finally the Daniel Stowe Botanical Garden.

The Horticulture/Turfgrass committee meeting/workshop was held Monday, July 14. Topics discussed included planning the 2009 Conference pre-tour and fund raising efforts.

There was overwhelming interest on the part of members to make horticulture presentations, with a total of 18 presentations given during the Horticulture/Turfgrass seminars held on Tuesday, July 15th. Presentations were divided into separate concurrent tracks by topic and these included: Master Gardeners, Lawns and Landscaping, and Fruits, Vegetables, and more. Presentations ran 30 minutes in length, were synchronized with the other talks, so those in attendance could move freely from one track to another in nearby rooms.

Sustainable Agriculture

Michelle Infante-Casella
New Jersey



Southern Region Vice Chair– Julia Gaskin, GA

Western Region Vice Chair – Milt Green, WY

North Central Region Vice Chair – Vance Haugen, WI

Northeast Region, Vice Chair and National Chair– Michelle Casella, NJ

The Sustainable Agriculture Committee had a busy inaugural year. In our first year, the committee took on the task of establishing the USDA/NACAA Sustainable Agriculture Research and Education (SARE) Fellows program. Four SARE Fellows were selected in 2007 from each of the 4 regions. They are: Norm Suverly from Washington (Western), Walt Bumgarner from Pennsylvania (Northeast), Adam Hady from Wisconsin (North Central), and Ronnie Barentine from Georgia (Southern). The 2008 SARE Fellows have been selected and notified and will receive recognition at the NACAA AM/PIC in Greensboro, NC. They are: Karen McAdams from North Carolina (Southern), Steve Van Vleet from Washington (Western), Mike Gastier from Ohio (North Central), and Richard Brzozowski from Maine (Northeast).

The Fellows will participate in 4 sustainable agriculture seminars over a 2 year period. The 4 seminars will be rotated in the 4 regions. The first seminar and tour was held in the Western Region in Arizona and hosted by Rick Gibson. The first 4 Fellows attended along with Sustainable Agriculture Committee Vice Chairs Gaskin, Green and Chair Casella. Additionally, Western Region SARE Coordinator Jim Freeburn was in attendance for this seminar and tour. Attendees learned about organic tree fruit production at two farms, cattle production systems, how endangered species affect the sustainability of ranching operations, border patrol issues, rangeland monitoring, and organic and natural beef production in Arizona. The 2007 Fellows will attend a second seminar and tour in the Northeast Region in fall of 2008, with the theme "Farming on the Urban Fringe" and sustainable agriculture issues related to this topic. The 2008 Fellows will begin the seminar experience in spring of 2009 in the Southern Region.

Travel costs to all 4 seminars and tours are covered by USDA SARE. In addition to the educational opportunity, successful participants of the Fellows Program will receive a USDA SARE library courtesy of the Sustainable Agriculture Network (SAN) in Washington, DC, and a \$1,500 stipend to be used for program support, materials or hardware after completing the 2 year program.

Before the completion of the fellowship, each participant will be expected to conduct an educational or research program in their home state discussing or exploring some element of sustainable agriculture. This exercise will help the fellows crystallize in their minds and Extension programs concepts and ideas learned from their experiences in the program. A final report will be required of each fellow at the conclusion of their second year. The report will include a discussion summarizing

their learning experiences and a detailed list of specific impacts gained from their fellow opportunity.

Each year, the graduating class of fellows will have the opportunity to compete for the right to present a sustainable agriculture program to AM/PIC participants at a brown bag luncheon sponsored by USDA SARE. Selection of the winning fellow will be made by a committee appointed by the NACAA voting delegates to oversee the program. Selection will be based upon the quality of any program implemented as described in the final report. USDA SARE will reimburse the winner up to \$600 in travel costs to and from the AM/PIC and \$1,000 in hotel/meals costs while at the AM/PIC.

This exciting new program is well on its way. We have 8 well qualified Fellows participating and look forward to future experiences and successful outcomes from the Sustainable Agriculture programs through the valuable partnership with NACAA and USDA/SARE.

Extension
Development Council
Chair
Michael Heimer
Texas



Each year a number of committees put their heads together to plan, develop, and present a variety of educational opportunities for the membership of the National Association of County Agricultural Agents. The Extension Development Council has the responsibility to provide educational activities that promote professionalism. This may not appear to be a noble task until you take a look at the membership of NACAA and understand the diversity of the members and their job responsibilities. Our members are professionals who desire educational opportunities that are of interest and challenge their competency.

We are educators first and foremost which places the burden of providing accurate and timely programs to their clientele. The clientele look to the Extension educator as the program leader and expect a professionalism that leaves no doubt that Extension educators are to be looked up to as source of reliable information. For this reason, it is critical that our association continue to provide opportunities for all of its members to strengthen their skills as Extension Professionals.

There are four committees in the Extension Development Council that are not subject matter

specific, but more importantly provide critical skills to assist in a member's professional growth. Last year each committee surveyed presentations to get an accurate read on the value of the educational activities. Program surveys will be utilized again this year in Greensboro as a planning tool. The Public Relations and Agricultural Issues (Dan Downing, Chairman), Early Career Development (Mark Nelson, Chairman), Administrative Skills Development (Jerry Warren Chairman), and Teaching and Educational Technologies (Karen Vines, Chairman) committees have been very active identifying critical needs and securing the best resource persons for an effective program. In a continued effort to promote committee structure and define responsibilities, the "Administrative Skills Development Committee" will now be called the "Administrative Skills and Leadership Development Committee". The "Public Relations and Ag Issues Committee" will also modify its name to clarify program responsibility by becoming the "Agriculture Issues and Public Relations Committee".

The Extension Development Council National Chairs, Vice Chairs, and even the state committee chairs collaborate while developing these programs. This is not an easy task, but the communication must exist for future Extension AM/PIC effectiveness. The communication from the county level to the national board and back to the county level is the mechanism by which we measure member needs, develop educational opportunities to make our members more effective, and finally recognize our co-workers for their exceptional efforts. All of these committees work hard to provide the leadership and involvement necessary to accomplish this goal.

The efforts to prepare for the 2008 AM/PIC has seen these committees set timely goals, expand program opportunities, and assemble an outstanding variety of educational resources. The AM/PIC attendees will be impressed with diversity and quality of presenters.

The Extension Development Council along with the Program Recognition Council and Professional Improvement Council address the challenge of identifying and securing volunteers to serve on these critical planning committees. The existing committee structure provides for a term limit and rotation of its membership. The upside of this policy allows us to constantly utilize new talent and ideas in the leadership roles. The downside is that members who have been effective leaders must step aside, at least for a short time. The busy lifestyle and workload of our

membership can make it difficult to identify members who are willing to serve in these many roles. This ongoing challenge to identify volunteers who will step up and serve must start at the county level and be fostered at the national level. The national committee chairs deserve a special thanks for their dedication and efforts to see NACAA be the best it can be. I would encourage every NACAA member to take advantage of committee leadership roles when given the opportunity.

Agriculture Issue and Public Relations

**Dan Downing
Missouri**



I am pleased to report the AI & PRC had another productive and enjoyable year thanks to the efforts of committee members Jerry Clemons, Arkansas, Don Fretts, Pennsylvania, Norman Suverly, Washington, Past Committee Chair, - Edmund Gomez, New Mexico, and Extension Development Council - Chair, Michael Heimer, Texas. Thank you to each of these gentlemen for their hard work and dedication.

Am/Pic in Grand Rapids ended on a high note for the AI & PRC with 70 plus members participating in and outstanding professional development seminar focusing on Bio-Fuels. This seminar set the stage for round two of bio-fuels discussions in Greensboro with Melvin Brees, University of Missouri, addressing changing economic considerations, Dr. David Brune, Clemson University addressing water quality and environmental implications, and representatives of the petroleum industry sharing the corporate perspective on bio-fuels.

Throughout the year the committee has worked to provide leadership encouraging the development of state level AI & PRCs, identifying emerging issues for the Am/Pic program, Promoting the Outstanding Young Farmers of America program, formally requesting the executive council change the committee's name, and refilling committee leadership roles.

The Outstanding Young Farmers of America (OYF) program is one of the core responsibilities of the AI & PRC. Over the past five to six years the OYF program has shifted from struggling for nominations to a growing program with NACAA playing a key role in this turn around. NACAA through the AI & PRC has helped to ease the application process by encouraging a two phased application process (a streamlined preliminary

application followed by a more in depth application for semi-finalist), and electronic submission of applications. A mass email was sent to all NACAA members in June reminding them of the August 1 nomination deadline.

The OYF program is coordinated by the United States Junior Chamber of Commerce, the Outstanding Young Farmers of America Fraternity, and NACAA, with corporate sponsorship from John Deere. At the 2008 OYF Congress NACAA was represented by NACAA President, Fred Miller and Past President, Chuck Otte. This year nearly one half of the forty-seven nominations were from NACAA members. This accounts for one half of the semi-finalists, and three of the four national winners. The national winners and the nominations sources were:

Chris & Angie Eckert, IL – OYF Alumni
Stephen & Kisha Bailey, MS – NACAA
Richard and Rhonda Fontenot, LA – NACAA
Charlotte & Dwayne Ferrell, NC – NACAA

As referenced above, the nomination process has been streamlined with an annual entry deadline of Aug. 1. This year the top 10 nominees will be hosted at the 2009 OYF Congress in Eugene, Oregon. Later the four national winners will travel to Washington DC to engage legislators in discussion on agricultural policies. As an NACAA member if the OYF you nominate is selected as one of the national winners, your registration fee at the next Am/Pic is eligible for reimbursement.

Internally the AI & PRC committee addressed changing the name of the committee as there were two committees under different councils both having the phrase "Public Relations" as the first part of their names creating logistical confusion. A special note of thanks goes out to Larry Moorehead and the public relations committee for helping work through these issues with us. The AI & PRC committee requested the national board change the name of the committee from Public Relations & Ag. Issues to Ag. Issues & Public Relations. The board did approve this change. Additional Donald Fretts, Vice Chair from the Northeast region will be rotating off of the committee with this vacancy being filled by Glenn Rodgers, Vermont. Dan Downing, Missouri will continue as committee chair for a second year.

In all it has been a very productive year for the AI & PRC. We look forward to continued progress in the coming year building on successes of the past.

Early Career Development

Mark Nelson
Utah



The Early Career Development (ECD) Committee is responsible for developing educational programs directed at NACAA Members with five years or less tenure. Efforts are to develop programs, materials, and partnerships to orient and assist Extension personnel early in their career. Many times these programs are relevant to all agents regardless of their tenure.

I am pleased to report that the E.C.D. Committee had had another good year.

We selected three national speakers for the July 15, 2008 Extension Development Council Seminars at the NACAAAM/PIC in Greensboro NC. Daniel Kluchinski, Extension Agent from Rutgers Cooperative Extension in New Brunswick, NJ. presented Getting the most out of mentoring. Ron Torrell, Area Livestock Specialist, University of Nevada discussed Tricks of the trade for Early Career Development. Chris Bruynis, Extension Educator, Ohio State University Extension presented Balancing the political demands of a County Extension Educator position. These presentation did an excellent job of covering important topics of new and longer serving agents.

ECD Committee Vice-chairs for 2007-08 were Jennifer Rees, (Nebraska) North Central Region, Brittany Edelson, Kentucky) Southern Region, Mark Nelson (Utah) Western region, and Daniel Kluchinski, North East Region. We are looking forward to a great 2008-2009 and to your participation in our committee's activities.

Administrative Skills Development

Jerry Warren
Texas



The administrative skills committee set goals to promote and develop human resource capacity. Every successful extension educator must have good public relation skills and abilities to communicate research based information to producers and consumers. To maximum this effort the committee has explored and

promoted ideas for making better use of advisory groups and using resources wisely. This year the committee is providing a workshop on ways to improve Extension Advisory Boards, Programmatic Opportunities for Extension through Focus Groups and developing resources through a Master Gardening program. Making use of all resources is an appropriate topic as greater demands are placed on each educator as we are constantly asked to do more with less.

A big thank you goes to the Regional Vice-Chairs: Richard Fechter of Howard, Kansas, Bruce Barbour of Morristown, New Jersey, and Brian Tuck, The Dalles, Oregon. Having an experienced group of regional vice-chairs to solicit and review applications made the process much smoother. Also, a special thanks to Michael Heimer and Brian Tuck for their efforts to bring me up to speed on my duties as Chair of this committee.

We welcome ideas, suggestions and volunteers so that we can provide valuable administrative development opportunities.

Teaching and Educational Technologies

**Karen Vines
Pennsylvania**



The NACAA Teaching & Educational Technologies Committee has been busy this year preparing workshops for the annual meeting to take place in Greensboro in July. They will be offering six workshops.

They will start the week, offering two levels of PowerPoint training on Sunday afternoon with NACAA members Betsy Greene and Susan Kerr. NACAA members can transition from beginner to intermediate PowerPoint users in the course of the afternoon.

Tuesday morning's sessions will provide a wide range of offerings.

- Turning Technologies will demonstrate the use of clicker technology for immediate audience response. This can be useful in assessing educational achievement or level of agreement/disagreement when facilitating community issues. Megan Reed and Stephanie Rose will provide this presentation. Turning Technologies will also have a booth in the exhibit area for individuals wanting further information.

- Ken Balliett and Lucy Bradley will provide a couple of uses of Web 2.0 technologies based on their experiences in their educational programming.
- Betsy Greene and Rick Koelsch will collaborate to provide insight into how to use eXtension in your educational programming. Both serve as members of successful communities of practice, playing a major role in the development of materials in the equine and poultry areas.

Thursday afternoon you have the option of either resting up for the banquet or further charging your mind by participating in a hands-on workshop in the computer classroom on using Web 2.0 technologies. This is offered by John Dorner who serves as the Technology Coordinator for NACAA and as an ex officio member of this committee.

The committee continues to utilize the findings from the 2007 survey in program planning and development.

Committee members for 2007-08 are Karen Vines, chair, representing the northeast region; Matt Hanson representing the north central region; Greg Hoover representing the southern region and Janet Schmidt representing the west region.

Program Recognition Council Chair

**Mike Hogan
Ohio**



The role of the Program Recognition Council is to implement the many awards and recognition programs sponsored by NACAA with financial support from partner donors. From the Distinguished Service and Achievement Awards to the Search for Excellence Recognitions, committees under the Program Recognition Council are responsible for coordinating all NACAA awards and recognition programs.

The Program Recognition Council consists of seven standing committees which conduct these awards programs. These committees and their respective committee chairs for 2008 include: Communications (Larry Williams, FL); Extension Programs (Brad Brummond, ND); 4-H and Youth (Sherry Beaty, AR); Professional Excellence (Charles Phillips, GA); Public Relations (Larry Moorehead, TN); Recognition and Awards (Todd Lorenz, MO); Scholarship (Chris Bruynis, OH).

These National Committee Chairs are the backbone of NACAA committee work, and it is only through their hard work and dedication that NACAA is able to conduct awards and recognition programs for its members. Some of these committees receive hundreds of applications from throughout the United States for specific awards programs. The National Committee Chairs would not be able to coordinate all of the awards and recognition programs without the many regional vice-chairs who serve the association by assisting with these committees. All of us as members owe these volunteer leaders of our association a debt of gratitude for their hard work and dedication. The terms of two of these National Committee Chairs will expire after this year's AMPIC in North Carolina. Charles Phillips will complete his term as Chair of the Professional Excellence Committee, and he will be replaced by Gary Zoubek of Nebraska. Larry Moorehead will also complete his term as Chair of the Public Relations Committee, and he will be replaced by Keith Mickler of Georgia.

The Program Recognition Council has worked jointly with the new Sustainable Agriculture Committee this past year. This new NACAA Committee has both a recognition and professional improvement component to its mission, so Brad Brummond, the Extension Programs Committee Chair is working with Michelle Infante, the Sustainable Agriculture Committee Chair to assist with the recognition portion of this committee's work.

As I mentioned above, some of the NACAA awards and recognition programs receive hundreds of applications from NACAA members throughout the country. Other NACAA awards programs, however, routinely receive far fewer applications. A need currently exists for additional NACAA members to apply for various NACAA awards programs, in order to maintain the financial support of donors for these programs. When the awards edition of *The County Agent* magazine hits your desk next winter, please make it a point to enter at least one of your quality programs in one of the many NACAA awards and recognition programs.

It has been a pleasure and a privilege to serve as Chair of the Program Recognition Council. During this first year of my term, many individuals have provided me with valuable guidance and support. I'd like to especially thank the seven National Committee Chairs noted above for their assistance, as well as Neil Broadwater, the previous Program Recognition Council Chair for his support.

Recognition and Awards

Todd Lorenz
Missouri



The association honored 66 NACAA members with the Distinguished Service Award (DSA) and 51 members with the Achievement Award (AA) in Greensboro. Four members or life members are recognized for the Hall of Fame Award. These members have shown excellence in their Extension work and educational programming locally and are also superior in association and humanitarian efforts.

This has been my 7th year on the Recognition and Awards team and I have watched the process grow from mailed hard copies of applications and photos to a Web-based process that we used for the first time this year. While in its infancy, we hope to continue to streamline this application process for a more efficient way of recognizing those so deserving of our praises. One such person most deserving our praises is John Dorner, our Electronic Communications Coordinator. Without his patience and persistence, we would not have advanced so quickly in this web-based process. My hat goes off to his dedicated service.

It is difficult to list all of those who are responsible but the State Chairs and Regional Vice-Chairs are instrumental in facilitating the Recognition and Awards process starting almost immediately after the meetings. The entire list can be found at <http://www.nacaa.com/committees/>.

This year marks the 40th year for American Income Life to be a sponsor of the recognition and awards breakfast for your award winners. In my years on this committee, Mr. Bill Viar, director of the Special Risk division, has always been there to represent AIL at the AM/PIC. Thanks go out to American Income Life and Mr. Bill Viar for their continued support of your association.

This year's Regional Vice-Chairs played a significant role in testing the new web-based process and providing improvements throughout this first year of use. Their dedication to serving the membership is greatly appreciated; they are professionals and it has been my pleasure to have been given the opportunity to work Larry Howard of Nebraska, Carol Schurman from Pennsylvania, Cynthia Gregg of Virginia, and Edward

Martin of Arizona. I look forward to working with them in the future.

Communications

Larry Williams
Florida



The communications Committee is pleased to report continued strong participation in the communications awards program for 2008. We are also pleased to report that Bayer Advanced has continued sponsorship of the Communications Awards Program for 2008.

We continue to have a large number of entries in the 14 communication award categories. The national level entries are evidence of the high quality of work and communications efforts that are being conducted by extension educators throughout the country. Our members are producing quality materials. Many of the judges at the national level report the difficulty in judging the entries due to consistent quality.

Ever changing technology is a “two-edged sword” creating some challenges but yet enabling us to do a more professional job. It is obvious that new technology offers extension users more options, greater flexibility and more convenience in accessing our information. This is having a positive impact on our clientele.

The Communications Committee asks that you take a few minutes to visit the posters of the winning entries in the poster display area. While there, you may even possibly gather some new ideas for your own communication efforts. The abstracts of the national winner, national and regional finalist for each category are published in the proceedings. These provide further opportunities to gain ideas improve our communication abilities and extension programming. It has been the practice of the national committee to hold onto the national winner in each category for a year so that states could borrow them to exhibit at their state meetings to encourage entries in the categories. The state chair needs to request that they be sent and then pay the return postage.

Many thanks go to the regional vice-chairs who have worked diligently over the past year or more. I appreciate their hard work to help make this program a success. I want to especially thank Julie Riley of Alaska and Geoffrey Njue of New Hampshire. This was their

second year as regional chairs. In addition to fulfilling her responsibility as the western region chair Julie took on the extra responsibility of handling the north central region entries in the absence of a north central chair. The north central chair position is currently open. Continuing southern region vice-chair Cindy Sanders of Florida did an outstanding job her first year. I look forward working with incoming northeast region chair Charles Schuster of Maryland and western region chair Jack Kelly of Arizona.

Extension Programs

Brad Brummond
North Dakota



It was another very good year for Extension Programs. I was reappointed to a two year term as Extension Programs Chair after having served one year of an unfilled term. I also had the same team of vice chairs to work with that I had last year and it certainly helped to work with veterans who know the process. We learned a few tricks from last year and the judging generally went better. We were much better able to identify non- NACAA applicants on our awards. We also had a much easier time working with the Search for Excellence in Sustainable Agriculture.

The other item of discussion was what to do with the Search for Excellence in Sustainable Agriculture. We looked at moving this program into the Sustainable Ag Committee. We have hit a snag as it is a Search for Excellence Program and that belongs to our committee but it is also a sustainable agriculture program and that expertise is in the Sustainable Agriculture Committee. Stay tuned as we are still trying to sort this out.

Our biggest challenge is the lack of applications. I would ask each state to have one application in each Search for Excellence award area for next year. You do good work so why not take a few moments and write an award application or pick up the phone and call a co-worker who has a great program and ask them to apply. If we could just do that we would see a huge increase in applications. We also need to increase our number of applications in the Search for Excellence in Sustainable Agriculture in the North Central and West Regions. We had one very fine application from each region but only one. The South and the Northeast regions had excellent numbers and quality. Any one of those applications could have been winners.

I would like to close by offering some tips on how to write an award winning application. 1) Follow the rules. We have around 20% of our applications who do not follow the rules. You cannot win a national award if you do not follow the rules. 2) Check and recheck your application before sending it in. Pay special attention to the abstract as this is where most people do not follow the rules. 3) The part of the application that is generally the weakest is the evaluation part. Show impact and conduct sound evaluations. What changed because of this program? You need to prove impact if you are going to win. It is just that simple.

I hope to see piles of applications next year. You can't win if you don't enter.

Professional Excellence

**Charles Phillips
Georgia**



The Professional Excellence committee is responsible for the peer review of poster abstracts and organizing the poster session at AM/PIC. NACAA continues to endorse the poster session as an important means of presenting Extension Programs and Applied Research results to its members. The Propane Education and Research Council (PERC) is the primary sponsor for 2008. They sponsored the awards breakfast once again this year.

All posters were peer reviewed at the regional level which is the responsibility of the Regional Vice-Chairs, all of whom have done an excellent job this year. The current regional Vice Chairs are Scott Jensen '09 Western region, Gary Zoubek '09, North Central Region, Forrest Connelly '08 Southern Region, and Virginia Rosenkranz '08 North East Region.

This year, we had 115 abstracts accepted for the meeting in Grand Rapids. There were 48 entries in the Applied Research category and 67 entries in Extension Education programs.

Awards were presented at the AM/PIC Poster Session Breakfast. The top three posters in each category received cash awards and plaques. Regional winners received a certificate.

One of the goals of the committee has been to improve the quality of poster entries. Vice Chairs worked with

the state chairs/presidents to ensure that posters and abstracts were of the highest quality. The abstracts were peer reviewed by at least two to three reviewers to determine whether or not the poster is acceptable. If a poster abstract was rejected, the author was given the opportunity to make corrections or improvements, so that it could be accepted.

This year the committee utilized more judges to reduce the amount of time it took for the judges to judge. This system reduced the amount of time that it took to judge the posters.

I would especially like to thank my fellow committee members for the fine job they have done. This is not the easiest assignment in NACAA. The Professional Excellence committee has to get the Poster Session set up, organized, judged, and finally recognized in a span of three days. It takes a lot of dedication and hard work to make this happen, and without the outstanding Vice Chairs on this committee, this would not happen.

Public Relations

**Larry Moorehead
Tennessee**



The Public Relations committee is responsible for conducting the PRIDE (Public Relations in Daily Efforts) program at the NACAA national meeting. The PRIDE program is a great way for NACAA members to highlight educational programs that exemplify the public relations aspect of extension work, as well as enhance the understanding of agriculture in their respective communities.

There were 9 entries in the PRIDE program this year. The entries were excellent examples of daily public relations work we all do in our roles as extension agents. There is a tremendous amount of work that is being done that would make excellent entries in the PRIDE program. We wish more agents would take the time to enter.

Congratulations to Mark Mechling of Ohio, who was our National winner this year and presented his program at our PRIDE luncheon. Congratulations also to Gregory Drake of Kentucky and Nicholas Polanin of New Jersey, our National finalists. Each received their awards at our luncheon. This is a great way for younger agents to see what other agents are doing.

A big thank you goes to Russ Higgins, North Central Region vice Chair, Larry Hull of Northeast Central Region vice Chair, Susan Kerr, Western Region, Vice Chair, J. Craig Williams, North East Region vice Chair, Marjorie Rayburn, Southern Region vice Chair and Robert Kattnig, Western Region vice Chair. These are the agents who got the work done.

We have two Vice Chairs rotating off this year; they are Majorie Rayburn, Southern Region, Russ Higgins, and North Central Region. I want to thank both these agents for their work the past two years. I also need to thank Neil Broadwater for all his help in keeping me straight and getting my reports in on time. You are a great leader and I can follow directions.

The Public Relations committee is looking forward to next year's challenge of getting more participation. We went up this year by 63% with 11 entries and hopefully we will get more next year. I want to challenge each agent to submit entries in NACAA awards programs especially. This is a great opportunity and all of you have done programs can are worthy of winning.

We will also have two Vice Chair positions, the Southern & North Central Region, that will be open for new agents. I encourage you to apply and help your national organization. It is a rewarding experience and you have a chance to work with great people from all over the United States.

I want to thank especially our new Pride sponsors The Soybean Association represented by Jack Reed and Keith Warden and the National Rural Electric Cooperation Association. If it were not for them our awards and luncheon would not be possible.

Life Member

Hal Tatum
Georgia



The 2007-2008 NACAA year came to a close on Thursday, July 17th. The Life Member Committee had a busy year.

The year began with a very productive meeting with the NACAA Board at the close of AM/PIC in Grand Rapids. The Plan of Work for the year was approved, and an action plan was made to improve communications between the Life Member Committee and the Board. Vice President Phil Pratt has been very helpful in providing a link with the NACAA Board.

The Regional Vice Chairs, Duane Duncan, Northeast; Kenneth Williams, Southern; Mike Stoltz, Western; and Don Utlaut, North Central; have been most helpful in keeping states informed concerning life member activities. Robert Hetrick (PA) was elected Northeast Vice Chair in Grand Rapids, but, due to serious health problems, asked to be replaced. Duane Duncan stepped in to fill out the rest of this year. However, it continues to be a problem getting states to appoint or elect a life member as the State Chair of the Life Member Committee. We need a state chair or an official contact for each state. We encourage active members to help find a life member contact for each state.

The committee continues to work on recruiting new retirees to become life members. Some state associations pay life member dues for new retirees at the time of their retirement. By doing so, the new retiree then becomes a part of the NACAA life member database, and the national association does not lose contact with members after they retire. If all state associations could pay the life member dues at retirement, it would solve the problem of losing touch with so many retirees. Another helpful tool is the Life Member Certificate. This can be presented at the time of retirement to encourage new retirees to become life members. The certificate is available from executive director Scott Hawbaker.

The program year was completed with an outstanding Life Member program in Greensboro. Thanks go to Bill Eller, Host Committee Life Member Chair, and his committee for providing a great meeting and wonderful North Carolina hospitality.

At the business meeting on Monday, July 14, Guilford County Forester, David Henderson, provided an inspirational memorial service to remember life members who had passed away during 2007 and 2008. The committee has honored the memory of NACAA members as a final tribute for the many years of educational and community service by county agents and extension educators.

On Tuesday, July 15, life members and spouses enjoyed a very grand breakfast buffet. The breakfast meeting was topped off by Bill Thompson, a NC native, who shared his favorite "front porch stories".

After the breakfast meeting, life members and spouses embarked on one of four tours planned for the day. There was something for everyone. The four tours were: Childress Vineyards and RCR Racing Museum, Old

Salem and Tanglewood Extension Arboretum, Mount Airy, and Seagrove Pottery and Southern Supreme Bakery.

A new program for Life Members at this year's AM/PIC was a travelogue. Elmer Olsen (OH) and Kenneth Williams (AR) shared their travel experiences to Australia, New Zealand, and the Fiji Islands. The pictures and presentations were enjoyed by the life members present. Hopefully another travelogue can be presented in Portland.

The 2008 AM/PIC provided plenty of opportunity for all attendees (Life Members included) to learn, to make new friends, to reconnect with old friends, and to find out about the many activities of NACAA. It was a good meeting and a good year.

Scholarship

Chris Bruynis
Ohio



The 2007 scholarship auction receipts totaled \$7,020. 50. There were 126 items donated by members and friends of NACAA for the auction. The two high selling items were a deer hunt provided Eddie Holland which brought \$2,000 and a ladies pearl necklace donated by J.R. Hofstetter Family purchased by Neil Broadwater for \$1,250. The money was turned over to the NACAA Educational Foundation. Thanks to everyone who donated or purchased an item. Also, my personal thanks to those individuals who helped with the setup, running and completion of the auction.

In addition to auction proceeds, two other projects resulted in additional donations to the NACAA Educational Foundation. The first is the Special Drawing event held during the auction. Tickets were sold throughout the meeting and at the auction for \$20. During the auction 6 tickets are drawn at regular intervals. The first 5 tickets are awarded \$100. The final ticket drawn is awarded \$1,000. Individuals must be present to claim the award. For those individuals whose name was not drawn, a \$20 donation was made to the NACAA Educational Foundation for each ticket purchased. In all 171 tickets were sold.

The second project is the sale of a commemorative NACAA Case Knife with embossed case. This knife is a three blade medium stockman knife produced by

Case Knife Company, USA. The handle is a jade green bone with the NACAA logo embossed on the blade of the knife. These knives are available during the AM/PIC meeting or through NACAA national office. The cost of the knife is \$45.

Proceeds from the two special projects totaled \$3,178. Bringing the total money raised for the NACAA Educational Foundation during the Buffalo AM/PIC was \$10,198.50.

For the 2006/2007 scholarship year, 21 scholarship applications representing 74 members were received. Of the 21 applications, 7 were group applications representing 60 members and the remaining 14 applications were from individuals. A total of \$51,588 was requested.

The NACAA Educational Foundation approved the funding of up to, but not to exceed \$24,799. The Scholarship Committee met on Sunday morning/afternoon of the Buffalo AM/PIC for approximately 5 hours. Members of the Scholarship Committee each had copies of all the applications for review prior to the meeting.

For the 2006/2007 scholarship year, the Scholarship Committee recommended 12 awards for a total of \$24,799. This broke down into \$1,750 for 2 individuals to continue their formal education, and \$23,049 for 6 groups and 4 individuals to participate in conferences, tours and meetings. The committee was unable to fund 9 requests.

The process of changing over the current database system to a web based system was completed and launched in 2008. The new system allows any member to check his/her donation levels, award levels and the amount of scholarship funds still available through the NACAA website. John Donner NACAA Electronic Communications Coordinator and Laura Watts were instrumental in implementing this switch. They deserve a word of thanks!

Members can now apply for scholarships electronically. Members can download the application form from the NACAA website, fill it out and e-mail their applications to the appropriate personnel for electronic signatures. Signatures of the state president, committee chair and extension administrator can be added by the respective person and forwarded on to the next. Once all signatures have been collected it can be forwarded onto the appropriate regional vice chair.

The Scholarship Committee would like to thank all members who have supported the scholarship fund through financial donations, auction item donations, and purchasing auction items, case knives, and special drawing tickets. It is through your support that allows the NACAA Educational Foundation to make scholarship awards possible.

Electronic Communications Coordinator

**John Dorner, IV
North Carolina**



Over the last year, I've been working with several committees, the state secretaries and the Executive Director to make their jobs and yours easier. The Member Database has continued to become more useful and I plan to make it even more so in the future.

The Membership Directory now makes it very easy to find contact information about any member. If you haven't tried it, click on "Member Database" from the NACAA Home Page at: www.nacaa.com.

This was the first time awards applications were submitted online. The state chairs reviewed the applications and approved them online, and passed them on to the regional vice-chairs and then on up to the national chair. This saved countless number of hours making copies, mailing forms and scanning photographs. This also made the creation of the awards book much faster and easier for the editor.

Proposals for presentations at the AM/PIC were also submitted, reviewed and selected online.

The scholarship awards and contributions information has been imported from the old (and confusing) database and updated so that when your name changes or you change states your information stays with you. You can also check your own contributions at: www.nacaa.com/scholarship/summary.php

Surely, there have been some bumps along the way, but I think the journey has been surprisingly smooth. We've made a lot of progress this year and expect to make a lot more next year.

Some of my plans for next year include:

- maintaining and making the website more useful

- improving the dues payment process
 - improving the awards process
 - improving the presentation proposal process
 - incorporate OpenID (so you can use your eXtension ID to log in)
 - add social networking information to the directory
 - creating a way for the Executive Director to collect and post new position announcements without going through the ECC. (visit "Position Openings" from the NACAA home page)
 - my ultimate goal for the next three years will be to create all the tools the next ECC will need - to make their job as easy as possible and reduce the technical knowledge needed to fulfill this position.
- If you have ANY suggestions for improving the web site or the Member Database, please let me know.

Journal of Extension

**Keith Mickler
Georgia**



I wish to take this opportunity to thank the NACAA officers and board for allowing me the opportunity to continue as representative for NACAA on the Journal of Extension Board (JOE).

This past year I represented NACAA at two JOE board meetings and one conference call with JOE board members representing other professional extension organizations. My first year on the board was quite a learning curve. In 2008 I was no longer the rookie on the board; I actually feel that I made some contributions and progress for NACAA along with learning how the complexity of the JOE board functions.

I currently serve as the Marketing and Public Relations Committee Chair. One element of marketing JOE is to make sure you know who JOE is. One way to do that is to have the JOE and Job Bank display at all national extension association meetings. You will find the JOE and Job Bank display in **booth number 1001** in Greensboro. Stop by and see JOE so we can discuss your opportunity to publish.

With that said I will say this, publishing in JOE is not as simple as publishing an article in the newspaper. All JOE submissions are sent out for peer review with high editorial standards and scholarly rigor. Not trying to brag on JOE, but if you get your article published in JOE consider that an immense achievement toward promotion.

As of May 22, 2008 106 submissions were received and reviewed with 16% being rejected as unsuitable for JOE, 49% returned to author for revision and 35% accepted review and publication. Currently there are 8 submissions waiting for review with 92 accepted submissions waiting to be published.

JOE has 70 active reviewers on the Peer Review Committee. JOE is still in need of reviewers, if you have an interest in becoming a peer reviewer for JOE please visit the JOE web site at www.joe.org/ques1.html#Q12 for more information.

Another function of JOE is the National Job Bank. The National Job Bank provides access to a broad range of faculty positions across teaching, research, extension and outreach as well as to other professional positions involving education, research and/or outreach missions. Outreach includes non-formal adult and/or youth education, continuing education, credit instruction, extension education, distance education, distance learning, service learning, civic engagement, economic and workforce development, or community-based education as well as extension programming in agriculture, natural resources, family and consumer science, 4-H/youth development and community and economic development.

A future JOE improvement coming down the pipeline is a redesigned web site for easier readability.

Please visit JOE often at <http://www.joe.org> and the National Job Bank at <http://jobs.joe.org>

Thanks to Past-President Chuck Otte, President Fred Miller, President-Elect Rick Gibson and all other NACAA board members for allowing me the continued opportunity to serve NACAA.

Please stop by the JOE booth while at the conference. JOE can be found in booth number 1001.

Executive Director

Scott Hawbaker
Illinois



It has been a pleasure serving as NACAA's Executive Director for this my ninth year. I do sincerely appreciate the trust and faith that the association has given me this past year, and I look forward to continuing my service to you.

One of my primary functions is to maintain relationships with current donors, and to assist the President-Elect in finding new donors and partners for your association. As economic times often turn downward, we have fortunately maintained outstanding donors to help support the functions of NACAA.

It is exciting to see the changes that NACAA has made over the last year, and I look forward to assisting the board in implementing new and improved ways to make your membership more rewarding.

Please feel free to contact the NACAA Headquarters for assistance with your association needs. During the year, I respond to over 1000 phone calls and emails in an effort to meet your needs as a member of NACAA.

Your NACAA board of directors is always seeking input on how they can better the association and the professional improvement opportunities provided to you as a member. NACAA can be reached at 252 N. Park Street, Decatur, IL 62523 - (217) 424-5144, Fax: (217) 424-5115, email: nacaaemail@aol.com or on the world wide web at <http://www.nacaa.com>.

**93rd ANNUAL MEETING and
PROFESSIONAL
IMPROVEMENT CONFERENCE of the
NATIONAL ASSOCIATION OF
COUNTY AGRICULTURAL AGENTS
July 13-17, 2008**

FRIDAY, JULY 11

7:00 am - **PRE-CONFERENCE LIVESTOCK TOUR**
Place: Entry F
Presiding: Gene Schurman, National Chair of
Animal Science Committee
Sponsored by: Alltech, Elanco Animal Health,
National Pork Board, and Prestage Farms

8:00 am- **NACAA Board Meeting**
5:00 pm **Place:** Edinburgh

SATURDAY, JULY 12

7:00 am - **PRE-CONFERENCE LIVESTOCK TOUR**
Place: Entry F

7:00 am- **PRE-CONFERENCE HORTICULTURE TOUR**
Sponsored by: Ball Horticulture Company

8:00 am- **NACAA Board Meeting**
3:00 pm **Place:** Edinburgh

Noon- **REGISTRATION**
8:00 pm **Place:** Prefunction Area I

1:00 pm - **Registration for 4-H Talent Revue**
5:00 pm **Place:** Prefunction Area I

6:00 pm- **4-H Talent Revue Orientation and Dinner**
9:00 pm **Place:** Guilford Ballroom ABC

SUNDAY, JULY 13

7:30 am-noon **4-H Talent Revue Rehearsal and Meal**
Place: Guilford Ballroom ABC

8:00 am- **REGISTRATION**
9:00 pm **Place:** Prefunction Area I

7:00am - **GRANDOVER GOLF OUTING**
1 pm **Vans leaving from Entry F**

9:00 am- **Commercial Exhibits & NACAA**
1:00 pm **Educational Exhibits Set Up**
Place: Prefunction Area III

9:00 am- **Regional Directors and Vice Directors**
Noon **Workshop**
Place: Edgewood
Presiding: James Devillier, NACAA Southern
Region Director

9:00 am- **Scholarship Selection Committee**
5:00 pm **Place:** St. Andrews

9:00 am- **NACAA Poster Set Up**
1:00 pm **Place:** Prefunction Area III

9:00 am- **Nominating Committee Meeting**
Noon **Place:** Olympia
Presiding: Chuck Otte, Past President

10:00 am- **PRAYER SERVICE**
11:00 am **Place:** Auditorium I
Presiding: Paul Walker

Noon- **Past National Officers and Board Luncheon**
2:00 pm **(Dutch treat)**
Place: Imperial A
Coordinator: Chuck Otte, Past President

1:00 pm- **COMPUTER TECHNOLOGY CENTER**
6:30 pm **Place:** Arrowhead

Noon- **National Committee Chairs and Vice Chairs**
2:00 pm **Luncheon and Workshop**
Place: Grandover
Presiding: Phil Pratt, NACAA Vice President
Sponsored by: Philip Morris, USA

1:00 pm- **COMMERCIAL EXHIBIT TRADE SHOW-**
6:00 pm **AND NACAA POSTER SESSION DISPLAY - OPEN**
Place: Prefunction Area III

2:30 pm - **BREAK**
3:00 pm **Place:** Prefunction Area III
Courtesy: F.A. Bartlett Tree Company

1:30 pm- **State Officers Workshop**
3:00 pm **Place:** Auditorium III
Presiding: Michele Hebert, Western Region
Director

1:30 pm- **Teaching and Educational Technologies**
2:40 pm **Hands-on Teaching Sessions**
Place: Pebble Beach
Topic: Beginning PowerPoint Workshop
Presenter: Susan Kerr

2:50 pm- **Teaching and Educational Technologies**
5:00 pm **Hands-on teaching Sessions**
Place: Pebble Beach
Topic: Intermediate Powerpoint Workshop
Presenter: Betsy Greene

2:00 pm- **Program Recognition Council Workshop**
5:00 pm **Place:** Sandpiper
Presiding: Mike Hogan, Council Chair

2:00 pm- **Extension Development Council Workshop**
5:00 pm **Place:** Tanglewood
Presiding: Michael Heimer, Council Chair

2:00 pm- **Professional Improvement Council Workshop**
5:00 pm **Place:** Heritage
Presiding: Tom Benton, Council Chair

2:00 pm- **Life Member Committee Meeting**
3:00 pm **Place:** Old North
Presiding: Hal Tatum, Life Member Chair

2:30 pm- **NACAA Educational Foundation Annual**
4:00 pm **Meeting**

	<p>and Board of Directors Meeting Place: Edinburgh Presiding: Curtis Grissom, Educational Foundation President</p>	<p>9:30 pm- 11:30 pm</p>	<p>HOSPITALITY (All rooms in Hotel Tower) Alabama/Georgia- Room 1663 Michigan- Room 1768 Minnesota- Room 1172 Missouri- Room 1268</p>
3:00 pm- 4:00 pm	<p>FIRST TIMER ORIENTATION AND RECEPTION Place: Blue Ashe Presiding: Tyrone Fisher Presenters: Chuck Otte, NACAA Past President & Karen Neill, Co-Chair NACAA AM/PIC (All first time attendees and their spouses invited)</p>		<p>10:00 pm</p> <p>North Carolina Meeting Place: Auditorium IV</p>
4:30 pm- 6:30 pm	<p>TASTE OF CAROLINA DINNER Place: Guilford Ballroom DEFG Sponsored by: RJ Reynolds Tobacco</p>		<p>MONDAY, JULY 14</p> <p>6:30 am- 7:45 am</p> <p>Voting Delegates Breakfast (By invitation) Place: Imperial BC Presiding: Leon Church, NACAA Secretary Sponsored by: NACAA</p>
5:30 pm-	<p>State President Rehearsal for Flag Ceremony Place: Guilford Ballroom ABC Presiding: Gary Pierce</p>	8:00 am- 5:00 pm	<p>REGISTRATION Place: Prefunction Area I</p>
6:00 pm – 6:15 pm	<p>National Leadership Rehearsal Place: Guilford Ballroom ABC Presiding: Fred Miller</p>	7:00 am- 7:00 pm	<p>COMPUTER TECHNOLOGY CENTER Place: Arrowhead</p>
6:00 pm- 6:45 pm	<p>Parents Orientation for Sons and Daughters Program Place: Auditorium I Presiding: Ross Young</p>	9:00 am- 6:00 pm	<p>COMMERCIAL AND NACAA EDUCATIONAL EXHIBITS OPEN Place: Prefunction Area III</p>
7:00 pm- 8:45 pm	<p>OPENING SESSION AND INSPIRATIONAL PROGRAM Place: Guilford Ballroom ABC Courtesy: Novartis Animal Health Presiding: Fred Miller, NACAA President Invocation: Mickey Cummings, Past NACAA President Remarks by Sponsor: Steve Boren, Novartis Animal Health Presentation of Colors – VFW Post 2087 Welcoming Comments & Pledge of Allegiance– Kirk Perkins, Chair, Guilford County Board of Commissioners National Anthem- Elizabeth Murphy Presentation of State Flags Musical Presentation: Georgia 4-H Clovers and Company Remarks and Introduction: Dr. James Zuiches, NC State Vice Chancellor for Extension & Engagement Inspirational Address: “Leadership that Leaves a Legacy”, General Henry H. Shelton Introduction of NACAA Board: Fred Miller Closing Announcements: Karen Neill, AM/PIC Co-Chair</p>	8:00 am- noon	<p>NACAA Poster Judging Place: Prefunction Area III</p>
		8:30 am - 4:30 pm	<p>4-H Talent Revue Rehearsal Place: Imperial D</p>
		8:00 am- 10:00 am	<p>GENERAL SESSION Place: Guilford Ballroom ABC Presiding: N. Fred Miller, NACAA President Comments: Beth Carroll, Senior Stewardship Manager, Syngenta Crop Protection Welcome: Dr. Johnny Wynne, Dean of the College of Agriculture and Life Sciences, NC State University Introductions: National Committee and Council Chairs, Special Assignments, and Executive Director Greetings from JCEP Report to the Association, N. Fred Miller Recognition of Donors and Introduction of New Programs: Rick Gibson, NACAA President Elect Presentation by Bidding States for 2012 AM/PIC Hall of Fame Awards Presentation Keynote Address: “Sustaining Agricultural Productivity: The Grandest of the Grand Challenges” Dr. Colien Hefferan, Administrator of Cooperative State Research, Education, and Extension Service Closing Comments: Mark Tucker, AM/PIC Co-chair</p>
9:00 pm- 9:30 pm	<p>ICE CREAM SOCIAL Place: Guilford Ballroom DEFG Sponsored by: Virginia Association of County Agricultural Agents</p>	10:00 am- 10:20 am	<p>BREAK Place: Prefunction Area III Sponsored by: North Carolina Soybean Producers Association</p>
9:00 pm- 11:00 pm	<p>STATE PICTURES (See schedule in back of program) Place: Prefunction Area I</p>	10:30 am- 11:40 am	<p>TRADE TALK CONCURRENT SESSIONS</p>

Animal Science

Place: Auditorium IV
Pfizer Animal Health, Novartis Animal Health, Intervet/Schering Plough, Fort Dodge Animal Health, Elanco Animal Health, Alltech.

Horticulture

Place: Auditorium II
Bayer Advanced

Crop Science/Agronomy I

Place: Auditorium III
Monsanto, Specialty Fertilizer Products, Inc., Dow AgroScience, Qualisoy

Crop Science/Agronomy II

Place: Auditorium I
United Soybean Board, Pennington Seed, PERC – Propane Education Research Council

11:45 am -
1:15 pm

PRIDE Luncheon (Tickets Required)

Place: Imperial E
Presiding: Larry Moorehead, Public Relations Committee Chair
Speaker: Mark Mechling
Topic: "How Farm-City Days Benefit Extension Programs"
Speaker: B.J. Jarvis
Topic: "Marketing Extension Programs to Decision-makers and Elected Officials"
Sponsored by: United Soybean Board and National Rural Electric Cooperative Association

11:45 am -
1:15 pm

MEET THE AUTHORS POSTER SESSION

Place: Prefunction Area III

11:45 am –
1:15 pm

First Time Attendee Luncheon (Tickets Required)

Place: Imperial GH
Presiding: Tyrone Fisher
Speaker: Rett Davis, Retired NC Agricultural Agent

Sponsored by: Phil Niemeyer, President, NASCO International

11:45 am -
1:15 pm

Professional Improvement and Search for Excellence Luncheons (Tickets Required)

Crop Production

Place: Augusta
Presiding: David Harrison
Program: "Integrated Blackbird Management in Sunflowers"
Presenter: Nels Peterson, North Dakota
Sponsored by: QUALISOY

Farm and Ranch Management

Place: Grandover East
Presiding: Brad Brummond
Program: "Virginia Regional Market Analysis and Economic Outlook Seminars Utilizing the Internet as an Interactive Delivery System"
Presenter: Michael T. Roberts, Virginia
Sponsored by: Specialty Fertilizer Products, LLC

Landscape Horticulture

Place: Grandover West
Presiding: Dick Brzozowski
Program: "Master Gardener Water Conservation Outreach Program"
Presenter: Larry Sagar, Utah
Sponsored by: TruGreen ChemLawn

4-H and Youth

Place: Imperial F
Presiding: Sherry Beaty
Program: "Agriculture Reality Store"
Presenter: John Grimes, Ohio
Sponsored by: Robert Fowler, III

11:45 am -
1:15 pm

EDUCATIONAL LUNCHEON SEMINARS (Tickets Required)

Place: Victoria BC
Program: "Expanding Markets for Local Farm Products"
Presenter: Charlie Jackson, Executive Director, Appalachian Sustainable Agriculture Project
Sponsored by: Sustainable Agriculture Research and Education (SARE)

Place: Imperial C
Program: "Current Status of Anthelmintic Resistance in Cattle"
Presenter: Dr. Tom Yazwinski, University of Arkansas
Sponsored by: Fort Dodge Animal Health
Place: Imperial AB
Program: "Invasive Species Biology, Management, Regulations & Economics"
Presenters: Anand B. Persad PhD., BCE, The Davey Institute, Kent, Ohio
Sponsored by: Davey Tree Expert Company

Place: Blue Ashe
Program: "Producing High Quality, High Yielding Crops"
Presenter: Vern Hawkins, Vice President, US Commercial Operations
Sponsored by: Syngenta Crop Protection

1:30 pm -
2:30 pm

COMMITTEE WORKSHOPS FOR ALL NACAA MEMBERS

"How to Host an AM/PIC"
Place: Turnberry
Presiding: Mark Tucker and Karen Neill

Communications
Place: Tanglewood
Presiding: Larry Williams

Extension Programs
Place: Olympia
Presiding: Brad Brummond

4-H & Youth
Place: Heritage A
Presiding: Sherry Beaty

Professional Excellence
Place: Pinehurst

	Presiding: Charles Phillips	North Central Place: Grandover West
	Public Relations	Northeast Place: Victoria B
	Place: Marsh Harbor	Western Place: Victoria C
	Presiding: Larry Moorehead	
	Recognition & Awards	4:45 pm- "GOT TO BE NC DINNER"
	Place: St. Andrews	7:00 pm Buses leaving every 20 minutes from
	Presiding: Todd Lorenz	Entrance G – last bus leaves at 6:10 PM
	Scholarship	Place: NC A&T Alumni Center
	Place: Links	Sponsored by: North Carolina Commodity
	Presiding: Chris Bruynis	Associations and North Carolina Department of
	Agronomy & Pest Management	Agriculture and Consumer Services
	Place: Sandpiper	
	Presiding: Edward Johnson	7:30 pm- 4-H TALENT REVUE
	Agricultural Economics & Community	9:00 pm Place: Guilford Ballroom ABC
	Development	Sponsored by: BB&T
	Place: Tidewater A	
	Presiding: Mary Sobba	9:00 pm- ICE CREAM SOCIAL
	Animal Science	10:00 pm Place: Guilford Ballroom DEFG
	Place: Augusta	Sponsored by: Kansas Association of County
	Presiding: Gene Schurman	Agricultural Agents
	Natural Resources/Aquaculture	
	Place: Tidewater B	9:30 pm- HOSPITALITY (All rooms in Hotel Tower)
	Presiding: Bill Sciarappa	11:30 pm Alabama/Georgia- Room 1663
	Horticulture and Turf Grass	Michigan- Room 1768
	Place: Colony B	Minnesota- Room 1172
	Presiding: James Hruskoci	Missouri- Room 1268
	Public Relations and Agricultural Issues	Oklahoma- Room 1760
	Place: Colony A	Oregon- Room 1568
	Presiding: Dan Downing	South Carolina- Room 1472
	Early Career Development	9:30 pm- STATE PICTURES
	Place: Pebble Beach	11:00 pm Place: Prefunction Area I
	Presiding: Mark Nelson	(See Schedule in Back of Program)
	Administrative Skills Development	10:00 pm North Carolina Meeting
	Place: Heritage B	Place: Auditorium IV
	Presiding: Jerry Warren	
	Teaching and Educational Technologies	TUESDAY, JULY 15
	Place: Colony C	6:30 am- Administrators' Breakfast
	Presiding: Karen Vines	7:45 am (By invitation)
1:30 pm	Life Members Business Meeting	Place: Grandover East
3:00 pm	Place: Victoria A	Presiding: Chuck Otte
	Presiding: Hal Tatum	
1:30 pm-	Agriculture and Natural Resources Program	7:00 am - Achievement Award Recognition Breakfast
5:00 pm	Leaders Meeting	8:00 am Place: Imperial BC
	Place: Edinburgh	Presiding: Todd Lorenz, Chair,
	Presiding: Ed Jones	Recognition & Awards Committee
2:30 pm-	BREAK	Sponsored by: American Income
3:00 pm	Place: Prefunction Area III	Life Insurance Company
	Sponsored by: Corn Growers Association of	
	North Carolina, Inc.	6:30 am – Poster Session Breakfast
3:00 pm-	REGIONAL MEETINGS AND CANDIDATE	7:45 am Place: Imperial FG
5:00 pm	PRESENTATIONS	Presiding: Charles Phillips, Chair,
	Southern Place: Guilford D	Professional Excellence Committee
		Sponsored by: Propane Education and Research
		Council
		Host: Mark Leitman, Director of Agricultural
		Programs
		7:00 am - COMPUTER TECHNOLOGY CENTER OPEN
		4:30 pm Place: Arrowhead
		8:00 am - REGISTRATION
		5:00 pm Place: Prefunction Area I

8:30 am - 11:30 am	<p>Delegate Session Place: Victoria A Presiding: N. Fred Miller, NACAA President Invocation: Phil Pratt, NACAA Vice President Delegate Roll Call: Leon Church, NACAA Secretary Nominating Committee Report: Chuck Otte, NACAA Past President Election of Officers Selection of 2012 AM/PIC Site Greetings from JCEP NACAA Foundation Report Scholarship Committee Report Treasurer's Report and Adoption of Budget, Paul Wigley, NACAA Treasurer Confirmation of Committee Appointments, Phil Pratt New Business Proposed By-laws Change Remarks, Rick Gibson, NACAA President-Elect</p>	<p>Program 3: 10:30 "Utilizing eXtension in Your Local Program" Presenters: Betsy Greene & Rick Koelsch</p>
		<p>8:30 am - 11:30 am</p> <p>Extension Development Seminar Public Relations & Ag Issues Workshop Presiding: Dan Downing Place: Augusta B Program: Panel Discussion Presenters: Melvin Brees – Food and Agricultural Policy Institute – University of Missouri – "Economic Factors" Dr. David Brune – Agricultural and Biological Engineering - Clemson University – "Bio-based Fuels and Environmental Implications" Petroleum Company representatives (invited) - "A Corporate Perspective on Bio-based Fuels"</p>
		<p>10:00 am- 10:30 am</p> <p>BREAK Place: Prefunction Area III Sponsored by: Forsyth County Farm Bureau</p>
8:30 am - 11:30 am	<p>Extension Development Council Seminar Administrative Skills Workshop Place: Auditorium IV Presiding: Jerry Warren Program 1: 8:30 "Extension Board Development" Presenter: Gary Zoubek Program 2: 9:15 "Identifying Programmatic Opportunities for Extension through Focus" Presenter: Howard J. Siegrist BREAK Program 3: 11:00 "Promoting Community Development by Training Advanced Master Gardeners in Administrative Skills" Presenter: Larry Sagers</p>	<p>9:00 am- 4:00 pm</p> <p>COMMERCIAL EXHIBITS AND NACAA EDUCATIONAL EXHIBITS OPEN Place: Prefunction Area III</p>
		<p>9:00 am- 4:00 pm</p> <p>NACAA POSTER SESSION OPEN Place: Prefunction Area III</p>
8:30 am - 11:30 am	<p>Extension Development Council Seminar Early Career Development Workshop Place: Pebble Beach Presiding: Mark Nelson Program 1: 8:30 am "Early Career Development - Tricks of the Trade" Presenter: Ron Torell Program 2: 9:15 "Balancing the Political Demands of a County Extension Director Position" Presenter: Chris Bruynis BREAK Program 3: 10:30 "Getting the Most Out of Mentoring" Presenter: Dan Kluchinski Evaluations</p>	<p>11:45 am- 1:15 pm</p> <p>State Presidents and Vice Presidents Luncheon Place: Imperial C Presiding: Rick Gibson, President Elect</p>
		<p>11:45 am- 1:15 pm</p> <p>Communication Awards Luncheon Place: Imperial D Presiding: Larry Williams, Communications Committee Chair Sponsored by: Bayer Advanced</p>
8:30 am - 11:30 am	<p>Extension Development Council Seminar Teaching & Educational Technologies Workshop Presiding: Karen Vines Place: Colony B</p> <p>Program 1: 8:30 am "Turning Point Audience Response System" Presenters: Megan Reed & Stephanie Rose Courtesy: Turning Technologies Program 2: 9:15 "Web 2.0 Technologies" Presenters: Ken Balliett and Lucy Bradley BREAK</p>	<p>11:45 am- 1:15 pm</p> <p>Search for Excellence in Livestock Production Luncheon and Awards Program Place: Imperial A Presiding: Tipton Hudson Program: "Oklahoma Meat Goat Boot Camp" Presenter: James E. Jones, Oklahoma Sponsored by: North Carolina Association of County Agricultural Agents and Monsanto</p>
		<p>11:45 am- 1:15 pm</p> <p>Search for Excellence in Remote Sensing and Precision Agriculture Luncheon Place: Imperial B Presiding: Brad Brummond Program: "Educating Youth about Global Positioning Systems and Compass Using Train the Trainer Methods" Presenter: Gary Wyatt, Minnesota Sponsored by: Utah State University</p>
		<p>11:45 am- 1:15 pm</p> <p>Search for Excellence in Young, Beginning or Small Farms/Rancher Program Place: Imperial FG Presiding: Jerry Clark Program: "Beginning Beekeeper Workshop" Presenter: Greg Drake, Kentucky</p>

Sponsored by: Farm Credit System Foundation, Inc.

11:45 am -
1:15 pm

EDUCATIONAL LUNCHEON SEMINARS

Place: Grandover East
Program: "Youth Resources Galore"
Presenter: Deborah Johnson, Executive Director, North Carolina Pork Council
Sponsored by: North Carolina Pork Council

Place: Blue Ashe
Program: "Technological Solutions to Problems Associated with Application of Pesticides"

Presenter: Dr. Erdal Ozkan, Professor, Ohio State University
Sponsored by: Jacto, Inc

Place: Grandover West
Program: "Financing Rural America"
Presenters: Chad M. Puryear, Vice President Commercial Ag Division, Piedmont Farm Credit
Sponsored by: Farm Credit Group (Ag First, Carolina Farm Credit, AgCarolina Financial),

Place: Victoria BC
Program: "SARE-funded Research at the Center for Environmental Farming Systems: Grafting Heirloom Tomatoes for Disease Resistance in Intensive Farming Systems"
Presenters: Dr. Mary Peet, North Carolina State University, Dr. Frank Louws, North Carolina State University, and participating farmers
Sponsored by: Sustainable Agriculture Research and Education (SARE)

1:30 pm-
3:30 pm

JCEP Seminar

Place: Auditorium II
Program: "Be an Agent of Change"
Presenters: JCEP Traveling Team
Karen Hatch Gagne, NAE4-HA
Kathy Dothage, NEAFSC
Duane Johnson, ESP
Rick Gibson, NACAA
Andrew Londo, ANREP

1:30 pm-
4:00 pm

PROFESSIONAL IMPROVEMENT COUNCIL SEMINARS

Agronomy and Pest Management I
Place: Auditorium III
1:30 pm "Monitoring Biomass for Use as Bio-Fuels"
Presenter: Wade Parker
2:00 "Sweet Sorghum as a Potential Bio-energy Crop in Southwest Louisiana"
Presenter: William Hogan
2:30 "Forage Yield and Nutritive Value of Selected Cool Season Forages under Varying Rates of Nitrogen"
Presenter: Sam Angima
3:00 pm BREAK

3:30 "2007 Irrigated Safflower Variety and Planting Rate Trial in Northern Utah"

Presenters: Clark Israelsen and Mike Pace
4:00 "Louisiana Sweet Potato Research Verification Program: Goals, Objectives, and Preliminary Results"

Presenter: Tara Smith

4:30 "Supporting Nutrient Management Practices for Small Farms in the New York City Watershed"
Presenter: Dale Dewing

Agronomy and Pest Management II

Place: Auditorium I

1:30 pm "A Simple and Powerful Tool to Help with Boom Sprayer Calibration Calculations"

Presenter: Ron Patterson

2:00 "2007 Arkansas Corn and Grain Sorghum Research Verification Program"

Presenter: Kevin Lawson

2:30 "Michigan Soybean Yield Contest as a Part of the Michigan Soybean 2010 Project"

Presenter: Ned Birkey

3:00 pm BREAK

3:30 "An Assessment of Selected Fungicides on Disease Progress of Soybean Rust and Other Diseases of Soybean in Louisiana"

Presenter: Boyd Padgett

4:00 "Evaluation of Yield and Growth Response of Wheat Following Rice or Soybean in Arkansas"

Presenter: Craig Allen

4:30 "On-farm Testing in Today's Environment to Solve Agronomic and Pest Management Problems"

Presenter: Aaron Esser

Ag Economics I

Place: Heritage A

1:30 pm "Farm Succession and Estate Planning with Personal Coaching for Participating Families"

Presenter: Brian Tuck

2:00 "Money on the Table"

Presenter: Sandra Buxton

2:30 "Crop Insurance, How Boring! Not if You Demo It Right"

Presenter: J. Craig Williams

3:00 pm BREAK

3:30 "Louisiana Sweet Potato Verification Program: Goals, Objectives, and Preliminary Results"

Presenter: Myrl Sistrunk

4:00 "Econo-Range, an Analysis Tool for Determining the Economic Feasibility of Rangeland Improvements"

Presenter: Bridger Feuz

4:30 "Delivering Annie's Project Electronically"
Presenter: Willie Huot

Ag Economics II

Place: Heritage B

1:30 pm "Enhancing Farm Market Profitability with Quality Cut-Sunflowers"

Presenter: Jenny Carleo

2:00 "Economics of Organic, Grazing, and Confinement Dairy Farms"

Presenter: Tom Kriegl
2:30 "Utilizing Experiential Learning Methods to Teach Practical Direct Marketing Skills to Small Farm Businesses"
Presenter: Theresa J. Nartea
3:00 BREAK
3:30 "Tri-State Organic IPM Video Series" (Sustainable Agriculture)
Presenter: Alan Sundermeir
4:00 "The Delaware County No-Till Initiative" (Sustainable Ag)
Presenter: Paul Cerosaletti

Animal Science I

Place: Victoria A
1:30 pm "Northeast Katahdin Hair Sheep Upgrade Project"
Presenter: Richard Brzozowski
1:45 "Value Added Direct Marketing Lamb Project for Adult and Youth Programs"
Presenter: Robert Mickel
2:00 "Identifying Milk Quality Limitations with Specialized Data Analysis Tools"
Presenter: Robert Goodling
2:15 "Using Dairy Manure Solids as Bedding"
Presenter: Mary Schwarz
2:30 "Livestock Field Days: An Experiential Learning Tool for Youth Producers"
Presenter: Mark D. Heitstuman
2:45 "A Pregnancy Ketosis Teaching Tool for Small Ruminant Educators"
3:00 pm BREAK
3:30 "Marketing Meat Goats in New Jersey"
Presenter: Stephen Komar

Animal Science II

Place: Meadowbrook
1:30 pm "Working Together to Produce and Market Beef Cattle in Southern Virginia"
Presenters: C. Taylor Clark and Cynthia L. Gregg
1:45 "Adding Value through the Monroe County Heifer Evaluation and Reproductive Development Program"
Presenter: John Pope
2:00 "Missouri Show-Me Quality Assurance Program Reaches Youth with Livestock Projects through Multiple Formats"
Presenter: Arnie Schleicher
2:15 "IPM Demonstrations in Livestock Production"
Presenter: Rebecca Thomas
2:30 "Mixing Fire Ant Baits with Fertilizer as an Economic Alternative to Controlling Imported Fire Ants"
Presenter: H. D. Dorough
2:45 "Long Distance Neighbors – Northern Utah Producers Donate Hay to Southern Utah Rancher Impacted by Wildfires"
Presenter: Clark Israelsen
3:00 pm BREAK
3:30 "Lost Rivers Grazing Academy"
Presenter: Scott Jensen
3:45 "Grazing School for Horse Owners Seeks to Meet Educational Needs of Alabama Horse Industry"

Presenter: M. Kent Stafford

Natural Resources/Aquaculture/Sea Grant I

Place: Tidewater A
1:30 pm "Ecosystem Monitoring to Evaluate Grazing Plan Influence on Rangeland Health"
Presenter: Tipton Hudson
1:50 "Working with Animal Feeding Operations to Implement Best Management Practices"
Presenter: Michael L. Christian
2:10 "Barriers and Opportunities for Low Impact Development: Case Studies from Three Oregon Communities"
Presenter: Derek Godwin
2:30 "Cossatot Forestry Clinic: A Collaborative Effort to Educate People in Howard, Polk and Sevier Counties"
Presenter: Sherry Beaty
2:50 "Income Opportunities with Botanical Herbs"
Presenter: Bill Worrell
3:10 Evaluations and Adjourn to BREAK

Natural Resources/Aquaculture/Sea Grant II

Place: Tidewater B
1:30 pm "What the Bay Hinges on: Teaching Ecology and Stewardship Through Shellfish Restoration"
Presenter: Cara Muscio
1:50 "Capture the Flow and Watch it Grow – Demonstration Rain Gardens in Northwest Arkansas"
Presenter: Katie Teague
2:10 "Remediating Stormwater Runoff with Manufactured Treatment Devices, Agricultural Management Practices, and Rain Gardens"
Presenter: William Sciarappa
2:30 "Tracking Human Pathogens with Optical Brighteners"
Presenter: Cara Muscio
2:50 "Successful Land Use Planning Education Addressing Multiple Jurisdictions"
Presenter: Neil A. Clark
3:10 Evaluations and Adjourn to the BREAK

Horticulture and Turf Grass

Place: Colony A
Session 1 Master Gardeners
1:30 pm "Building the Capacity of the Yavapai County Master Gardener Program"
Presenter: Jeff Schalaus
2:00 "Making Gardens More Productive Through Advanced Master Gardener Training"
Presenter: Larry Sagers
2:30 "Teaching Math, Science, History, etc. Through Junior Master Gardeners"
Presenter: Miles Brashier
3:00 pm BREAK
3:30 "Bringing Master Gardeners to Costa Rica"
Presenter: D.F. Culbert
4:00 "Developing Funding, Coalitions and Support for a Public Botanical Garden"
Presenter: J.L. Goodspeed
4:30 "Crash Course in Florida Gardening"
Presenter: Rebecca Jordi

Session 2 Lawns and Landscapes**Place:** Colony BC**1:30 pm** "Arkansas Common Landscape Problems"**Presenter:** Sherri Sanders**2:00** "North Georgia Turfgrass Field Day"**Presenter:** Billy Skaggs**2:30** "The Effectiveness of Predatory Mites in the Landscape"**Presenter:** Mary Elizabeth Henry**3:00 pm BREAK****3:30** "Southeast Louisiana Nursery Association Marketing Efforts"**Presenter:** Anne Coco**4:00** "Developing Certified Arborists for Proper Community Tree Care"**Presenter:** D.B. Holmes**4:30** "The Michigan Garden Plant Tour – Increasing Floriculture Sales"**Presenter:** Tom Dudek**Session 3 Fruits, Vegetables, and More****Place:** Turnberry**1:30 pm** "Insuring the Future of Pollination in Pennsylvania"**Presenter:** Thomas Butzler**2:00** "Microbial Food Safety Training for the Produce Industry in New Jersey"**Presenter:** Wesley Kline**2:30** "Financially Self-supported Onion Research in Nebraska"**Presenter:** James Hruskoci**3:00 pm BREAK****3:30** "An Evaluation Program for Plant Materials in South Carolina"**Presenter:** Bob Polomski**4:00** "The Plant Science Center, a Resource for Southwest Arizona"**Presenter:** Rob Call**4:30** "The Garden Academy – Meeting the Needs of a Growing Clientele"**Presenter:** Willie Chance

2:30 pm-

Break

3:20 pm

Place: Prefunction Area III**Sponsored by:** Guilford County Farm Bureau

3:30 pm -

Commercial Exhibits and Posters close and take down

5:00 pm

5:30 pm

STATES NIGHT IN!!! (Tickets Required)**Place:** Guilford Ballroom**Welcome:** James Devillier, NACAA Southern Region Director**Comments:** David Herring, AgCarolina Financial Chad Puryear, Carolina Farm Credit**Sponsored by:** Southern Region State Associations

7:00 pm

SILENT AND LIVE SCHOLARSHIP AUCTION PREVIEW**Place:** Guilford Ballroom

8:00 pm

LIVE SCHOLARSHIP AUCTION**Place:** Guilford Ballroom

10:00 pm

North Carolina Meeting**Place:** Auditorium IV**WEDNESDAY, JULY 16**

6:15 am-

ASSEMBLE FOR PROFESSIONAL

9:00 am

IMPROVEMENT TOURS**(Arrive 30 minutes before tour departure time printed on ticket)****Place:** Guilford Ballroom DEFG**BREAKFAST (PROVIDED ON BUS)****Sponsored by:** North Carolina Farm Bureau

6:45 am -

PROFESSIONAL IMPROVEMENT TOURS

6:00 pm

4:45 pm

Shuttle buses will leave Koury Convention Center to take people not participating in tours to the Dixie Classic Fairgrounds.

Place: Entry F

5:00 pm

NORTH CAROLINA BBQ**Place:** Dixie Classic Fairgrounds, Winston-Salem, NC**Sponsored by:** NC Pork Council

10:00 pm

North Carolina Meeting**Place:** Auditorium IV**THURSDAY, JULY 17**

7:00 am -

National Committee Members Breakfast

8:30 am

Recognition of Retiring Chairs, Vice Chairs and Special Assignments**Place:** Imperial BC**Presiding:** Phil Pratt, NACAA Vice President**Sponsored by:** United Soybean Board

7:00 am -

FELLOWSHIP OF CHRISTIAN FARMERS

8:30 am

INTERNATIONAL PRAYER BREAKFAST (Tickets Required)**Place:** Imperial A**Presiding:** Paul Walker, North Carolina**Sponsored by:** Fellowship of Christian Farmers International

7:00 am -

COMPUTER TECHNOLOGY CENTER

4:00 pm

Place: Arrowhead

9:00 am-

REGISTRATION

5:00 pm

Place: Registration Desk III & IV

8:00 am-

COFFEE/TEA BREAK

8:30 am

Place: Prefunction Area III**Sponsored by:** Kentucky Association of County Agricultural Agents and Ohio Association of Extension Professionals

8:30 am-

NACAA Policy Meeting

10:00 am

Place: Torrey Pines

8:30 am-

GENERAL SESSION

10:30 am

Place: Guilford Ballroom ABC**Presiding:** N. Fred Miller, NACAA Pres.**Outstanding Service to American and World Agriculture Award**

Presentation and Response: John M. Woodruff

Looking Ahead to the New Year: Rick Gibson, NACAA President Elect
Recognition of Retiring Officers and Installation of Incoming Officers, Directors and Vice Directors Comments and Introduction: Dr. Jon Ort, Assistant Vice Chancellor, Associate Dean and Director, North Carolina Cooperative Extension
Capstone Speaker: “How the World is Changing”, Dr. James H. Johnson, Director, Urban Investment Strategies Center
Announcements: Karen Neill

10:45am-11:45 am “How the World is Changing” Workshop
Presenter: Dr. James Johnson, Director, Urban Investment Strategies Center (Space Limited)
Place: Auditorium II

10:45 am-2:30 pm **SUPER SEMINARS (including Lunch – Tickets Required)**
A. Sustainable Agriculture:
Place: Victoria A
Topic 1: “NC Choices – Linking Sustainable Pork Producers Directly with Consumers”
Presenters: Jennifer Curtis, Executive Director, NC Choices, plus a panel of 3 NC Choices farmers
Topic 2: “Extension and the “New American Farmer”: the Opportunities Were Never Greater!”
Presenters: Dr. John Ikerd, Professor Emeritus of Agricultural Economics, University of Missouri, Columbia
Sponsored by: SARE

B. Extension Disaster Education Network (EDEN): Animal Agrosecurity and Emergency Management
Place: Victoria BC
Presenters: Dr. Ed Jones, NC State University, Andrea Husband and Ricky Yeorgan, University of Kentucky.
Sponsored by: NCSU Agricultural Foundation

C. Urban Water Quality Issues
Place: Grandover East
Presenters: Dr. Greg Jennings and Dr. Bill Hunt, NC State University, and agents from NC, SC and Texas.
Sponsored by: Contech Solutions

11:45 am-1:30 pm **Search for Excellence Luncheon- Sustainable Agriculture**
Place: Grandover West
Presiding: Brad Brummond and Michelle Casella
Topic 1: “Creation of a Local and Sustainably Managed Foodshed on Maryland’s Eastern Shore”
Presenter: Laura Hunsbarger, Maryland
Topic 2: “Integrated Cropping Systems Management: Extension Programs for Sustainable Dryland Farming in the Northern Great Plains”
Presenter: Terry Angvick, Montana

Topic 3: “Impact of Teaching Soil Quality Concepts in a Hands-on Workshop Using Post-Event Multi-media Technology”
Presenter: Bruce Clevenger, Ohio
Topic 4: Beginning Beekeeper Workshop Shortcourse
Presenters: Greg Drake and Carol Schreiber, Kentucky
Sponsored by: SARE

10:45am-12:15 pm **EDUCATIONAL LUNCHEON SEMINARS (Tickets Required)**
“Fibrowatt-Alternative Litter Management Solution”
Place: Imperial D
Presenter: Eric Jenkins, VP Commercial Development, Fibrowatt, LLC
Sponsored by: Fibrowatt, LLC

“Improving Nitrogen Efficiency in Urea-based Fertilizer Products”
Place: Imperial C
Presenter: John Hassell
Sponsored by: Agrotain International

1:30 pm-5:00 pm **Teaching and Educational Technologies – Hands- on Teaching Sessions**
Place: Pebble Beach
Topic: Working in Web 2.0 Workshop
Presenter: John Dornier

1:30 pm-4:00 pm **American Registry of Professional Animal Scientists Certification Exam**
Place: Colony A

3:30 pm **NACAA Board in President’s Room**

5:30 pm-6:30 pm **DSA & AA Recipients, Hall of Fame Recipients, NACAA Board Members, Region Directors, Past Officers, Special Assignments, Special Guests, Council Chairs, Committee Chairs and Vice Chairs Assemble for Banquet**
Place: Guilford Ballroom DE

6:30 pm-9:00 pm **ANNUAL BANQUET - (Tickets Required)**
Place: Guilford Ballroom ABC

9:15 pm-11:00 pm **PRESIDENT’S RECEPTION**
Place: Guilford Ballroom DE
Sponsor: North Carolina Agricultural Foundation

10:00 pm **North Carolina Meeting & Celebration**
Place: Auditorium IV

FRIDAY, JULY 18
8:00 am-5:00 pm **NACAA Board Meeting**
Place: Edinburgh

SATURDAY, JULY 19
8:00 am-Noon **NACAA Board Meeting**
Place: Edinburgh

LIFE MEMBER PROGRAM 2008 NACAA ANNUAL MEETING

SATURDAY, JULY 12

Noon - **REGISTRATION**
8:00 pm **Place:** Prefunction Area I

SUNDAY, JULY 13

8:00 am- **REGISTRATION**
9:00 pm **Place:** Prefunction Area I

2:00 pm- **LIFE MEMBER COMMITTEE MEETING**
3:00 pm **Place:** Old North
Presiding: Hal Tatum, Life Member Chair

Noon- **Past National Officers and Board Luncheon
(Dutch Treat)**
2:00 pm **Place:** Imperial A
Coordinator: Chuck Otte, Past President

1:00 noon - **LIFE MEMBER AND SPOUSES HOSPITALITY**
5:00 pm **Place:** Room 1761

1:00 pm - **NACAA POSTER SESSION DISPLAY - OPEN**
6:00 pm **Place:** Prefunction Area III
Coordinator: Charles Phillips, Professional Excellence Chair

1:00 pm- **COMMERCIAL EXHIBIT TRADE SHOW**
6:00 pm **Place:** Prefunction Area III

4:30 pm- **TASTE OF CAROLINA DINNER**
6:30 pm **Place:** Guilford Ballroom DEFG
Courtesy: RJ Reynolds Tobacco

7:00 pm- **OPENING SESSION AND INSPIRATIONAL PROGRAM**
8:45 pm **Place:** Guilford Ballroom ABC
Courtesy: Novartis Animal Health
Presiding: Fred Miller, NACAA President
Invocation: Mickey Cummings, Past NACAA President
Remarks by Sponsor: Steve Boren, Novartis Animal Health
Presentation of Colors – VFW Post 2087
Welcoming Comments & Pledge of Allegiance– Kirk Perkins, Chair, Guilford County Board of Commissioners
National Anthem- Elizabeth Murphy
Presentation of State Flags
Musical Presentation: Georgia 4-H Clovers and Company
Remarks and Introduction: Dr. James Zuiches, NC State Vice Chancellor for Extension & Engagement
Inspirational Address: "Leadership that Leaves a Legacy", General Henry H. Shelton
Introduction of NACAA Board: Fred Miller
Closing Announcements: Karen Neill, AM/PIC Co-Chair

9:00 pm- **STATE PICTURES,**
11:00 pm (See schedule in back of program)
Place: Prefunction Area I

9:00 pm- **ICE CREAM SOCIAL**
10:00 pm **Place:** Guilford Ballroom DEFG
Sponsored by: Virginia Association of County Agricultural Agents

9:30 pm- **HOSPITALITY (All rooms in Hotel Tower)**
11:30 pm Alabama/Georgia- Room 1663
Michigan- Room 1768
Minnesota- Room 1172
Missouri- Room 1268

MONDAY, JULY 14

8:00 am- **REGISTRATION**
5:00 pm **Place:** Prefunction Area I

8:00 am- **General Session**
10:00 am **Place:** Guilford Ballroom ABC
Presiding: N. Fred Miller, NACAA President
Comments: Beth Carroll, Senior Stewardship Manager, Syngenta Crop Protection
Welcome: Dr. Johnny Wynne, Dean of the College of Agriculture and Life Sciences, NC State University
Introductions: National Committee and Council Chairs, Special Assignments and Executive Director
Greetings from JCEP
Report to the Association, N. Fred Miller
Recognition of Donors and Introduction of New Programs: Rick Gibson, NACAA President Elect
Presentation by Bidding States for 2012 AM/PIC

Hall of Fame Awards Presentation
Keynote Address: "Sustaining Agricultural Productivity: The Grandest of the Grand Challenges" Dr. Colien Hefferan, Administrator of Cooperative State Research, Education, and Extension Service
Closing Comments: Mark Tucker, AM/PIC Co-Chair

9:00 am- **COMMERCIAL AND NACAA EDUCATIONAL EXHIBITS**
6:00 pm **Place:** Prefunction Area III

7:00 am - **LIFE MEMBER HOSPITALITY**
5:00 pm **Place:** Room 1761

10:00 am- **BREAK**
10:20 am **Place:** Prefunction Area III
Sponsored by: NC Soybean Producers Association

1:30 pm **LIFE MEMBERS BUSINESS MEETING**
3:00 pm **Presiding:** Hal Tatum, Life Member Chair
Place: Victoria A

4:45 pm- **"GOT TO BE NC DINNER"**
7:00 pm Buses leaving every 20 minutes from Entrance G – last bus leaves at 6:10 PM
Place: NC A&T Alumni Center

Sponsored by: North Carolina Commodity Associations and North Carolina Department of Agriculture and Consumer Services
7:30 pm- **4-H TALENT REVUE**
9:00 pm **Place:** Guilford Ballroom ABC
Sponsor: BB&T

9:00 pm- **ICE CREAM SOCIAL**
10:00 pm **Place:** Guilford Ballroom DEFG
Sponsored by: Kansas Association of County Agricultural Agents

9:30 pm- **STATE PICTURES**
11:00 pm **Place:** Prefunction Area I

9:30 pm- **HOSPITALITY (All rooms in Hotel Tower)**
11:30 pm Alabama/Georgia- Room 1663
Michigan- Room 1768
Minnesota- Room 1172
Missouri- Room 1268
Oklahoma- Room 1760
Oregon- Room 1568
South Carolina- Room 1472

TUESDAY, JULY 15

7:00 am - **LIFE MEMBER BREAKFAST (ticket required)**
8:30 am **Place:** Imperial D
Presiding: Hal Tatum, Life Member Chair
Speaker: Bill Thompson, Humorist/Author

7:00 am - **LIFE MEMBER HOSPITALITY**
5:00 pm **Place:** Room 1761

8:00 am - **REGISTRATION**
5:00 pm **Place:** Prefunction Area I

9:00 am- **LIFE MEMBER AND LIFE MEMBER SPOUSES TOURS**
5:00 pm **FULL DAY TOURS**
Tour #1&2 –RCR Racing/Childress Vineyards/ Timberlake Gallery
Tour#3-Old Salem/Tanglewood Ext. Arboretum
Tour #4-Mt. Airy, NC (Andy Griffith/Mayberry)
Tour #5 –Seagrove Pottery/Southern Supreme Bakery

8:00 am- **NACAA POSTER SESSION OPEN**
4:00 pm

5:30 pm **STATE'S NIGHT IN!!!**
Courtesy: Southern Region State Associations
Place: Guilford Ballroom ABC

7:00 pm **SILENT AND LIVE SCHOLARSHIP AUCTION PREVIEW**
Place: Guilford Ballroom ABC

8:00 pm **LIVE SCHOLARSHIP AUCTION**
Place: Guilford Ballroom ABC

WEDNESDAY, JULY 16

6:30 am- **ASSEMBLE FOR PROFESSIONAL IMPROVEMENT TOURS**
9:00 am **(Arrive 30 minutes before tour departure time printed on ticket)**

Place: Guilford Ballroom DEFG

BREAKFAST (PROVIDED ON BUS)
Sponsored by: North Carolina Farm Bureau

6:45 am - **PROFESSIONAL IMPROVEMENT TOURS**
6:00 pm

4:45 pm Shuttle buses will leave Koury Convention Center to take people not participating in tours to the Dixie Classic Fairgrounds.
Place: Entry F

5:00 pm **NORTH CAROLINA BBQ**
Place: Dixie Classic Fairgrounds, Winston-Salem, NC
Sponsored by: NC Pork Council

THURSDAY, JULY 17

7:00 am - **FELLOWSHIP OF CHRISTIAN FARMERS INTERNATIONAL PRAYER BREAKFAST (Tickets Required)**
8:30 am **Place:** Imperial A
Presiding: Paul Walker, North Carolina
Sponsored by: Fellowship of Christian Farmers International

9:00 am- **REGISTRATION**
5:00 pm **Place:** Registration Desk III & IV

8:00 am- **COFFEE/TEA BREAK**
8:30 am **Place:** Prefunction Area III
Sponsored by: Kentucky Association of County Agricultural Agents and Ohio Association of Extension Professionals

9:00am **TRAVELOGUE**
10:00 am **Presiding:** Hal Tatum, Life Member Chair
Place: Auditorium I

8:30 am- **GENERAL SESSION**
10:30 am **Place:** Guilford Ballroom ABC
Presiding: N. Fred Miller, NACAA Pres.
Outstanding Service to American and World Agriculture Award
Presentation and Response: John M. Woodruff
Looking Ahead to the New Year: Rick Gibson, NACAA President Elect
Recognition of Retiring Officers and Installation of Incoming Officers, Directors and Vice Directors
Comments and Introduction: Dr. Jon Ort, Assistant Vice Chancellor, Associate Dean and Director, North Carolina Cooperative Extension
Capstone Speaker: "How the World is Changing", Dr. James H. Johnson, Director, Urban Investment Strategies Center
Announcements: Karen Neill, AM/PIC Co-Chair

7:00 am - **LIFE MEMBER HOSPITALITY**
5:00 pm **Place:** Room 1761

5:30 pm- **DSA & AA Recipients, Hall of Fame Recipients, NACAA Board Members, Region Directors, Past Officers, Special**
6:30 pm

**Assignments, Special Guests, Council
Chairs, Committee Chairs and Vice Chairs
Assemble for Banquet**

Place: Guilford Ballroom DE

6:30 pm- **ANNUAL BANQUET (Tickets Required)**

9:00 pm **Place:** Guilford Ballroom ABC

9:15 pm- **PRESIDENT'S RECEPTION**

11:00 pm **Place:** Guilford Ballroom DE

**SPOUSES PROGRAM
2008 NACAA ANNUAL MEETING**

SATURDAY, JULY 12

Noon- **REGISTRATION**

8:00 pm **Place:** Prefunction Area I

SUNDAY, JULY 13

8:00 am- **REGISTRATION**

9:00 pm **Place:** Prefunction Area I

1:00 am- **SPOUSES HOSPITALITY**

5:00 pm **Place:** Room 1761

3:00 pm- **FIRST TIMER ORIENTATION AND
RECEPTION**

Place: Blue Ashe

Presiding: Chuck Otte, NACAA Past President
(All first time attendees and spouses invited)

4:30 pm- **TASTE OF CAROLINA DINNER**

6:30 pm **Place:** Guilford Ballroom DEFG

Sponsored by: RJ Reynolds Tobacco

7:00 pm- **OPENING SESSION AND INSPIRATIONAL
PROGRAM**

8:45 pm **Place:** Guilford Ballroom ABC

Courtesy: Novartis Animal Health

Presiding: Fred Miller, NACAA President

Invocation: Mickey Cummings, Past NACAA
President

Remarks by Sponsor: Steve Boren, Novartis
Animal Health

Presentation of Colors – VFW Post 2087

Welcoming Comments & Pledge of Allegiance–
Kirk Perkins, Guilford County Board of
Commissioners Chair

National Anthem- Elizabeth Murphy

Presentation of State Flags

Musical Presentation: Georgia 4-H Clovers and
Company

Remarks and Introduction: Dr. James Zuiches,
NC State Vice Chancellor for Extension &
Engagement

Inspirational Address: "Leadership that Leaves a
Legacy", General Henry H. Shelton

Introduction of NACAA Board:

Fred Miller

Closing Announcements: Karen Neill,
AM/PIC Co-Chair

9:00 pm- **STATE PICTURES,**

11:00 pm (See schedule in back of program)

Place: Prefunction Area I

9:00 pm- **ICE CREAM SOCIAL**

9:30 pm **Place:** Guilford Ballroom DEFG

Sponsored by: Virginia Association of County
Agricultural Agents

9:30 pm- **HOSPITALITY (All rooms in Hotel Tower)**

11:30 pm Alabama/Georgia- Room 1663

Michigan- Room 1768

Minnesota- Room 1172

Missouri- Room 1268

MONDAY, JULY 14

8:00 am- **REGISTRATION**

5:00 pm **Place:** Prefunction Area I

7:00 am- **SPOUSES HOSPITALITY**

5:00 pm **Place:** Room 1761

8:00 am- **GENERAL SESSION**

10:00 am **Place:** Guilford Ballroom ABC

Presiding: N. Fred Miller, NACAA President

Comments: Beth Carroll, Senior Stewardship
Manager, Syngenta Crop Protection

Welcome: Dr. Johnny Wynne, Dean of the
College of Agriculture and Life Sciences, NC State
University

Introductions: National Committee and
Council Chairs, Special Assignments
and Executive Director

Greetings from JCEP

Report to the Association, N. Fred Miller

Recognition of Donors and Introduction

of New Programs,

Rick Gibson, NACAA President Elect

Presentation by Bidding States for 2012 AMPIC

Hall of Fame Awards Presentation

Keynote Address: "Sustaining Agricultural

Productivity: The Grandest of the Grand

Challenges" Dr. Colien Hefferan, Administrator of

Cooperative State Research, Education, and

Extension Service

Closing Comments: Mark Tucker, AM/PIC Co-
Chair

8:00 am- **SPOUSES TOURS (Tickets Required)**

5:00 pm **Place:** Entry F

FULL DAY TOURS

Tour #1 – "For the China Collector"

Tour #2 – "Greensboro's Downtown History

Tour #4 – "The Biltmore Estate"

Tour #5 – "A Tour of Mayberry"

Tour #6 – "It's Furniture Galore"

Tour #10 – "The North Carolina Zoo"

HALF DAY TOUR

9:00 am - **Place:** Entry F

3:00 pm **Tour #16 – "A Voyage through Time/History"**

4:45 pm- **"GOT TO BE NC DINNER"**

7:00 pm Buses leaving every 20 minutes from Entrance G
– last bus leaves at 6:10 PM

Place: NC A&T Alumni Center

Sponsored by: North Carolina Commodity Associations and North Carolina Department of Agriculture and Consumer Services

7:30 pm-
9:00 pm **4-H TALENT REVUE**
Place: Guilford Ballroom ABC
Sponsored by: BB&T

9:00 pm-
10:00 pm **ICE CREAM SOCIAL**
Place: Guilford Ballroom DEFG
Sponsored by: Kansas Association of County Agricultural Agents

9:30 pm-
11:30 pm **HOSPITALITY (All rooms in Hotel Tower)**
Alabama/Georgia- Room 1663
Michigan- Room 1768
Minnesota- Room 1172
Missouri- Room 1268
Oklahoma- Room 1760
Oregon- Room 1568
South Carolina- Room 1472

9:30 pm-
11:00 pm **STATE PICTURES**
Place: Prefunction Area I

TUESDAY, JULY 15

8:00 am -
5:00 pm **REGISTRATION**
Place: Prefunction Area I

7:00 am-
5:00 pm **SPOUSES HOSPITALITY**
Place: Room 1761

9:00 am-
11:00 am **SPOUSES WORKSHOPS**
(Tickets Required)

- #1 "Gourmet Mushrooms on a Small Scale"
Place: Heritage AB
- #2 North Carolina's Lunch Basket
Place: Augusta A
- #3 Butterfly Gardening
Place: Turnberry
- #4 Antique Road Show
Place: Colony C
- #5 War Between the States
Place: Auditorium I
- #6 Container Gardening
Place: Imperial A
- #7 Folded Moravian Star
Place: Colony A
- #8 Cooking Outdoors
Place: Pinehurst

11:30 am-
1:30 pm **SPOUSES LUNCHEON**
(Ticket Required)
Place: Guilford FG
Presentation: Bill Mangum, Author of "Carolina Preserves"

2:00 pm-
4:00 pm **SPOUSES WORKSHOPS**
(Tickets Required)
#9 Families Eating Smart, Moving More
Place: Augusta B
#10 North Carolina Lunch Basket
Place: Augusta A
#11 Shagging on the Boulevard

- Place:** Imperial B
- #12 Skin Care and Beauty Tips
Place: Imperial A
- #13 Backyard Wine Making
Place: Sandpiper
- #14 Painting for Fun
Place: Imperial E
- #15 Folded Moravian Star
Place: Imperial G
- #16 Cooking Outdoors
Place: Pinehurst
- #17 Basic Survival, Being Personally Prepared
Place: Imperial F

4:30 pm **STATES NIGHT IN!!!**
Place: Guilford Ballroom

7:30 pm **SILENT AND LIVE SCHOLARSHIP AUCTION**
PREVIEW
Place: Guilford Ballroom

8:30 pm **LIVE SCHOLARSHIP AUCTION**
Place: Guilford Ballroom

WEDNESDAY, JULY 16

6:30 am-
9:00 am **ASSEMBLE FOR PROFESSIONAL**
IMPROVEMENT TOURS
(Arrive 30 minutes before tour departure time
printed on ticket)
Place: Guilford Ballroom DEFG

BREAKFAST (PROVIDED ON BUS)
Sponsored by: North Carolina Farm Bureau

6:45 am -
6:00 pm **PROFESSIONAL IMPROVEMENT TOURS**

4:45 pm Shuttle buses will leave Koury Convention Center to take people not participating in tours to the Dixie Classic Fairgrounds.
Place: Entry F

5:00 pm **NORTH CAROLINA BBQ**
Place: Dixie Classic Fairgrounds, Winston-Salem, NC
Sponsored by: North Carolina Pork Council

THURSDAY, JULY 16

7:00 am -
8:30 am **FELLOWSHIP OF CHRISTIAN FARMERS**
INTERNATIONAL PRAYER BREAKFAST (Tickets
Required)
Place: Imperial A
Presiding: Paul Walker, North Carolina
Sponsored by: Fellowship of Christian Farmers International

9:00 am-
5:00 pm **REGISTRATION**
Place: Registration Desk III & IV

8:30 am-
10:30 am **GENERAL SESSION**
Place: Guilford Ballroom ABC
Presiding: N. Fred Miller, NACAA Pres.
Outstanding Service to American and World
Agriculture Award
Presentation and Response: John M. Woodruff
Looking Ahead to the New Year: Rick Gibson,

NACAA President Elect
Recognition of Retiring Officers and Installation of Incoming Officers, Directors and Vice Directors
Comments and Introduction: Dr. Jon Ort, Assistant Vice Chancellor, Associate Dean and Director, North Carolina Cooperative Extension
Capstone Speaker: "How the World is Changing", Dr. James H. Johnson, Director, Urban Investment Strategies Center
Announcements: Karen Neill, AM/PIC Co-Chair

7:00 am-5:00 pm **SPOUSES HOSPITALITY**
Place: Room 1761

9:00 am-11:00 am **SPOUSES WORKSHOPS (Tickets Required)**

- #18 Cooking with Herbs
Place: Colony A
- #19 Making Memories with Photography
Place: Colony B
- #20 Gifts by Nature
Place: Sandpiper
- #21 Skin Care and Beauty Tips
Place: Tidewater
- #22 Basic Knitting 101
Place: Tanglewood
- #23 Self Defense for Men and Women
Place: Augusta

Noon-2:00 pm **Lunch on Your Own/ "Free Time!"**

5:30 pm-6:30 pm **DSA & AA Recipients, Hall of Fame Recipients, NACAA Board Members, Region Directors, Past Officers, Special Assignments, Special Guests, Council Chairs, Committee Chairs and Vice Chairs Assemble for Banquet**
Place: Guilford Ballroom DE

6:30 pm-9:00 pm **ANNUAL BANQUET**
Place: Guilford Ballroom ABC

9:15 pm-11:00 pm **PRESIDENT'S RECEPTION**
Place: Guilford Ballroom DE
Sponsor: North Carolina Agricultural Foundation

**SONS & DAUGHTERS PROGRAM
 2008 NACAA ANNUAL MEETING
 YOUTH HEADQUARTERS
 Place:** Oak and Cedar

SATURDAY, JULY 12
 Noon-8:00 pm **REGISTRATION**
Place: Prefunction Area 1

SUNDAY, JULY 13
 8:00 am-9:00 pm **REGISTRATION**
Place: Prefunction Area 1

4:30 pm-6:30 pm **TASTE OF CAROLINA DINNER**
Place: Guilford Ballroom DEFG
Courtesy: RJ Reynolds Tobacco

6:00 pm-6:45 pm **PARENT ORIENTATION**
Place: Auditorium I

6:45 pm-8:30 pm **GET ACQUAINTED PARTY**
Place: Oak and Cedar
Sponsored by: NC 4-H AGENTS

9:00 pm-11:00 pm **STATE PICTURES**
 (See schedule in back of program)

MONDAY, JULY 14
 8:00 am-5:00 pm **REGISTRATION**
Place: Prefunction Area I

7:30 am **SONS & DAUGHTERS GATHER FOR HANGING ROCK STATE PARK or NEW RIVER STATE PARK (AGES 12 AND UP) TOURS**
Place: Oak and Cedar

5:30 pm **SONS AND DAUGHTERS RETURN TO A&T STATE UNIVERSITY FOR GOT TO BE NC DINNER**

7:30 pm-9:00 pm **4-H TALENT REVUE**
Place: Guilford Ballroom ABC
Sponsored by: BB&T

9:00 pm-10:00 pm **ICE CREAM SOCIAL**
Place: Guilford Ballroom DEFG
Sponsored by: Kansas Association of County Agricultural Agents

9:30 pm-11:00 pm **STATE PICTURES**
Place: Prefunction Area I

TUESDAY, JULY 15
 8:00 am - 5:00 pm **REGISTRATION**
Place: Prefunction Area I

7:30 am- **SONS AND DAUGHTERS GATHER FOR TOURS (RACE DAY AND CAROWINDS)**
Place: Oak and Cedar

4:00 pm-5:00 pm **RACE DAY TOUR RETURNS TO KOURY CAROWINDS TOUR RETURNS TO KOURY**

5:30 pm-6:00 pm **STATES NIGHT IN!!!**
Place: Guilford Ballroom
Sponsored by: Southern Region State Associations

7:00 pm **SILENT AND LIVE SCHOLARSHIP AUCTION PREVIEW**
Place: Guilford Ballroom

8:30 pm **LIVE SCHOLARSHIP AUCTION**
Place: Guilford Ballroom

WEDNESDAY, JULY 16

Enjoy the day with your parents!

6:15 am-9:00 am **ASSEMBLE FOR PROFESSIONAL IMPROVEMENT TOURS**
 (Arrive 30 minutes before tour departure time printed on ticket)
Place: Guilford Ballroom DEFG

BREAKFAST (PROVIDED ON BUS)

Sponsored by: North Carolina Farm Bureau

6:45 am- **PROFESSIONAL IMPROVEMENT TOURS**
6:00 pm

4:45 pm Shuttle buses will leave Koury Convention Center to take people not participating in tours to the Dixie Classic Fairgrounds.
Place: Entry F

5:00 pm **NORTH CAROLINA BBQ**
Place: Dixie Classic Fairgrounds, Winston-Salem, NC
Sponsored by: NC Pork Council
BEACH TOUR

THURSDAY, JULY 17

6:30 am- **Beach Tour Gathers to Load Buses**
Place: Oak and Cedar

5:30 pm- **Farewell party for Beach Tour**
7:00 pm **on the way back from the beach**

9:30 pm **Beach Tour Returns to Koury**

EMERALD POINT WATER PARK TOUR

8:00am- **Emerald Point Tour Gathers for Supervised**
9:30 am **Activities**
Place: Oak and Cedar

10:00am **Load Buses for Emerald Point**
Place: Oak and Cedar

4:00pm **Emerald Point Tour Returns to Koury for**
Those Attending the Banquet

5:00pm- **Farewell Party for Emerald Point Tour**
7:00 pm

7:30 pm **Emerald Point Tour Returns to Koury**

7:30 pm- **Supervised Activities in Oak and Cedar**
10:00 pm

Poster Session

Applied Research

2008 NACAA

**93rd
Annual Meeting
and
Professional Improvement Conference
Greensboro, North Carolina**

Poster Session Abstracts

Applied Research Category

AGRONOMIC PRODUCTION PRACTICES TO CONTROL *ABACARUS HYSTRIX* IN TIMOTHY HAY

Bamka, * W.J.¹, Komar, S.², Mickel, R.³

¹. County Agent, Rutgers NJAES Cooperative Extension, Burlington County, Westampton, New Jersey 08060

². County Agent, Rutgers NJAES Cooperative Extension, Sussex County, Newton, New Jersey 07860

³. County Agent, Rutgers NJAES Cooperative Extension, Hunterdon County, Flemington, New Jersey 08822

Field and forage crop production accounts for approximately half of the farmland use in New Jersey. The NJ Department of Agriculture reports over 90,000 acres of grass hay in the state. Roughly half this acreage is in timothy hay. With an average production yield of 3 tons/acre this represents over 21 million dollars in production revenue. Hay production for the growing equine and small livestock industry is one of the few profitable commodities for field and forage crop producers. In fact New Jersey is a timothy hay deficit state. Therefore, any decrease in production results in an economic loss to NJ farmers. A production problem faced by timothy hay producers across New Jersey is the occurrence of a relatively new pest, the cereal rust mite (*Abacarus hystrix*). This pest has been in the mid-Atlantic region for only the past 10 years. Cereal rust mite typically reduces hay yields by 30–70% and reduces the quality of hay because of brown discoloration. Horse owners are reluctant to buy off color hay. A recent survey of extension personnel in Pennsylvania, Virginia, Maryland, Delaware and New Jersey has revealed that virtually every acre of timothy hay in the region is infested with cereal rust mite. Currently Sevin XLR Plus is the only control measure labeled for cereal rust mite. There is growing concern that the cereal rust mite will soon develop resistance to this insecticide. Research was conducted to evaluate alternative chemical and production practices for cereal rust mite control in timothy hay.

HIGHER INPUT PRICES RESULT IN GREATER ECONOMIC INCENTIVES FOR PRECISION AGRICULTURE

Barker III, * F. J.

Extension Agent, Agriculture/AMOS Innovative Programs, The Ohio State University Extension – Knox County, 1025 Harcourt Rd, Mt. Vernon, Ohio 43050.

Farmers often question the economic value GPS-based technology. ***Does precision agriculture pay?*** In most precision agriculture circles, this is the most often asked question, and at times a most difficult question to answer. Today's technology allows farmers to vary the application rates of crop inputs throughout a field. GIS software allows field specific data to be analyzed and incorporated into the decision making process. Theoretically, combining field based data with the ability to vary input usage at specific locations within a field should increase input efficiency. Increased efficiency should improve profit margin and result in the adoption of more environmentally sound practices. The objective of this study was to evaluate phosphorus and potassium fertilizer application rates utilizing four different fertility scenarios on a Central Ohio farm with nine years of GPS based yield data. These scenarios were; 1) The farmers normal production practices, 2) Soil testing and fertilizer recommendations based upon 2.5 acre grid samples, 3) Soil testing and fertilizer recommendations based upon management zones developed by soil type and 4) Fertilizer recommendations based upon management zones developed by GPS based crop removal. ***Does precision agriculture pay?*** The results of this analysis show economic advantages for each GPS based scenario. When compared to the farmers' normal production plans, the grid sampling scenario resulted in savings of \$36.36 per acre. The soil type management zones and the crop removal management zones resulted in savings of \$84.91 and \$88.04 respectively.

A SEARCH FOR NEW PRODUCTS FOR CONTROL OF BLACK SHANK OF TOBACCO

Bost,* S.C.¹ , Walker, S.E.²

¹. Extension Specialist, The University of Tennessee Extension, 5201 Marchant Dr., Nashville, TN 37211

². Extension Agent, The University of Tennessee Extension, Macon County, Lafayette, TN 37083

Black shank is the most damaging disease of tobacco in the southeastern United States. Chemical control efforts by producers concentrate on one product, mefenoxam. The high cost and the tendency this material to lose effectiveness due to the development of reduced sensitivity in target pathogens creates a need for alternative control products. Greenhouse trials indicated black shank control activity by Quadris (azoxystrobin) and the phosphorous acid products ProPhyt and AgriFos. On-farm trials were conducted in Macon County, Tennessee to determine the practical suitability of these materials as black shank control products. At Farm 'A' in 2005, only those treatments containing Ridomil (mefenoxam) provided a significant reduction in black shank. All other treatments (soil applications of Quadris or ProPhyt and foliar applications of AgriFos or ProPhyt) provided intermediate levels of control. In a trial at Farm 'A' in 2006, ProPhyt provided a level of control equal to that of Ridomil, although neither treatment resulted in an acceptable level of control due to the severity of the disease. When applied alone in a 2007 trial on Farm 'B,' ProPhyt provided only slight control; however, the control provided by Ridomil was enhanced and yields were increased by about 15% by the addition of ProPhyt to the Ridomil. ProPhyt, if registered for use on tobacco, may provide valuable control of black shank if applied in a manner that maximizes its activity.

THE EFFECT OF COVER CROPS ON PSNT LEVELS AND CORN YIELDS IN WYANDOT COUNTY, OHIO

Bruynis,* C. L.¹, Hoorman, J.², Fritz, M.³

¹ Extension Educator, Ohio State University Extension, 109 S. Sandusky Ave., Rm 16, Upper Sandusky, Ohio 43351

² Extension Specialists, Ohio State University Extension, 3900 Campus Drive, Suite B, Lima, OH

45804

³Manure Management Specialists, Soil and Water Conservation District, 97 Houpt Drive, Suite A, Upper Sandusky, Ohio 43351

This research examined the ability of annual ryegrass, cereal rye and oil seed radish to capture and release nutrients from summer applied swine manure compared to the control of no cover crop. The research design used a random replicated design with two manure application rates and four cover treatments. Manure application on wheat stubble occurred in late August, 2006 and the cover crop plots were seeded in early September, 2006. Pre-side dress nitrogen tests (PDNT) were completed on the soil samples collected in early May and yield data was collected in October, 2007. Analysis of the data showed statistically significant differences (>95%) in the PSNT levels with all cover crops being higher than the plots with no cover. Oil seed radish had the highest available N (40 mg/kg) followed by cereal rye (32 mg/kg), annual ryegrass (29 mg/kg) and no cover (21 mg/kg). The collected yield data also indicated a statistically significant difference (>95%) with no cover (165 bu/a) posting the highest yield followed by oil seed radish (163 bu/a), annual ryegrass (161 bu/a), and cereal rye (158 bu/a). Yield differences were hypothesized to be more of a function of moisture loss through the green cover crops in this drought year than a function of cover crops themselves.

DISCOVERING NEW TOOLS FOR MAYHAW: THOMAS COUNTY RESEARCH

Byrne,* R.J.¹, Brannen, P.M.³, Clark, D.W.², Scherm, H.⁴

¹ Extension Agent, University of Georgia, Thomas County, Thomasville, Georgia 31799

² Extension Coordinator, University of Georgia, Thomas County, Thomasville, Georgia 31799.

³ Extension Specialist, Department of Plant Pathology, University of Georgia, Athens, Georgia 30602.

⁴ Professor, Department of Plant Pathology, University of Georgia, Athens, Georgia 30602

Mayhaws are a minor fruit commodity in Georgia. Consumers prize the jellies, sauces, and wines that the mayhaw, a Southern native, produces.

Growers have limited fungicide choices to manage their orchards against diseases, especially hawthorne leaf blight (*Monilinia johnsonii*). In the spring of 2007, a test plot was conducted to test two fungicides on mayhaws. The goal was to obtain a new label expansion for Vanguard, conditional on efficacy. Vanguard registration would provide a good resistance management tool, as the active ingredient, cyprodinil, is in a different fungicide class from other registered products. Five applications of fungicides were made weekly just before and during bloom. Treatments were applied in a randomized complete block design with six replications; each plot consisted of one plant. A solo backpack mist sprayer was used to apply Vanguard 75WG (5oz./acre) and Pristine 38WDG (18.5oz./acre), each in 1.3 liters water per tree (~40 gal/A). An untreated check was included in the trial. Fungicide efficacy data was collected by sampling ten random shoots per tree and counting mummified fruit per 19.7 inches of distal shoot on April 18th. Data was analyzed by use of Fisher's protected LSD test. When compared to the untreated check, both Vanguard and Pristine treatments provided exceptional suppression of blossom infections and prevention of mummified fruit. Vanguard is registered for use on other *Monilinia* species, and if registered for use on mayhaws, it will be a useful addition to present resistance management tools, allowing growers to use multiple fungicide classes in alternation.

PREDICTING MILK BASIS IN THE SOUTHEAST FEDERAL MILK ORDER

Campbell,* J. C.

Area Farm Management Specialist, University of Tennessee Extension, Columbia, Tennessee 38402

For dairy producers to successfully utilize futures and options to forward price milk, an accurate prediction of basis (the difference between the Class III price and the producer's farm milk price) is vital. Since prices vary among farms, the Southeast Federal Order Uniform Milk Price was used to calculate basis in a study to determine predictors of milk basis. Eight years of basis data were analyzed. Correlation analysis using the previous month Class III price to calculate basis had R² values of 0.15 or less for the change in the Class III price from the previous month, the Class III price, percent Class I utilization, and percent Class III utilization. Analysis using the Class III and uniform price for the same month returned a R² value of 0.38 for

change in the Class III price from the previous month, while the other three variables had R² values of 0.17 or less. A frequency analysis found basis fell between \$2 and \$3 per hundredweight 44% of the time using the previous month Class III and 43% of the time for when using the same month. A t analysis found no significance difference in the means when comparing methods of calculating basis. These analyses indicate that frequency is a more reliable factor for predicting milk basis. Observation of the data shows a tendency for basis to be larger when the Class III price is declining from month to month and smaller when the Class III price is rising.

FARMER – KNOW THY CUSTOMER! IMPROVING CUT SUNFLOWER SALES THROUGH BETTER DIRECT MARKETING PRACTICES

Carleo*, J. S.¹, Polanin, N.²

¹ County Agent, Rutgers NJAES Cooperative Extension, Cape May County, 4 Moore Road, Cape May Court House, NJ 08210

² County Agent, Rutgers NJAES Cooperative Extension, Somerset County, 310 Milltown Road, Bridgewater, NJ 08807

Thirteen varieties of sunflower were cultivated for sale as cut-flowers at two different farm stands and one community farmers market in Cape May County, NJ. The gross mean economic yield per acre of cultivated land during the summer tourism season was approximately \$4,000. Varieties selected included 'Double Quick', 'Joker', 'Magic Roundabout', 'Moonshadow', 'Peach Passion', 'Prado Red Shades', 'Pro Cut Bicolor', 'Pro Cut Yellow Lite', 'Sunbright', 'Sunny F₁ Hybrid', 'Sunrich Lemon', 'Sunrich Orange Summer' and 'Tiffany'. All were advertised as pollen-less and suitable for the cut-flower market. Despite the wide variety of sunflowers, customers far preferred varieties with yellow ray flowers and dark brown disc flowers, which comprised approximately 85% of displays sold. Varieties least preferred were the more novel and unusual (non-yellow and brown) types, with only 33 – 66% of display sales. However, the "traditional" varieties tested within the 'Pro Cut' series exhibited a severe drooping or "shepherd's crook" characteristic shortly after harvest, making it unmarketable as a cut flower. Return farm market customers also refused additional purchases of 'Joker', reportedly due to

Kansas State University scientists conducted research trials in 2006 with a focus on *Amaranthus* control. Field tests on medium- to fine-textured soils have demonstrated that mesotrione plus s-metolachlor plus atrazine has adequate safety for use in grain sorghum, especially when applied 7-14 days prior to planting. Preemergence treatments, applied 3 days after planting, were compared with competitive postemergence treatments applied 21 days after planting. Weed control ratings taken 21, 35, and 63 days after planting showed that soil-applied mesotrione plus s-metolachlor plus atrazine provided good-to-excellent early-season control of Palmer amaranth, that was far superior to postemergence herbicide treatments.

BULK BLENDING FIRE ANT BAITS WITH FERTILIZER; AN ECONOMIC ALTERNATIVE

Bertagnolli-Heller¹, V.E., Dorough²,* H.D., Graham³, L.C., Ridley⁴, K.A.

¹ Consumer Horticulture Extension Agent/Master Gardener Coordinator, Clemson University Extension Service, Columbia, South Carolina 29229, Former Research Assistant, Auburn University, Auburn, Alabama 36849

² Regional Extension Agent, Alabama Cooperative Extension System, Piedmont Region, Talladega, Alabama 35160

³ Coordinator - Alabama Fire Ant Management Program, Auburn University, Auburn, AL 36849

⁴ Research Assistant, Auburn University, Auburn, AL 36849

Fire ants are a recurring problem in southern pastures. Effective and relatively inexpensive treatments are available for the management of these pests. But these applications are usually cost prohibitive due to low return per acre on capital investment for these fields. Escalating fuel prices have forced an increase in the cost of applying fire ant baits. Mixing baits with fertilizer could allow producers to apply these products in a bulk mix and minimize increased application costs. Two growth regulator fire ant baits, pyriproxyfen and s-methoprene, were mixed with fertilizer at the local farmer's cooperative. A pyriproxyfen treatment, a fertilizer treatment and an untreated control were also included in the experiment. All treatments were applied to the pasture at label rates in a randomized complete block design replicated four

times. Maximum control obtained in the study was 86%. There were no significant differences between the bulk mix treatments and the pyriproxyfen treatments at 5, 8, 14 or 21 weeks post-treatment. However, fire ant mound numbers declined slower in the bulk mix treatments than in the pyriproxyfen only treatment. Mound numbers were less than five per acre in all bait treatments 21 weeks post treatment.

NO-TILL AND CONVENTIONAL TILLAGE FALLOW WINTER WHEAT PRODUCTION COMPARISON IN THE DRYLAND CROPPING REGION OF EASTERN WASHINGTON

Esser,¹ A.D.¹, Jones, R.²

¹ Extension Agronomist, Washington State University Extension, Lincoln-Adams Area, Ritzville, Washington 99169

² Wheat Producer, Lincoln County, Wilbur, Washington, 99185

Winter wheat (WW) (*Triticum aestivum* L.) production on tillage based summer fallow systems has been a standard practice for producers in the dryland cropping region of eastern Washington for generations. This practice has been profitable but it comes at a cost that includes soil loss through wind and water erosion. Producers have examined alternative methods including no-till farming systems for maintaining or increasing profitability and reducing soil erosion. A series of on-farm tests were completed over a 5 year period examining WW established under three treatments; 'conventional' tillage fallow system, 'No-till early', or seeded at the same time as the conventional treatment, and 'no-till late' or planting was delayed 1 month. Conventional methods include a chisel sweep and multiple cultiweeding for fertilization and weed control and seeding with a deep furrow hoe drill. No-till includes multiple chemical applications for weed control and seeding and fertilization with a no-till hoe drill with Anderson[®] paired row openers. Similar to previous research, conventional increased seed zone moisture (0-8") but no differences were detected between treatments in total moisture to a depth of 3 feet. Soil compaction was monitored to a depth of 18 inches in one-inch increments. Less soil compaction was detected in no-till at a depth of 10-16 inches. No difference in grain yield was detected between conventional and no-till early averaging 71-bu/acre. No-till late produced 20% less yield. Economic return above

variable costs was similar to yield with no differences between conventional and no-till early and lower when seeding was delayed.

FORAGE UPTAKE OF APPLIED SELENIUM

Filley*, S.J.¹, Peters, A.², and Bouska, C.³

¹Regional Livestock and Forage Specialist, Douglas County Oregon State University Extension Service, Roseburg Oregon 97470

²Livestock and Natural Resources Agent and

³Research Assistant, Coos County Oregon State University Extension Service, Myrtle Point Oregon 97458

Selenium (Se) deficient livestock diets are problematic in Oregon and a low cost method of supplying Se was needed. Application of Se at 0.0 lb/ac, 0.5 lb/ac, 1.0 lb/ac, and 2.0 lb/ac sodium selenite and 0.5 lb/ac sodium selenate to pastures, replicated three times, was tested to determine effect of Se form and rate on forage Se uptake. Data were analyzed with Kruskal-Wallis non-parametric tests, followed by Welch t-tests. In year one, 0.5 lb/ac selenate had the highest Se uptake (2.02%; $P < 0.04$) and forage Se content (8.44 ± 0.08 ppm; $P < 0.01$) among treatments. Selenium uptake was lowest in the 2.0 lb/ac selenite treatment (0.23%) compared to control ($P = 0.01$). Selenite at 0.5 lb/ac had a Se uptake of 0.28% ($P < 0.05$) and 1.0 lb/ac selenite provided 0.52% uptake, but was not different from control ($P = 0.10$). Compared with the control (0.09 ± 0.06 ppm), the plots in the 0.5 and 2.0 lb/ac selenite treatments contained greater ($P < 0.01$) forage Se content (1.17 ± 0.05 and 4.24 ± 0.35 ppm, respectively), whereas the 1.0 lb/ac selenite treatment only tended ($P = 0.06$) to increase forage Se content (3.11 ± 0.79 ppm). Two years after Se application, only the plots treated with 0.5 lb/ac selenate and 2.0 lb/ac selenite had forage Se concentrations greater than control. These data suggest that selenite and selenate fertilization increases forage Se concentrations for up to two years and is a cost-effective method of supplying Se to grazing livestock.

MEAT GOAT DEMOGRAPHICS AND NICHE MARKETING

Fisher*, J. C.¹, Mangione, D. A.², Nye, L. A.³, Stock, R.⁴

¹ ANR Educator, The Ohio State University Extension Pike County, 120 S. Market St

Waverly, Ohio 45640 fisher.7@osu.edu Tel: 740.947.2121

² ANR Educator, The Ohio State University Extension Ross County

³ ANR Educator, The Ohio State University Extension Clinton County

⁴ Leader, University of Dayton; Business Research Group

Six focus groups were conducted from different Islamic Centers to understand Halal meat purchase and consumption patterns of the Moslem population with special attention to goat. Participants described the Zabiha slaughter method as the most merciful. Not knowing the animal's origin held tremendous concerns relative to feeding of animal by-products, use of hormones, and adulteration with pork. Trust concerns drove purchase decisions with 72% purchasing from a Moslem owned retail store. Only 13% purchased from a large grocery and 8% direct from a farmer. Participants indicated their consumption patterns by season, holiday, and geographic origin. The average meat purchase was 23 pounds at an average occurrence of 12.5 times per annum. Purchasing trends indicated 78% prefer lean over marbled cuts. Nearly 86% prefer fresh over frozen goat meat. Intact males were preferred by 42% of the respondents. Preferences for meat goat cuts were: Leg (71%), Chops (42%), Shoulder (24%), and Breast (7%). Nearly a third indicated they also want the kidneys, heart, or head. Demographic shifts in the United States indicate almost 53 million people have a preference for goat meat. There are 2.4 million goats in the US according to the 2007 Agricultural Statistics. Based on consumption trends of this study, goat demand exceeds inventory by 160%. Meat goat consumer trends are changing regarding religious concerns, convenience, food safety, and food quality issues. Extension personnel utilized these results to help producers understand opportunities to develop niche markets for fresh goat with local ethnic or faith based populations.

EVALUATION OF TOMATO SPOTTED WILT VIRUS RESISTANT TOMATO VARIETIES FOR THE FRESH MARKET IN SOUTHEASTEN ARKANSAS

Gavin, *J.C.¹, Cooper, P.C.²

1. Extension Agent, University of Arkansas Cooperative Extension Service, Bradley County, Warren AR, 71671
2. Extension Horticulturalist, University of Arkansas Cooperative Extension Service, (Retired), Warren AR, 71671

Tomato spotted wilt virus (TSWV) is one of the most serious disease impacting tomato growers in southeastern Arkansas. Eleven tomato cultivars and advanced breeding lines were compared to the cultivar "Amelia," the local standard in the southeastern Arkansas fresh-market tomato industry. Evaluations were made for yield and fruit quality attributes. Seven of the cultivars and lines performed as well as or better than "Amelia." These included "BHN-602," "Red Defender," "Bella Rosa," "Nico," "Fletcher" (NC-0377), "BHN-640," and "NC-03289." All cultivars in the study showed very good resistance to Tomato Spotted Wilt Virus, and many of them possess resistance to Races 1, 2, & 3 of Fusarium wilt. Additional evaluations will be conducted in 2008.

HERBICIDE EFFECTS ON SURVIVAL AND GROWTH OF PLANTED LOBLOLLY PINE AND HARDWOOD SEEDLINGS IN SOUTH ARKANSAS

Hall, * B.¹, Cunningham, K.²

1. Extension Agent, Arkansas Extension Service, Dallas County, Fordyce, Arkansas 71742
2. Extension Forestry Instructor, Arkansas Extension Service, Little Rock, Arkansas 72203

Two herbicide demonstrations at separate locations were established, measured and analyzed for a pine and hardwood planting in Dallas County, AR. The study was established in the spring of 2006. Initial, year 1 and year 2 growth and survival measurements were taken at both locations. The study design was a randomized complete block, with five treatments. Herbicide treatments were applied at varying rates and application types within the label guidelines for a respective herbicide. The hardwood demonstration site was an old field that had been commercially planted in

four red oak species. Hardwood herbicide treatments included varying rates and application type using Oust XP herbaceous herbicide. The pine demonstration site was on old field site with a variety of grasses present. Pine herbicide treatments included combinations of Arsenal and Oust, and Oustar herbicides. Pre-emergent and post emergent treatments were included in the pine demonstration. Growth measurements included ground line diameter (in inches) and height (in feet). Confounding factors were determined to exist in the hardwood demonstration including: questionable planting quality, seedling quality variation, and predation of seedlings. Year 1 and year 2 survival and growth data are presented for both the pine and hardwood demonstrations.

PROTECTING HARVESTED HAY FROM THE RED IMPORTED FIRE ANT

Heimer, * M.E.¹, Nester, P.R.², Drees, B.M.³, Calixto, A.⁴

1. County Extension Agent, Texas AgriLife Extension Service, Montgomery County, Conroe, Texas 77303
2. Extension Program Specialist, Texas AgriLife Extension Service, Harris County, Houston, Texas 77084
3. Professor and Extension Specialist, Texas AgriLife Extension Service, Brazos County, Bryan, Texas 77843
4. Extension Associate, Texas AgriLife Extension Service, Brazos County, Bryan, Texas 77843

Hay infested with the red imported fire ant, *Solenopsis invicta* Buren (Hymenoptera: Formicidae) is a regulated item when it is to be shipped out of quarantined areas. Upon inspection, if the presence of any fire ants on a hay shipment going to a non-quarantined area from a fire ant quarantined area is observed that hay shipment is likely to be turned away. Currently the only USDA or TDA approved way to have hay or straw approved for shipment from fire ant quarantined counties to non-infested counties is to remove bales from the field immediately after baling and store them in an off ground location. This prevents hay that has been stored in the field in ground contact from being eligible for shipment. A results demonstration was set up in Montgomery County Texas to evaluate best management practices for protecting harvested hay from fire ant infestation. Only those treatments that keep hay bales free of foraging fire ants are desired. Our study shows treatments focusing on fire ant control should be applied to a hay storage area before hay is placed. This may

range from a broadcast fire ant bait application to a broadcast bait application followed by additional treatments of a contact insecticide applied around the hay bales or contact insecticide treatments applied under hay bales stored on risers. The use of the fire ant bait stations placed next to hay bales for the reduction of foraging fire ant activity shows promise.

SONAR FOR CONTROL OF DUCKWEED IN SMALL CATTLE PONDS

Henderson,* D.G1 , Seldon, G.2

1: Extension Agent – Staff Chair, Arkansas Cooperative Extension, Madison County, Huntsville, Arkansas 72740

2: Extension Specialist – Aquaculture, Arkansas Cooperative Extension, University of Arkansas at Pine Bluff, Newport, Arkansas 72112

Duckweed (*Lemna sp.*) a small, floating aquatic plant that is very common in Arkansas. It frequently colonizes ponds, and other quiet areas with little or no water current, that possess adequate nutrients. Its ability to reproduce both sexually and asexually allows it to grow and spread quickly under optimal conditions. This can lead to the formation of dense mats of duckweed that can entirely cover small ponds. At present, only two herbicides currently legal in Arkansas have a response rating as either good (diquat; brand name Reward) or excellent (floridone; brand name Sonar). Cattle watering ponds tend to be small and nutrient loaded, making them ideal duckweed habitat. During the summer of 2006, three ponds were selected in Madison County for a demonstration project involving Sonar A.S for duckweed control. Ponds were randomly selected for treatment at the highest labeled rate (90 ppb active ingredient (AI)), the lowest labeled rate (45 ppb AI), or for no treatment as a control pond. All ponds were located in pastures and used by cattle throughout the summer. The High Rate pond was approximately 0.22 acres with assumed average depth of 5 feet. The rate was calculated as 8.5 ounces of Sonar A.S. The Low Rate pond was approximately 0.21 acres with an assumed average depth of 5 feet. The rate was calculated as 4.2 ounces of Sonar A.S. The control pond was a similar depth and area. At both the low rate and high rate, the ponds stayed clear of duckweed all summer.

EVALUATING BURLEY TOBACCO VARIETIES FOR DISEASE RESISTANCE IN WESTERN NORTH CAROLINA

Holloway*, S.R.¹ , Ayers, E.T.² , Ivors, K.L.³

1. Extension Agent, NC Cooperative Extension, Yancey County, Burnsville 28714.
2. Extension Agent, NC Cooperative Extension, Madison County, Marshall 28753.
3. Assistant Professor and Extension Specialist, NC State University-MHCREC, Fletcher 28732.

Use of higher yielding, disease resistant burley varieties increases profitability and reduces pesticide usage and labor input. These attributes are especially important in the challenging agricultural economy of western North Carolina. The objective of these trials was to evaluate new burley tobacco varieties for disease resistance and yield traits in the mountains of North Carolina. Six burley tobacco varieties were established at two locations in different counties in fields naturally infested with either race 0 or race 1 of the tobacco black shank pathogen, *Phytophthora nicotianae*. Treatments consisted of experimental, new and commonly grown burley varieties with and without fungicide applications for black shank control. Disease assessments for both blue mold and black shank were collected at topping and prior to harvest, and yield data was collected after curing. In general, blue mold severity was greatest on the varieties NC 7, KTH 2406, and TN 90, moderate on KT 206, and lowest on NC 2000 and TKS 4028. The varieties KT 206, KTH 2406, NC 7 and TN 90 had higher survival rates in the field infested with *P. nicotianae* race 0, while KT 206, KTH 2406, and NC 7 had higher survival rates in the field infested with *P. nicotianae* race 1. Statistical analyses indicated that variety had a greater effect on blue mold and black shank damage than did Ridomil treatments, although Ridomil treatments increased yield among all varieties, further justifying the significance of Ridomil applications in fields infested with *P. nicotianae*.

PERIMETER TRAP CROP EVALUATION FOR CUCUMBER BEETLE CONTROL IN PUMPKIN

Infante-Casella,* M.L.¹., Ghidui, J.²

¹: County Agent, Rutgers NJAES Cooperative Extension, Gloucester County, 1200 N. Delsea Dr.,

Clayton, NJ 08312

² Vegetable Entomologist, Rutgers NJAES
Agricultural Research and Extension Center, 121
Northville Rd., Bridgeton, NJ 083024

Field research was conducted to determine if 'New England Blue Hubbard' (*Cucurbita maxima*) would attract both striped cucumber beetles (*Acalymma vittatum* (Fabricius) and spotted cucumber beetles (*Diabrotica undecimpunctata howardi* Barber) away from a main crop of pumpkin when planted as a perimeter trap crop. Cucumber beetle is the main insect pest of cucurbit crops in New Jersey and can greatly reduce plant survival due to the transmission of the bacteria *Erwinia tracheiphila* that causes the disease bacterial wilt of cucurbits. A demonstration was conducted at the Rutgers Agricultural Research and Extension Center in Bridgeton, New Jersey in spring of 2007. The pumpkin variety 'New England Pie' was seeded on Jun 5 at a spacing of 3 ft between plants in a row and 6' between rows with 16 rows 120 ft. in length. On the same date, two rows of Hubbard were seeded at the same in row and row spacing around the field of pumpkin. In an adjacent field separated from the PTC field by a 60 ft buffer 18 rows of pumpkin, 120 ft long at the same spacing, were seeded also on Jun 5. Field scouting of pumpkin seedlings began twice weekly on Jul 5 and ended on Jul 16. The first scouting event showed no cucumber beetle in the pumpkin crop with the perimeter trap crop. Highest numbers of cucumber beetle were found in the Hubbard throughout the scouting period. This study showed cucumber beetle are more attracted to 'New England Blue Hubbard' than 'New England Pie' pumpkin.

EFFECT OF SULFUR AND NITROGEN APPLICATIONS ON VAUGHN'S #1 BERMUDAGRASS HAY MEASURING CROP YIELD AND FORAGE QUALITY

Joines, D.K.¹, Gill, W.W.², Savoy, H.J.³

¹ Manager, University of Tennessee Extension, Soil, Plant and Pest Center, Nashville, Tennessee 37211

² Director, Middle Tennessee State University, School of Agriscience and Agribusiness, Murfreesboro, Tennessee 37132

³ Associate Professor, University of Tennessee Extension, Biosystems Engineering and Soil Science, Knoxville, Tennessee 37996

Vaughn's #1 Bermudagrass® has been widely

established becoming one of the leading varieties in the Middle Tennessee area. This field study was conducted to evaluate Bermudagrass yield response to sulfur amendments and measure nutrient status of harvested forage. Research was conducted on a low testing Staser silt loam (Cumulic Hapludoll) on the Highland Rim approximately 30 miles north of Nashville (N 36° 28' and W 86° 50', elevation 714 ft). Experimental design was a randomized complete block of four replications. All plots were treated with 80 lb P/ac as triple superphosphate, 240 lb K/ac as potassium chloride and 100 lb. N/ac as ammonium nitrate. Elemental S was applied at 20 and 40 lb S/ac respectfully. K and S applications were once annually while N was applied after each cutting. A Carter Forage Harvester was utilized harvesting 3 ft swaths through each plot where samples were weighed for dry matter and nutrient analysis. Statistical analysis revealed there was no significant response in yield to S applications ($P < 0.05$). There were no significant affects on nutritional quality measurements of NDF, ADF, P, K, Ca, Mg, Mn, Zn, S or TDN with the exception of copper (Cu), which showed a highly significant ($P < 0.01$) decrease in levels as S rate increased. Although plant S was not affected by treatments, sulfur was present in 78% of samples with amounts which were marginally antagonistic ($>0.20 - 0.30$ %) to copper metabolism in cattle. Nitrate accumulation in the forage was not affected by S applications ($P < 0.05$).

MANAGING GLYPHOSATE RESISTANT PALMER AMARANTH WITH RESIDUAL HERBICIDES IN DRYLAND COTTON

Kichler, J.M.^{1*}, Culpepper, A.S.²

¹ Macon County Cooperative Extension, The University of Georgia, Oglethorpe, GA 31068

² Department of Crop and Soil Sciences, The University of Georgia, Tifton, GA 31793

Glyphosate-resistant Palmer amaranth was confirmed in Macon County, Georgia in 2005. Producers must use residual herbicides if they are going to effectively manage this pest. Dryland producers often question the use of residual herbicides due to erratic rainfall patterns. The objective of this experiment was to determine the most effective residual cotton herbicides that could be applied preemergence, postemergence, and at layby for control of Palmer amaranth. Traditional small plot techniques were used

and each treatment was replicated 3 times. Thirteen residual herbicides were applied at a 1X and 1.5X rate prior to Palmer amaranth emergence. Residual herbicides included the following: Caparol, Cotoran, Direx, Dual Magnum, Envoke, Layby Pro, Linex, Prowl H2O, Reflex, Stalwart, Suprend, and Valor. Rainfall did not activate the herbicides until seventeen days after application. Reflex, Staple, and Valor were the most effective treatments providing 78%, 78%, and 82% control, respectively, at 44 days after application.

THE IMPACT OF ROW WIDTH, PLANT POPULATION, AND HARVEST DATE ON THE MARKETABLE YIELD OF RED TABLE BEETS FOR PROCESSING

Kikkert,* J.R.¹, Reiners, S.²

¹Cornell University Cooperative Extension Vegetable Program, 480 N. Main St., Canandaigua, NY 14424

²Department of Horticultural Sciences, Cornell University, New York State Agricultural Experiment Station, 630 W. North St., Geneva, NY 14456.

New York ranks second in table beet production in the US. Growers are paid an average of \$65/ton for size 1 (1.9 to 4.1 cm dia.), \$45/ton for size 2 (4.2 to 6.3 cm) and \$35/ton for size 3 (6.4 to 8.2 cm dia) beets. Processors will only accept 10% size 3 roots. 'Ruby Queen' was grown at 4 row widths (46, 51, 56, and 61 cm) and 2 in-row populations (82 and 115 pl/m) in 2006. A third population (49 pl/m) was added to the 46 and 51 cm row width treatments in 2007. Beets were hand harvested 80, 100, and 120 d after planting; graded by size and weighed. Data was analyzed by regression analysis and Tukey's HSD tests. Harvest date and plant population had the greatest effect on root size distribution. There were significantly more undersize (<1.9 cm dia) roots at 80 d and 115 pl/m. The FW of size 1 roots was greatest with 115 pl/m and 100 or 120 d. The FW of size 2 roots was greater with 82 pl/m compared to 115 pl/m, and at 100 or 120 d compared to 80 d. Growing the beets at 115 pl/m and/or the 46 and 51 cm row widths significantly reduced the number of large beets. The dollar value/m of row was highly dependent on harvest date ($p < 0.0001$), with the highest return at 120 d. Although row width had little effect on FW marketable beets/m of row, the return/ha increased as row width decreased.

RIGHT-TO-FARM ISSUES ON NEW JERSEY'S SUBURBAN FRINGE

Kluchinski*, D.¹, Kimmel, D.²

¹County Agent, Rutgers NJAES Cooperative Extension, New Brunswick, NJ 08901

²Agricultural Resource Specialist, New Jersey State Agricultural Development Committee, Trenton, NJ 08625

Farmers and non-farmers are being brought closer together as residential development and suburban growth increases. In order to determine areas of conflict and develop educational outreach efforts to prevent or reduce these conflicts, a survey of Rutgers Cooperative Extension faculty and staff who work with commercial agricultural interests was conducted. Respondents ($n=29$, 88% response rate) were asked to identify and rank the most common complaints or inquiries related to right-to-farm issues and farmer/non-farmer conflicts. The top three first-ranked issues were pesticides (applications, residues, drift, safety/dangers), identified by 37% of respondents, followed by noise (trucks, pumps, equipment) and growers rights (ordinances, migrant workers, labor housing, construction, etc.) (17% each), and manure related issues (odors, flies, storage, spreading, handling) (13%). The top three second-ranked issues were pesticides and manure (19% each); noise, water use, and animal issues (hunting, animal rights, livestock production) (15% each); and pollution (dust, dumping, greenhouse emissions, farm cleanliness, runoff, lighting, etc.) (11%). The top three third-ranked issues were pollution (26%), manures and animal issues (17% each), and water use (13%).

SPATIAL DISTRIBUTION OF BLACK BEAR DAMAGE IN NEW JERSEY

Komar,* S. J.¹, Mickel, R. C.², Bamka,W. J.³,

¹County Agent, Rutgers NJAES Cooperative Extension, Sussex County, Newton, New Jersey 07860

²County Agent, Rutgers NJAES Cooperative Extension, Hunterdon County, Flemington, New Jersey 08822

³County Agent, Rutgers NJAES Cooperative Extension, Burlington County, Westampton, New Jersey 08060

Black bear (*Ursus americanus*) populations have been steadily increasing in New Jersey since the 1980's. Current research estimates the bear population at more than 3,000 bears in the prime bear region of northwestern New Jersey. This region is also home to a great deal of rural and agricultural land. Although anecdotal evidence suggests that damage to agricultural crops has increased, limited studies have been conducted to quantify bear damage in New Jersey agricultural crops. A research trial was conducted during the 2007 growing season to quantify bear damage and to determine the spatial distribution of bear damage in corn. Bear damage was quantified using Global Positioning System technology. Damage was found to be variable ranging from less than 1% of the total field area to nearly 8% with an average loss of 2.24%. Numerical differences were observed in the linear distance from individual rolls to the forested areas with approximately 80% of the damage occurring between 25 and 200 feet. Bear damage in agricultural crops can impact yield and profitability for agricultural producers in northwest New Jersey. Wildlife damage to crops is variable by field and several factors such as weather, crop load, availability of mast crops or other available foods will change the impact wildlife has on crop yield. More research is needed to determine spatial distribution of bear damage and to quantify the relationship between bear population, crop damage and land use classification.

THE ECONOMICS OF ORGANIC, GRAZING AND CONFINEMENT DAIRY FARMS

Kriegel, * T. S.¹

¹. Farm Financial Analyst, UW Center for Dairy Profitability, 1675 Observatory Drive, Madison, WI 53706.

Ten Land Grant Universities plus Ontario standardized accounting rules and data collection procedures to gather, pool, summarize and analyze actual farm financial performance from many sustainable, small farming systems which currently lack credible financial data that producers need for decision-making, in a project initially sponsored by USDA IFAFS grant project #00-52501-9708.

This effort compares Wisconsin organic dairy farm data to grazing and confinement data since very little organic dairy data was collected from outside of Wisconsin. However, the Wisconsin data is compared to the limited

amount of organic data collected in other parts of North America.

This project has over 70 farm years of Wisconsin organic dairy farm data spanning seven years to help understand the level of economic competitiveness of organic dairy farming.

Insights include:

1. Actual farm financial data from organic dairy farms is still scarce.
2. The financial performance of organic dairy farms looks dramatically different from one part of the country to the other.
3. A number of individual farms are achieving financial success with an organic system.
4. The price premium was very important to the economic competitiveness of organic dairy farms.

The up-to-date conclusions of this project can be accessed at <http://cdp.wisc.edu>.

2007 ARKANSAS CORN AND GRAIN SORGHUM RESEARCH VERIFICATION

Lawson, * K.W.¹, Guiling, P.S.², Kelley, J.P.³

1. Corn and Grain Sorghum Verification Coordinator, Arkansas Cooperative Extension, Little Rock, Arkansas 72203
2. Agricultural Economics Associate, Arkansas Cooperative Extension, Keiser, Arkansas 72351
3. Extension Agronomist – Wheat and Feed Grains, Arkansas Cooperative Extension, Little Rock, Arkansas 72203

The Corn and Grain Sorghum Research Verification Program (CGSRVP) was conducted on five corn and three grain sorghum fields in 2007 by the University of Arkansas Cooperative Extension Service. Grain yields ranged from 171 to 218 bushels per acre for corn with an average of 200.39 bushels per acre, and 95 to 128 bushels per acre for grain sorghum with an average of 110.5 bushels per acre. Arkansas farmers harvested 590,000 acres of corn and 215,000 acres of grain sorghum with an average yield of 168 and 94 bushels per acre, respectively. The 2007 state average corn and grain sorghum yields set new state records. Agronomic and economic data for specified operating costs were collected for each

CGSRVP field to evaluate the effectiveness and profitability of production recommendations. The economic analysis show total direct expenses ranged from \$304.43 to \$409.83 per acre for corn with an average of \$360.54 per acre, and \$152.77 to \$204.03 per acre for grain sorghum with an average of \$188.51 per acre. The average break-even prices needed to cover total specified operating costs averaged \$1.79 per bushel for corn and \$1.58 per bushel for grain sorghum. Total direct and fixed costs averaged \$441.47 and \$268.35 per acre with a break-even price of \$2.19 and \$2.23 per bushel for corn and grain sorghum, respectively. The CGSRVP was used to demonstrate Extension's research-based recommendations to help corn and grain sorghum growers to produce a profitable, high yielding crop. The CGSRVP is funded by the Corn and Grain Sorghum Checkoff monies and administered through the Arkansas Corn and Grain Sorghum Promotion Board.

EVALUATION OF THE RELATIONSHIP OF TIME OF DAY TO FORAGE NITRATE LEVELS

LeValley, * R.C.¹, Pettijohn, M.B.², Selk, G.E.³, Gallaway, M.R.⁴, Highfill, G.A.⁵, New, M.G.⁶, Zhang, H.⁷

- ¹. Extension Area Livestock Specialist, Oklahoma State University, Duncan, OK 73533
- ². Extension Educator, Agriculture, Oklahoma State University, Grady County, Chickasha, OK 73018
- ³. Extension Animal Reproduction Specialist, Oklahoma State University, Stillwater, OK 74078
- ⁴. Extension Educator, Oklahoma State University, Stephens County, Duncan, OK 73533
- ⁵. Extension Area Livestock Specialist, Oklahoma State University, Enid, OK 73701
- ⁶. Extension Educator, Oklahoma State University, Comanche County, Lawton, OK 73501
- ⁷. Professor, Plant and Soil Sciences, Oklahoma State University, Stillwater, OK 74078

Forage sorghums are used by Oklahoma cattle producers for summer grazing or harvested for hay. While they can be very productive and high quality, they can also accumulate toxic levels of nitrate when stressed. Based on the assumption that the plant continues soil nitrate uptake during nighttime hours, followed by accelerated conversion of the nitrate to protein during daylight hours, Extension recommendations have been to wait until afternoon to

cut forage sorghum for hay if anticipated nitrate levels are marginally high. To evaluate the significance of the change in nitrate concentration in forage sorghums during the day, samples were collected at two hour intervals from at 8:00 am to 6:00 pm. A cooperators field was divided into quadrants. Two were sampled on day one and the remaining two quadrants sampled on day two. Three random samples, consisting of ten stems each, were taken from each quadrant at the specified interval, resulting in 18 samples per quadrant. The samples were analyzed at the OSU Soil, Water and Forage Analytical Laboratory to determine the level of nitrates, (ppm NO₃). Results were analyzed using SAS analysis of variance, with time of day, day, and interactions, as the potential sources of the variation in nitrates. There was no significant variation due to time of day; however there was a difference between days. The study will be repeated in the summer of 2008 to gain additional data.

STATUS OF INTEGRATED PEST MANAGEMENT IN SELECT NORTH DAKOTA COUNTIES

Majumdar, * A.¹, Ulmer, A.², Brummond, B.³, Lien, J.⁴, Kringler, J.⁵, Nichols, K.⁶, Lubenow, L.⁷, Olson, L.⁸, Rose, M.⁹, Peterson, N.¹⁰, Weinmann, T.¹¹

- ¹. Agricultural Agent, Cooperative Extension Service, North Dakota State University, Finley, ND 58230-0316
- ². Agricultural Agent, Cooperative Extension Service, North Dakota State University, LaMoure, ND 58458-0037
- ³. Agricultural Agent, Cooperative Extension Service, North Dakota State University, Park River, ND 58270-4131
- ⁴. Agricultural Agent, Cooperative Extension Service, North Dakota State University, Steele, ND 58482-0110
- ⁵. Agricultural Agent, Cooperative Extension Service, North Dakota State University, Fargo, ND 58108-2806
- ⁶. Agricultural Agent, Cooperative Extension Service, North Dakota State University, Hillsboro, ND 58045-0730
- ⁷. Agricultural Agent, Cooperative Extension Service, North Dakota State University, Cavalier, ND 58220-4111
- ⁸. Agricultural Agent, Cooperative Extension Service, North Dakota State University, Grand Forks, ND 58201

- ⁹. Agricultural Agent, Cooperative Extension Service, North Dakota State University, Minot, ND 58702-5005
- ¹⁰. Agricultural Agent, Cooperative Extension Service, North Dakota State University, Lakota, ND 58344
- ¹¹. Horticultural Agent, Cooperative Extension Service, North Dakota State University, Fargo, ND 58108-2806

Paper-based grower survey was conducted in 2008 as a multi-county initiative for assessing grower perception and utilization of integrated pest management (IPM) in North Dakota. Preliminary results (n = 287) from eight counties with 704,003 reported acres suggested a strong need for IPM training for crop producers. About 79% of reported acres are under IPM practices based on the survey. Depending on the county, there are differences in grower perception and implementation level of IPM. About 82% growers indicated that IPM is adequately emphasized in university publications and events; 11.8% of respondents indicated that IPM should receive more emphasis in university sources. Scouting crops for pest problems was perceived as a top-priority IPM tactic (rating 4.2 out of 5.0) closely followed by tactics such as the use of resistant varieties (4.0) and pesticide rotation (3.9). Weeds were indicated as the most threatening pest on farms by 46% participants, followed by diseases (23.3%) and insects (22.8%). Extension print publications and workshops were indicated to be the most popular sources of IPM information. Lack of awareness about IPM practices and high cost were the top two impediments to the adoption of IPM practices. The findings from this survey corroborate previous surveys conducted in Texas, Utah, and Virginia. Overall, 28% respondents from ND indicated need for training in IPM philosophy and practices.

DETERMING THE ECONOMIC IMPACT OF THE OHIO GRAPE & WINE INDUSTRY

Marrison, D.*¹

¹ Agriculture and Natural Resources Educator, Ohio State University Extension, Ashtabula County, 39 Wall Street, Jefferson, Ohio 44047

OSU Extension conducted the Ohio Grape & Wine Economic Impact Study in the fall of 2007 to ascertain the economic impact this industry has to the Ohio economy. A survey was developed, pilot tested and mailed to 148 wineries and grape producers. Fifty-one percent of the population responded to the survey.

Respondents reported that 736,750 persons visited their grape & wine operations each year with a total estimated visitor population to be 1.64 million visitors per year. The responding wineries reported selling 593,500 gallons each year worth 21.3 million dollars. The wineries reported additional income of 19.3 million from gift, meal, snack, lodging and special events. Respondents also indicated to have spent 14.3 in capital vineyard and winery expenses in the past five years and plan to spend an additional 9.4 million in the next five years. Respondents reported 8.5 million dollars for yearly variable winery and vineyard expenses of which 2.8 million is for employee expenses. In total, it is estimated that the total economic impact of the Ohio Grape & Wine Industry to be close to 100 million dollars per year. This statewide research project was conducted by OSU Extension in conjunction with the Lake County Soil & Water Conservation District and Ohio Wine Producers Association with support from the Ohio Grape Industries Committee and the Cleveland Foundation.

THE USE OF GROWTH IMPLANTS FOR INCREASED WEIGHT GAIN IN STOCKER CATTLE

McGinley, * B.C.¹, Gadberry, M.S.², Dove, T.³, Longmore, C.⁴ Anderson, P.⁵

- ¹. Extension Agent, University of Arkansas
Cooperative Extension Service, Fulton County,
Salem, Arkansas 72576
- ². Extension Specialist, University of Arkansas
Cooperative Extension Service, Little Rock,
Arkansas 72203
- ³. Senior Sales Representative, Elanco Animal Health,
Mansfield, Missouri 65704
- ⁴. Regional Sales Manager, VetLife, West Des
Moines, IA 50265
- ⁵. Technical Service Manager, VetLife, West Des
Moines, IA 50265

As input costs for cattle production increase, producers must implement practices that improve production efficiency. Using growth promotants in stocker cattle has the potential to increase weight gain, providing a significant return above the investment cost. The objective of this producer-farm project was to demonstrate the economic benefit of implanting commodity cattle. One hundred sixty-five crossbred steer calves, weighing 487 ± 77.4 lbs., were implanted with COMPONENT® TE-G to evaluate its impact on

weight gain. Calves were fed a total mixed ration consisting of wheat and bermudagrass hay, hominy, corn gluten feed, wet distillers grains, and a mineral premix. By day 65, average daily gain (ADG) of implanted cattle was 2.46 lbs./day compared to 2.29 lbs./day for non-implanted cattle ($P = 0.09$). Gross returns per head were \$169 for the non-implanted and \$180 for the implanted calves. The return above implant cost was \$10 per head by day 65 and projected to be \$15 per head if the demonstration herd had not been marketed prior to realizing the full benefit of the implant. The net gain realized if all cattle within this demonstration group had been implanted would be at least \$1650.

EFFECTS OF EQUINE STALL WASTE APPLICATIONS ON YIELD AND QUALITY OF COOL SEASON GRASS HAY

Mickel,* R. C.¹, Komar, S. J.²

¹ County Agent, Rutgers NJAES Cooperative Extension, Hunterdon County, Flemington, New Jersey 08822

² County Agent, Rutgers NJAES Cooperative Extension, Sussex County, Newton, New Jersey 07860

Manure management is a serious concern for small equine operations in New Jersey. Many producers use wood shavings as stall bedding. Bedding often represents a large percentage of the volume of stall waste being land-applied. An increased percentage of shavings in stall waste can minimize nutrient availability and can decrease yields if over applied. An experiment was conducted during the 2007 and 2008 growing seasons to evaluate the effects of applying equine stall waste to grass hay. Two stall waste treatments, 10 tons/A and 20 tons/A, were compared to inorganic fertilizer applications and a composted manure product at equal rates. All treatments provided increased yield when compared to the untreated check. In 2007 inorganic fertilizer applications resulted in the greatest yields. No differences were observed between the compost treatment and both stall waste treatments. Results were similar in 2008 with the inorganic treatments producing the greatest yields. Yields were increased in the plots treated with composted manure in 2008. Differences were observed in hay quality during the 2008 growing season with the untreated plots producing the lowest yield and poorest quality hay. More research is needed to determine the maximum volume

of horse stall wastes that can be applied without impacting yield.

FERTILIZING COTTON IN ALABAMA'S BLACK BELT

Mitchell,* C.C.¹, Yates, R.P.², Delaney, D.P.³

¹Extension Agronomist-Soils, Dept. Agronomy & Soils, Auburn University, AL 36849

²Regional Extension Agent, Alabama Cooperative Extension System, Linden, AL 36748

³Extension Agronomist, Dept. Agronomy & Soils, Auburn University, AL 36849

The Black Belt Prairie region of Central Alabama was the center of world cotton production in the Antebellum South and during reconstruction. However, since World War II and the advent of mechanical cotton production, only a few areas of cotton production remain in this part of the South. Modern cotton farmers on these typically clayey soils with a high shrink-well capacity and poor internal drainage face challenges that farmers on nearby, well drained, sandy Coastal Plain soils do not face. Among these challenges are high denitrification during wet weather, potential K fixation by 2:1 type clays, typically low soil test P, and shallow root growth. In 2001, on-farm, soil fertility test/demonstrations were initiated because of problems some local farmers had encountered with foliar diseases presumably associated with K deficiencies. Most of these soils test "high" or "very high" in extractable K. Because of problems managing on-farm tests, the study was moved to a Vaiden clay (very-fine, smectitic, thermic Aquic Dystruderts) on the Black Belt Research and Extension Center in 2005. In 4 of the 6 years of these studies, either extreme drought or excessive rainfall dramatically limited yields. Nevertheless, these studies suggest that current soil test P and K interpretations may need revising. Cotton does not respond to P although these soils usually test "low" to "medium" in P. Cotton often responds to additional K application although these soils test "very high" in K.

PERFORMANCE OF LATE-SUMMER SEEDED SPRING OATS AS A FORAGE CROP IN NORTHERN ILLINOIS

Morrison,* J.A.¹, Paul, L.E.²

¹ Extension Educator, Crop Systems, University of Illinois Extension, Rockford, Illinois 61107

² Agronomist, Northern Illinois Agronomy Research Center, Department of Crop Sciences, University of Illinois, Shabbona, Illinois 60550

Spring oats (*Avena sativa*) seeded in late-summer is an option for livestock producers needing a forage crop that can be baled, ensiled, or grazed. Limited data exists in northern Illinois on forage yield and quality of spring oats seeded in late-summer. The objective of this study was to document such data and as a result, provide reference values for livestock producers developing their forage management strategies. A three-year study (2005-2007) was conducted at the Northern Illinois Agronomy Research Center, Shabbona to measure forage yield and quality of spring oats seeded in late-summer. Four oat varieties were drilled at three bushels per acre in a prepared seedbed in mid-August, late-August, and early-September. There were four replicates in a randomized complete block design. The previous crop was winter wheat (*Triticum aestivum*) harvested as grain. Oats were harvested in late October using a flail-type forage harvester. Forage "grab" samples were collected for nutrient analysis. Due to excess rainfall at the site in August 2007, seeding dates were delayed to September; even though harvest data were collected, they were not included in this report. Data were statistically analyzed using the SAS program. Averaged over the varieties and years, spring oats seeded in mid-August, late-August, and early-September yielded 1.8, 1.3, and 0.6 tons of dry matter per acre, respectively. Whole plant crude protein was 17.7, 22.1, and 21.4 percent for each seeding time, respectively. Relative feed value was 154, 164, and 168 for each seeding, respectively. Significant differences existed between varieties and seeding dates relative to yield and quality.

SEEDING AND GERMINATION RATE STUDIES ON THE FIRST SEEDED TURFGRASS CULTIVAR OF SEASHORE PASPALUM (*PASPALUM VAGINATUM*) 'SEA SPRAY'

Nagata,* N.M.¹

¹ Extension Agent, Maui County Cooperative Extension Service, University of Hawaii, Kahului, Hawaii 96732

In 2005, 'Sea Spray' was introduced as the first seeded seashore paspalum for lawns and golf courses. In 2003-2005, field trials were conducted on Maui to determine a seeding and germination rate and to introduce this cultivar to local stakeholders. 'Sea Spray' was planted at 0.5, 1.0, 1.5, 2.0 and 3.0 lbs/1,000 ft² in randomized complete blocks (RCB) with 3 replicated, 5' x 5' plots. Results indicated an optimum seeding rate of 1.0-1.5 lbs/1,000 ft². A field day was held on May 14, 2004 for 21 individuals. Nine people who responded to a survey indicated they had obtained new information and their knowledge increased by 47%. Eight people will use this information within 6 months and 1 person will use it in the future. Germination studies were conducted with seed lots harvested and stored from 2002, 2003, 2004 (lot-H), 2004 (B) and 2004 (B-Endo) in Oregon. Seeds arrived on Maui in December 2004 and stored until needed. They were planted at 1 lb/1,000 ft² in 3' x 5' plots in a RCB design with 5 replicated, 3' x 5' plots in December 2004, May 2005 and December 2005. Germination declined for the 2002 and 2003 lots with each planting or as seeds aged in storage. All the 2004 seed lots had the best germination 5 months after storage, followed by no storage time and decreased after 1 year. A field day was held on February 1, 2005 with 13 people attending and again on July 15, 2005 for 3 individuals.

MONITORING BIOMASS FOR USE AS BIO-FUELS

Parker*, W.¹, Hawkins, G.L.²

¹ Extension Coordinator, Georgia Cooperative Extension, Jenkins County GA, 30442

² Agricultural Pollution Prevention Specialist, University of Georgia, Tifton, GA 31793

Cellulose is seen as the next material or biomass that will be used for the production of alternative fuels, specifically ethanol. However, the removal of biomass from a field may have negative affects on the soil organic

matter especially in systems practicing conservation tillage. In the conservation tillage system, a cover crop is planted and that same cover crop is then used as mulch for various positive benefits. As we look for new and different sources for feedstocks for conversion of cellulose to ethanol, one potential source is the commercial crop residue such as cotton and the cover crop planted to form the mulch layer. Therefore, this project was designed to monitor soil organic matter as it is affected by the removal of 0, 50 and 100% of rye cover crop residue from a field using the conservation tillage system. Data will be presented to show how much material can be removed from a typical field and the associated soil organic matter content. The results presented here are initial data from the project, but will explain results and future plans for the project.

EVALUATION OF YIELD AND GROWTH RESPONSE OF WHEAT FOLLOWING RICE OR SOYBEAN IN ARKANSAS

Perkins, J.K.¹, Allen, C.S.², Grant, E.W.³, Kelley, J.P.⁴, Sheets, S.C.⁵

1. Extension Agent, University of Arkansas Cooperative Extension, Lonoke County, Lonoke, AR 72086
2. Extension Agent, University of Arkansas Cooperative Extension, Poinsett County, Harrisburg, AR 72432
3. Extension Agent, University of Arkansas Cooperative Extension, Craighead County, Jonesboro, AR 72401
4. Extension Wheat Specialist, University of Arkansas Cooperative Extension, Little Rock, AR 72203
5. Program Technician, University of Arkansas Cooperative Extension, Little Rock, AR 72203

Recent research has demonstrated that soft red winter wheat planted following rice in a cropping rotation normally yields less than wheat planted following soybeans. In 2007, there were 830,000 acres of wheat grown in Arkansas. The majority of this wheat is in a rice and soybean rotation. Many of the best wheat varieties today do not vary greatly in yield potential, but instead have specific traits that make them more adaptable to a specific production environment. Historically wheat has struggled when planted following rice due to stand establishment and growth issues related to poor external and internal drainage characteristics of a rice soil. The objective of this study was to evaluate vegetative and yield characteristics of 27 commonly grown winter wheat varieties in a soybean and rice rotation system on different soil types. This three county effort to evaluate a standardized variety

trial following different cropping systems was performed in conjunction with the Extension Wheat Specialist. Trials were established in Lonoke, Poinsett and Craighead counties using a Hege 500 small plot drill. Plot size was 5' x 20' and the experimental design was a randomized complete block with four replications. University of Arkansas recommendations for fertility and crop management were utilized in all trials. Data was taken on growth characteristics i.e. (stand, tillering, lodging, disease, yield and test weight). Results of this study will be presented to fellow agents and producers.

POULTRY LITTER ON CORN AND COTTON IN ALABAMA

Reed, T. D.¹, Mitchell, C. C.², Birdsong, W. C.³, Winstead, A. T.⁴, Norwood, S. H.⁵, Petcher, R. L.⁶, Griffith, W. G.⁷

1. Extension Specialist, Alabama Cooperative Extension System (ACES), Franklin County, Russellville, AL 35653
2. Extension Specialist, ACES, Auburn University, Auburn, AL 36849
3. Extension Specialist, ACES, Wiregrass REC, Headland, AL 36345
4. Multi-County Extension Agent-Precision Ag, ACES, Tennessee Valley REC, Belle Mina, AL 35615
5. Multi-County Extension Agent-Precision Ag, ACES, Tennessee Valley REC, Belle Mina, AL 35615
6. Regional Extension Agent-Agronomy, ACES, Washington County, Chatom, AL 36518
7. Regional Extension Agent-Agronomy, ACES, Fayette County, Fayette, AL

Alabama ranks third in broiler production among U.S. states and produces over 1 billion broilers annually. The broiler litter (BL) generated by this industry is frequently used as the primary source of fertilizer for corn and cotton on Alabama farms. Auburn University Extension personnel have conducted research annually since 1990 to evaluate the response of cotton and/ or corn fertilized with varying rates of poultry litter. Initial studies were conducted using conventional tillage and beginning in 1995 studies were conducted using conservation tillage. The first irrigated studies were conducted with cotton in southeast Alabama from 1999 through 2003. Irrigated studies with corn and cotton using pre-plant

BL applications and supplemental commercial sidedress N were performed in north Alabama in 2007. These studies have shown that N availability is about the same whether it is surface applied as in conservation tillage or incorporated as in conventional tillage. These studies have led Extension to recommend that farmers use 2 tons of BL (with at least 3% N) pre-plant for cotton and 3 tons of BL pre-plant for corn grown without irrigation and to apply additional sidedress N for corn and cotton grown using irrigation. Higher rates of BL are needed for sandier soils (lower CEC) to give the same yield response to a given rate of BL applied to heavier soils (higher CEC value). Tests have shown that due to nitrogen losses litter should be applied within 30 days of planting. Both crops exhibited a residual yield response to litter.

EVALUATION OF SOYBEAN POPULATIONS ON YIELD AND ECONOMICS IN SOUTH CENTRAL NEBRASKA

Rees,* J.M.¹, Schneider, J.W.², VanDeWalle, B.S.³, Zoubek, G.L.⁴

¹. Extension Educator, UNL Extension, Clay/Webster Counties, Clay Center, NE 68933

². Extension Educator, UNL Extension, Hamilton County, Aurora, NE 68818

³. Extension Educator, UNL Extension, Fillmore County, Geneva, NE 68361

⁴. Extension Educator, UNL Extension, York County, York, NE 68467

Rising input costs have producers examining ways to reduce costs of production. In 2006 and 2007, producers involved with the Greater Quad County On-farm Research Group tested four different soybean populations to determine yield and economic impact on the cost of production. Seeding rates were 90,000; 120,000; 150,000; and 180,000 seeds/acre. Stand counts and yield were taken both years and pod counts were also taken in 2007. Yield data were analyzed using the mixed procedure in SAS 9.1. In 2006 at two locations, there was a significant population effect ($p=0.0151$) and no significant location effect ($p=0.1222$). There was no location by population significant interaction ($p=0.0734$). Significant population differences in 2006 occurred between 90,000 vs. 150,000 seeds/acre ($p=0.0255$); 90,000 vs. 180,000 seeds/acre ($p=0.0032$) and 120,000 vs. 180,000 seeds/acre ($p=0.0214$). The average yield was 65.52 bushels/acre at 90K vs. 67.43 bushels/acre at 180K even

though significant statistical yield differences occurred between populations. In 2007 (five locations), there were no location by population significant interactions ($p=0.9328$) and no significant population interactions ($p=0.6279$). There were significant location differences ($p<0.0001$) due to hail in a few locations. Average 2007 yield differed from 59.42 bushels/acre at 90K vs. 60.17 bushels/acre at 180K. This research shows that producers typically averaging 160,000 seeds/acre could reduce their populations to 120,000 seeds/acre with no significant yield loss. Reducing these populations on the estimated 270,000 soybean acres planted in these four counties in 2007 would have resulted in a \$9.00/acre seed savings, equivalent to saving \$2.5 million!

POTENTIAL IMPACT OF PROPOSED EPA BUFFERS ON TIFT COUNTY VEGETABLE PRODUCTION

Rucker*, K. S.¹, Tankersley, T. B.¹, and Culpepper, A. S.²

¹Tift County Extension Agent, University of Georgia, Tifton, GA, 31793, Dept. of Crop and Soil Sciences,

²University of Georgia, Tifton, GA, 31793

The Environmental Protection Agency (EPA) is currently investigating rule changes which would force vegetable growers to have buffers between fields applied with certain fumigants and any inhabited structure. To show the potential impact of these buffer restrictions, an economic impact assessment was performed on Tift County, Georgia. Fields planted in potentially effected crops during the 2006 growing season were identified by growers and their boundaries defined using GIS software. Tift County provided an additional GIS layer locating all inhabited structures in the county. Buffers were created on the structures in the GIS at various buffer distances and the total acres of vegetable production impacted were calculated based on where the buffers intersected field boundaries. Based on the 2006 Georgia Farm Gate Value Report, the economic impact of proposed buffers to Tift County were \$0.5, \$3.5, \$14.8 and \$36.9 million dollars respectively for 150, 300, 600 and 1,200 feet buffer distances.

RESEARCHING AGRICULTURAL AND RECREATIONAL LANDS IN REMEDIATING A COASTAL WATERSHED

Sciarappa, W. J.¹, Muscio, C. M.², and Hulme, B.³

- ¹. County Agent, Rutgers NJAES Cooperative Extension, Monmouth County, Freehold, NJ 07728
- ². County Agent, Rutgers NJAES Extension, Ocean County, Toms River, NJ 08755
- ³. Program Assistant, Rutgers NJAES Cooperative Extension, Monmouth County, Freehold, NJ 07728

Rutgers Cooperative Extension (RCE) is part of a Regional Stormwater Management Planning Committee that addresses environmental impairments and recommends Best Management Practices (BMPs) to remediate any non-point source contributions of nutrient loading and fecal coliform within watersheds. RCE characterized and assessed the agricultural, recreational and open space lands in the 12 sq. mile Wreck Pond Brook Watershed in comparison to its developed suburban communities. This region has contributed to the majority of New Jersey ocean beach closings in 2005, 2006 and 2007.

Geographic Information System (GIS) and tax assessment information were used to identify and characterize the quantity of agricultural, recreational and open space land in the watershed. A YSI Multiparameter Probe, a Hach Colorimeter and macroinvertebrate sampling were utilized to assess nitrogen and phosphorus levels in ponds and streams. Nutrient levels in the soil were assessed with soil probes. Innovative Microbial Source Tracking (MST) methods, qPCR and Multiple Antibiotic Resistance, were utilized to determine the source of microbial contamination.

The characterization yielded no obvious point sources of either nutrient or microbial contaminations from agricultural sources indicating a combined origin from multiple non-point suburban sources. The quantitative results led to the conclusion that important BMPs were manufactured treatment devices within the human communities and public education regarding nutrient runoff and soil erosion. Educational workshops were implemented for various stakeholders emphasizing rain gardens for homeowners and landscapers, and working demonstrations of on-farm manure management practices for farmers. A high degree of acceptance of these suggested BMPs from both groups was documented.

FUNGICIDE USE IN CORN

Shelby, P.W.¹, Newman, M.A.², Thompson, M.A.³, Williams, R.C.⁴

- ¹. Extension Agent, University of Tennessee Extension Gibson County, 1252 Manufacturers Row, Trenton, TN 38382
- ². Extension Specialist, University of Tennessee Extension, 605 Airways Blvd., Jackson, TN 38301
- ³. Extension Specialist, University of Tennessee Extension, 605 Airways Blvd., Jackson, TN 38301
- ⁴. Extension Area Specialist, University of Tennessee Extension Gibson County, 1252 Manufacturers Row, Trenton, TN 38382

Gray Leaf Spot (*Cercospora Zeae-maydis*) is a common foliar disease that can reduce corn yields. Strobilurin fungicides can effectively control gray leaf spot (GLS) when applied at the tassel emergence growth stage VT. In 2007, UT evaluated GLS control and yields with the use of strobilurin fungicides in continuous corn in irrigated and non-irrigated fields using susceptible and tolerant hybrids. Location 1 was an irrigated, replicated test plot at the Milan Research & Education Center (MREC) in a four-year continuous corn rotation, where two strobilurin fungicides were applied in 20 gallons of water per acre. Two non-irrigated studies (Location 2 and 3) were conducted in fields with a second year corn rotation using 20 to 22 Early Roundup Ready (RR) and RR stacked hybrids and one strobilurin fungicide applied with a commercial ground sprayer at 20 gallons of water per acre. Location 2 involved replicated plots arranged as sprayed and unsprayed blocks at the MREC. Location 3 was planted on a local farm as side by side sprayed and unsprayed strip plots. The break even yield was estimated to be 3.8 bu/A at \$4.00/bu corn. At Location 1 in irrigated continuous corn, yield increases of +7 to +25 bu/A resulted from a strobilurin fungicide application to corn at VT where conditions were optimal for heavy GLS infection. At Location 2, 11 of the 22 hybrids had a +3.8 bu/A yield increase while only 3 of the 20 on-farm strip plots had a +3.8 bu/A yield increase at Location 3.

ON-FARM EVALUATION OF LONG-TERM CONSERVATION TILLAGE SYSTEMS IN SOUTHWESTERN MINNESOTA

Stahl*, L.A.B.¹, Bau, D.B.²

¹ Extension Educator–Crops and ² Extension Educator–Farm Business Management, University of Minnesota Extension, Worthington, Minnesota 56171.

Growers in southwestern Minnesota have expressed concern over the potential for delayed plant growth, reduced yields, and reduced profitability when using conservation tillage, in part due to the prevalence of heavy soil types and cool conditions at planting in the area. To help address these concerns, an on-farm research and demonstration plot was initiated the fall of 2005 by Heron Lake, MN. The effect of tillage systems in a corn/soybean rotation on residue coverage, plant population, grain yield and moisture, and economics was evaluated. Treatments included fall strip-tillage (ST), fall chisel-plow and disk followed by spring field cultivation (CP), no-tillage (NT), one-pass of a field cultivator in the spring (OP), ridge-tillage (RT), and CP with approximately 25% more nitrogen than the CP treatment (CPA). The CPA treatment was included to help demonstrate University of Minnesota nitrogen guidelines. Corn and soybean trials were arranged in a randomized complete block design with 3 replications and rotated each year. Results were analyzed by ANOVA and means separated using Fisher's Protected LSD at the 0.05 and 0.10 significance levels. Significant differences in residue coverage were detected among treatments both years in corn and soybean. Yield differences were found among treatments in 2007 (both crops) but not 2006. Economic returns were affected by treatment only in soybean in 2007.

THE EFFECT OF FIELD EDGE HABITAT ON SOYBEAN INSECT PREDATOR POPULATION

Sundermeier,* A.P.¹, Pavuk, D.M.²

¹ Extension Educator, Ohio State University Extension, Bowling Green, Ohio 43402

² Professor, Bowling Green State University Department of Biological Sciences, Bowling Green, Ohio 43402

Edge habitats adjacent to soybean fields have the potential to provide resources and refuge for a wide diversity of beneficial insects, such as pollinators,

predators and parasitoids. Conservation biological control is an approach that focuses on various ways of providing natural enemies of crop pests the necessary resources to allow them to persist and increase their populations in proximity to crop fields. In this study, our major objective was to document predatory insects that may have the potential for regulation of the soybean aphid. Data was collected from Northwest Ohio soybean fields that had edge habitats which consisted of a wooded area (complex) compared to an edge habitat that consisted of grass species (simple). Fields were sampled every two weeks from June through August by using a sweep net to capture insects present. In each soybean field, three locations were sampled, the edge of the field, 50 feet into the field, and 150 feet into the field. Multicolored Asian ladybird beetle (MALB) populations increased 116% from a low near simple edge habitats to the center of soybean fields. However in a complex edge habitat, MALB populations decreased 60% from a high near edge habitat compared to center of field. Lacewing populations were not effected by type of edge habitat. More lacewing was found on edge habitat regardless of type. Lacewing population decreased 70% as counts were taken at interior field locations. All species of predatory insect populations reached maximum numbers in late August.

SUSTAINABILITY FACTORS IN RECIRCULATING AQUAPONIC SYSTEMS

Tyson,* R.V.¹, Simonne, E.H.², Treadwell, D.D.³

¹ Extension Agent, Florida Cooperative Extension, Seminole County, Sanford, Florida 32773

² Associate Professor, University of Florida Department of Horticultural Sciences, Gainesville, Florida 32611

³ Assistant Professor, University of Florida Department of Horticultural Sciences, Gainesville, Florida 32611

Aquaponics is a sustainable production system that links hydroponics with aquaculture. Factors affecting sustainability are system water pH, nutrient availability and crop yield. To maintain water quality in recirculating systems, nitrifying bacteria (*Nitrosomonas sp.* + *Nitrobacter sp.*) convert fish waste ammonia to nitrate nitrogen - a plant macronutrient, through the process of nitrification. In addition, plants act as another biofilter, utilizing nutrients and transpiring water to the atmosphere. This minimizes the need for nutrient laden water discharges to the environment. The ammonia

biofiltration rate, as measured by the loss of total ammonia nitrogen (TAN) from system water, increases as water pH increases from 5.5 to 8.5. Higher fish densities producing more nutrients for plants could be maintained when water pH is high. However, the concentration of certain nutrients, especially calcium, iron, and manganese, is reduced at high pH. Only manganese was reduced below the sufficiency range for cucumber (*Cucumis sativus*) production at pH 8.0. Even though early marketable aquaponic cucumber yield declined linearly as pH increased from 6.0 to 8.0, total yield was not significantly affected by pH. Removal of TAN increased linearly in a perlite trickling biofilter/ root growth medium and occurred at the rate of 19, 31, and 80 g/m³/d for aquaponic systems operating at pH 6.0, 7.0, and 8.0, respectively. This confirms the importance of pH in the sustainability of the system under study – recirculating tank culture with tilapia (*Oreochromis niloticus*) and cucumber. Other systems should be investigated with respect to sustainability factors to improve production recommendations.

VENTENATA GRASS CONTROL WITH IMAZAPIC

Van Vleet,* S.M.¹

¹Extension Educator, Agriculture and Natural Resources, Washington State University, Whitman County, Colfax, Washington 99111

Ventenata grass (*Ventenata dubia*), commonly called wiregrass or hairgrass, is an invasive, introduced annual grass. Ventenata is highly invasive in bluegrass, alfalfa, small grains, pasture and rangeland. Little is known about the impacts of this invasive species that has spread rapidly across the Pacific Northwest. Ventenata has shown resistance to the herbicides glyphosate and sethoxydim. In the early spring of 2007, a research study was conducted on rangeland in Anatone, Washington, using the herbicide imazapic. Imazapic was applied at 4 and 8 ounce per acre rates in the early spring and fall. Spring applications at the 4 ounce per acre rate provided an average of 68% control, while the 8 ounce per acre rate provided 93% control. Early spring applications resulted in 25% or less injury to existing rose species at the 4 ounce rate, compared to 55% injury at the 8 ounce rate. The herbicide imazapic is typically applied to invasive plants in the fall because of greater control, but data from fall applications in the Anatone study will not be collected until spring 2008.

ON-FARM TRIALS, INCREASING CORN POPULATIONS WITH TWINNED ROWS IN OHIO

Watters*, H.D.¹, Foster, S.S.², Kleinschmidt, A.W.³, Prill, G.L.⁴, Yost, J.K.⁵

¹ Extension Agent AgNR, The Ohio State University Extension, Champaign County, Urbana OH 43078

² Extension Agent AgNR, The Ohio State University Extension, Darke County, Greenville, OH 45331

³ Extension Agent AgNR, The Ohio State University Extension, Van Wert County, Van Wert, OH 45891

⁴ Program Manager AgNR, The Ohio State University Extension, Van Wert County, Van Wert, OH 45891

⁵ Extension Agent AgNR, The Ohio State University Extension, Fayette County, Washington C.H., OH 43160

In the mid-1990s many were trying to increase yield and populations in hybrid corn with narrow rows, mostly using 15-inch row widths. But that required a specialized head to harvest the crop. In our trials we used twinned rows of corn 7.5 inches apart on 30-inch centers to create narrow rows but were able to use a 30-inch corn head for harvest. Seven on-farm yield trials were conducted over four years (2003 to 2006) comparing twinned rows on 30-inch centers to conventional 30-inch rows in western Ohio at three sites, in Darke County (west central Ohio), in Van Wert County (northwest Ohio) and in Fayette County (southwest Ohio). We used the Great Plains Precision Plant drill to plant the twinned rows and a conventional planter to plant in 30-inch rows. Various hybrids were used, and at one site (Darke County) they were chosen based on predicted adaptability to narrow rows. Seeding rates from 30,000 up to 50,000 seeds per acre were used in both twin and 30-inch rows. In general we did see a slight yield boost by increasing the seeding rate to 35,000 to 37,000 seeds per acre, but we also observed this in 30-inch rows as well as in twinned rows. We observed increased lodging in some hybrids, and recommend proper hybrid selection for increased populations. Growing corn with the Precision Plant drill did not reduce yield, even when planting in 30-inch row widths. The drill may be an excellent choice for a producer needing a multi-purpose planter for wheat, soybeans or corn.

EVALUATION OF CHATEAU TANK MIXES IN APPLE

Wheeler*, M.J.¹, Ayers, E.L.², Mitchem, W.E.³

¹. County Extension Agent, University of Georgia Cooperative Extension, Gilmer

County, Ellijay, GA 30540

². County Extension Coordinator, University of Georgia Cooperative Extension, Fannin

County, Blue Ridge, GA 30513

³. Extension Associate, North Carolina State University, Fletcher, NC 28732

Weed control in apple orchards allows the limited allocation of water and nutrients to best serve the trees. A burndown study was developed to evaluate the effectiveness of different combinations of tank mixes using Chateau on three year old Arkansas Black apple, *Malus domestica*, var. *Arkansas Black*, on MM106 rootstock. In March 2007, a three ounce per acre rate of Chateau was applied to prepare the site for an early summer application of Chateau, and to encourage emergence of summer weeds. Treatments were then applied in late May. The treatments consisted of tank mixes of glyphosate at 1 qt/a, Rely at 4 qt/a + ammonium sulfate (8 lb/100 gal) + non-ionic surfactant (0.25% v/v), Rely at 4 qt/a + ammonium sulfate + crop oil concentrate (1% v/v) + Aim at 0.8 fl oz/a, Aim at 1.6 fl oz/a + Poast 1.25 pt/a + ammonium sulfate + crop oil concentrate, and Gramoxone Inteon at 4 pt/a + non-ionic surfactant. Visual estimates of control were noted nine and 28 days after application. Weed density counts were taken at the same time. Significant differences ($p \leq 0.05$) were found between the nontreated control and the treatments when evaluating percent bare ground at nine days and 28 days after treatment. There were significant differences in the total weed counts (# of weeds/ft²) at nine days ($p \leq 0.05$) and 28 days after treatment ($p \leq 0.10$; actual $p = 0.0554$). Both Rely treatments provided better control than comparable glyphosate standard, but the costs of these treatments were approximately twice that of glyphosate.

YIELD EVALUATION OF POWDERY MILDEW RESISTANT ZUCCHINI AND YELLOW SUMMER SQUASH VARIETIES

Wyenandt, C. A.¹, Infante-Casella,* M. L.²

¹. Vegetable Pathologist, Rutgers New Jersey Agricultural Experiment Station Cooperative

Extension, Rutgers Agricultural Research and Extension Center, Bridgeton, NJ 08302

². County Agent, Rutgers NJAES Cooperative Extension, Gloucester County, Clayton, NJ 08312

Field research was conducted with 7 green zucchini (GZ) and yellow summer squash (YSS) (*Cucurbita pepo*) varieties to evaluate yield and quality under field conditions in 2007 at the Rutgers Agricultural Research and Extension Center in Bridgeton, New Jersey. Varieties were chosen based on past performance from disease evaluation trials conducted in 2005 and 2006 at the same location. Through the research done in 2005 and 2006 these varieties were determined to have intermediate resistance to powdery mildew. In the 2007 study, squash was planted in two seasons. The first planting was seeded into raised beds with black plastic mulch and drip irrigation on Apr 30 and the second planting on July 27. Harvests began on June 11 and were conducted 3 times weekly for 4 weeks for the spring crop. For the fall crop harvests began on September 7 and took place 3 times weekly for 3 weeks. Varieties with the highest marketable yield in spring included 'XPT 1832 III' YSS, 'Judgement III' GZ, 'Patriot II' YSS, respectively. In fall, the highest marketable yields were seen with 'Judgement III' GZ, 'Wild Cat' GZ, and 'Tigress' GZ, respectively.

Poster Session

Extension Education

2008 NACAA

**93rd
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and
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Greensboro, North Carolina**

GEOPHYTES

Andruczyk, * M.A.¹, Dawley L.W.², Williams H.³

¹ Extension Agent, Virginia Cooperative Extension, Horticulture, City of Chesapeake, Chesapeake, Virginia 23322

² Extension Agent, Virginia Cooperative Extension, 4-H, City of Virginia Beach, Virginia Beach, Virginia 23456

³ Extension Agent, Virginia Cooperative Extension, 4-H, City of Chesapeake, Chesapeake, Virginia 23322

Chesapeake 4th grade teachers need assistance helping students pass the Standard of Learning Tests in plant parts, adaptations, life cycle interrelationships, geography, and economic importance. Chesapeake 4th grade students are unfamiliar with geophytes and don't have access to plant materials to study them. Additionally, The Mid-Atlantic Home and Flower Show is struggling to attract a more diverse audience and expand the color/aesthetics and educational aspects of the show. To respond to these challenges, a \$1,300 grant was funded by the Virginia Horticulture Foundation in 2006-07 and increased to \$1,500 in 2007-08 to support teaching about geophytes in 35+ Chesapeake and Virginia Beach 4th grade classrooms, 4-H clubs, and Chesapeake Juvenile Services youth. While participating in a planting and forcing project, children were instructed about geophytes, engaged in a competition to force bulbs for the Mid-Atlantic Home and Flower Show, and formed relationships with the school and community by planting bulbs. They were challenged to remember plant concepts and plant parts and develop an appreciation for plants. Additionally, they beautified their homes and the Mid-Atlantic Home and Flower Show by planting 7,500 bulbs and forcing *Narcissus*, *Freesia*, *Tulipa*, *Muscari* and *Hippeastrum* so that the 15,000 attendees each year can enjoy and learn about geophytes also. To date, 2,300 children and teachers have participated in the project. In spring 2008, 4th grade students will be evaluated for knowledge gain of geophytes concepts, survival adaptations, world habitats, human health, and economic importance.

EDUCATING PRODUCERS ON THE BENEFITS OF GROWING PRIMOCANE FRUITING BLACKBERRIES

Brown*, M.V.¹, Wright, S.R.² and Prochaska, S.C.³

¹Assistant Professor/Small Fruit Crop Specialist, Ohio State University South Centers, 1864 Shyville Rd.,

Piketon, Ohio 45661

²Horticulture Specialist, Ohio State University South Centers, 1864 Shyville Rd., Piketon, Ohio 45661

³Associate Professor/Extension Educator, Ohio State University Extension, Crawford County, 117 E. Mansfield, Bucyrus, Ohio 44820

An educational program has been developed through Ohio State University South Centers and Ohio State University Extension to promote awareness among fruit growers in Ohio about the benefits of growing primocane fruiting blackberries. Blackberry growers have experienced several years of poor fruit production due to late spring frosts that have either severely reduced or eliminated fruit production. The University of Arkansas has over the last 13 years developed new erect blackberries that produce fruit on the first year growth (primocanes). Field trials of primocane fruiting blackberries have been established at the OSU South Centers in south central Ohio and at the OSU Unger Farm in north central Ohio. These trials serve as key educational demonstration plots to train fruit growers about primocane bearing blackberry vegetative and fruiting habits. Hands-on field tours are conducted each year to show growers how to properly manage primocane fruiting blackberry plantings. Field demonstration trials can serve as a valuable tool for instructing growers on the production practices for growing primocane fruiting blackberries. Additional educational programs will be offered as more data is gathered from future applied research plots are established. Extension personnel at other universities can use this type of field demonstration trials to instruct local fruit growers about blackberry production.

THE TENNESSEE AGRITOURISM INITIATIVE

Bruch,* M.L.

Extension Specialist, University of Tennessee Extension, Center for Profitable Agriculture, Spring Hill, TN 37174

The Tennessee Agritourism Initiative is an ongoing cooperative effort of the University of Tennessee Extension; the Tennessee Departments of Agriculture, Tourist Development, and Economic and Community Development; the Tennessee Farm Bureau Federation; and USDA Rural Development. The initiative began in 2003 to assist farmers in adding value to their farm resources and fostering rural economic development through agritourism.

Educational programming has been one key objective of the initiative for which UT Extension takes primary responsibility. Educational programming has included three main categories of activities: 1) Developing educational resources, 2) Conducting educational sessions and 3) Providing individual consultations to agritourism entrepreneurs and farmers interested in agritourism.

Significant impacts have been made through educational activities. Participants of educational programs have increased their awareness of agritourism as an opportunity to add value to farm resources. Participants have also increased knowledge and skills to increase their potential for success in agritourism ventures. Participants in workshops and conferences have reported experiencing increases in sales, net income and number of employees. Consultations with individual entrepreneurs have resulted in increased number of visitors resulting in increased revenue.

EXTENSION EDUCATION GPS/GIS CURRICULUM TRAINING ADULT LEADERS

Carter, * P.G.¹, Van Vleet, S.²

¹ Extension County Director, Washington State University Extension, Columbia County, Dayton, WA 99328

² Extension Educator, Washington State University Extension, Whitman County, Colfax, WA 99111

Global Positioning System (GPS) has quickly become a household term in today's society, yet many have only a minimal grasp of the technology and lack operational skills. A program to train adult leaders and educators of youth was developed to help fill the technology void. The training focused on developing an understanding of geospatial systems that comprise GPS navigation and to provide hands-on operational knowledge of GPS units. 4-H and Extension adults were invited to a one day hands-on training utilizing Garmin GPS Map 76, Garmin Rino 110, and Garmin GPS V handheld units. Basic GPS information was presented and handheld units were provided for each participant to use. The participants were guided through exercises utilizing the GPS units to gain familiarity with the hardware and the "one screen" menus. Once comfortable with navigating the menus, they went outdoors to navigate to predetermined coordinates making a trail of their path as they went from point to point. Upon completion of the exercise, the trails generated with each unit were

downloaded on a computer for viewing and comparing each path taken. Following this training, the adults were to train youth on the operation of GPS units. One leader of a 4-H GPS Club trained their club youth members to operate similar GPS units and they conducted exercises at the county fair where youth members trained adults and other youth. Due to their efforts the county declared a "GPS Day." This training has provided additional knowledge for 80 adults and youth.

THE DELAWARE COUNTY NO-TILL INITIATIVE

Cerosaletti, * P.E.¹, Dewing, D.R.¹, Kiraly, M.K.¹

¹ Extension Educators, Cornell Cooperative Extension of Delaware County, Hamden, New York 13820

Adoption of no-till planting methods has been slow in the southern tier region of New York State, including Delaware County, due to challenging soil types and inability of small farms to afford modern no-till planting equipment. Rising fuel costs, dwindling labor forces and the need to protect soil and water resources creates incentive to consider this technology. In 2006 Cornell Cooperative Extension of Delaware County conducted farmer listening sessions and surveys to determine interest in no-till production methods and interest in renting modern no-till equipment. Feedback from these assessments indicated a high degree of interest. As a result Cornell Cooperative Extension of Delaware County developed the Delaware County No-Till Initiative, a two pronged program that combines educational programming with access to no-till equipment. The no-till educational efforts combine written, workshop and field day educational forums to help farmers adopt no-till techniques successfully, with an emphasis on farmer to farmer learning. To spur adoption of no-till methods and limit farmers' risk in trying no-till, Cornell Cooperative Extension of Delaware County also secured grant funding to provide farmers rental access to new no-till corn planting and seeding equipment through a local custom service provider. In 2007, the first year of the initiative, 15 farmers tried no-till planting for the first time on 500 acres, a 250% increase in the number of farms using no-till in the county. Farmer satisfaction was high, and for 2008 program participation has doubled to nearly 30 farmers and 1000 acres.

ESTABLISHING THE “WHY TREES MATTER” PROGRAM

Chatfield*, J. A.¹, Draper, E.A.²

¹ Extension Specialist, Ohio State University Extension, Center at Wooster, Wooster, Ohio, 44691

² Extension Educator, Ohio State University Extension, Gauga County, Burton, Ohio, 44024

Ohio State University has a long history of urban and community forest research. The two-year old **Why Trees Matter** program at OSU involves a continuation and expansion of the historical Ohio Street Tree Evaluation Program (OSTEP). This program will monitor street trees over time in community forests throughout Ohio. The **Why Trees Matter** program will evaluate over 130 different plots with the goal to measure energy savings, stormwater remediation and carbon sequestration. These plantings can provide insight into which trees will generate the biggest ecological benefit over time. Several factors called for a recommitment and expansion of these projects. First, there is an increase in public awareness of the existing and potential impacts of invasive species, such as the emerald ash borer, on the environmental, economic and social health of communities. Second, the public release of powerful modeling tools to measure economic and environmental impacts of community forests on communities. These tools include the *i-Tree* software developed through a partnership of the U.S. Forest Service, Davey Tree Company, the National Arbor Day Foundation, the Society of Municipal Arborists and the International Society of Arboriculture. Third, there is a contemporary attitude with increased social and political awareness regarding the importance of “green” sustainability in communities. Recently, the urban forest budget of New York City was increased from \$22 million to \$62 million annually. The increase was the result of an *i-Tree* analysis indicating a \$122 million annual environmental benefit of New York City’s urban forest.

HOT SPRING COUNTY JOB SHADOWING PROGRAM

Clark,* J.D.¹,

¹ County Extension Agent-Staff Chair, Malvern Cooperative Extension, Hot Spring County, Malvern, Arkansas 72104

Job Shadow Day has proved to be a big success

with older 4-H’ers and business people. We began this project four years ago. This program increases the interest of older 4-H’ers in our local program. The Job Shadowing Program allows 4-H’ers, thirteen years old and above, to spend the day shadowing an individual in a business or profession they feel they may want to pursue upon completing their high school education. We ask our older 4-H’ers to think of a career they would like to know more about or one they would be interested in. We then make contact with those business or individuals. This program allows the 4-H’ers to get a better understanding of the business or profession through hands on experience and gives the business person or professional an opportunity to share his or her knowledge and skills with a young person. Every year we have had fifteen to twenty 4-H’ers participate in this project. It has proven to be valuable for both the 4-H’ers and the business person or professional they shadow. Comments we have heard from 4-H’ers: “I did not realize how much work and time needed to get the training and education to become a veterinarian.” Comments from business and professionals: “We were surprised to see the interest and dedication shown by these young people.” If you are looking for a way to keep older members involved in your 4-H Program, try a Job Shadowing Program.

SUCCESSFUL LAND USE PLANNING EDUCATION ADDRESSING MULTIPLE JURISDICTIONS

Clark*, N.¹, Fogel J.², Slade, G.³

¹ Extension Agent, Virginia Cooperative Extension, Forestry and Natural Resources, Southeast District, Suffolk, VA 23437.

² Extension Agent, Virginia Cooperative Extension, Community Viability, Northeast District, Richmond, VA 23294.

³ Extension Agent, Virginia Cooperative Extension, Crop and Soil Science, Surry, Virginia 23883.

Land use planning decisions have become increasingly complex as the pace of growth has recently accelerated creating many decisions about the details of this growth regarding rate, location, and how it affects the economic, social, and environmental climate of the localities.

Stated need is coming from land-based industries and landowners desiring relief from nuisance lawsuits and “highest and best” tax rates that do not accurately reflect working land use. Local governments desire knowledge

and tools to assist them in dealing with the ever-increasing complexity of state and federal incentives, regulations, and mandates and dealing with pressures from many diverse interests.

As a response, a consortium of partners combined to hold an educational session attended by 36 municipal staff and decisions-makers representing 5 municipalities. These attendees were presented with information about new changes at the state level, agency programs to address natural resource conservation issues, and case studies looking at the costs and benefits where these practices have been put to use. The participants then participated in a panel discussion with the experts allowing them to address specific questions that impact their current situations.

As a result, county staff were made aware of funds, expertise, and programs available to assist in land use planning issues. Some counties have begun instituting land conservation activities including purchasing development rights, adopting land use taxation, and adding smart growth concepts into their comprehensive plans and development ordinances. These elements demonstrate information dissemination, knowledge gain, partnerships formed for future assistance, and application of lessons learned.

COUNTY AGENT SALES TAX EDUCATIONAL PROGRAM

Clemons*, J.H.¹, Payne, J. R.²

¹ Extension Agent, University of Arkansas Cooperative Extension Service, Arkadelphia, AR 71923

² Public Issues Educational Instructor, University of Arkansas Cooperative Extension Service, Clarksville, AR 72830

Clark County, like many counties in Arkansas is struggling financially. From 2000 until 2005, Clark County lost 900 jobs. This represented a 7.5% decline in total jobs in the county. County schools had a 5% decrease in enrollment. These factors caused a decrease in the county tax base which has contributed to financial distress for Clark County. The County Quorum Court has identified a need to begin programs to enhance economic development in the county. The Quorum Court voted unanimously to place before the voters a ballot issue to increase the county's sales tax by one half percent. If passed, the sales tax would generate approximately 1.3 million dollars. Proceeds

from the tax would be used to fund and promote economic development projects and activities to stimulate the local economy. Since the University of Arkansas, Division of Agriculture Cooperative Extension Service is involved in public policy education, the Clark County Quorum Court asked the Cooperative Extension Service to assist in developing an educational program to educate citizens on the sales tax proposal. The Clark County Cooperative Extension Service worked with local leaders to develop an educational fact sheet and a power point presentation to help educate the public on the proposed issue. The power point information was presented 6 times and 750 fact sheets were distributed to citizens and local decision makers. The information was developed in a neutral/non-biased format. The sales tax issue passed by a two to one margin.

JEFFERSON COUNTY "SEE THE FARM" TOUR

Crawford,* J.F.¹

¹ Extension Coordinator, Georgia Cooperative Extension, Jefferson County, Louisville, GA 30434

Agriculture awareness is a means of creating good relations between farmers and the rest of the community. Even in small rural counties, many non-farmers have no idea of the extent of commodity production in their own "backyard". At the same time, Extension has always conducted farm demonstration trials as a means to educate and inform farmers on technology, management and methods to increase productivity on the farm. To raise public awareness of farming and the income it contributes to the county economy, a farm tour was planned. To make this farm tour interesting to the farmers so they would attend and mingle with the non-farm guests we invited, each of the four tour stops included a demonstration plot. 62 people boarded a van, a school bus and a truck carrying water and saw a corn variety plot, a cotton nematode trial plot, a soybean variety plot and a peanut variety plot. The entire circular route to see four different economically important crops took just under 1.5 hours which was good because the temperature was 106°. The tour, which included a state senator and county commissioners, ended with a hamburger supper and an address by the state Farm Bureau president.

SUPPORTING NUTRIENT MANAGEMENT PRACTICES FOR SMALL FARMS IN THE NEW YORK CITY WATERSHED

Dewing*, D.R. Cornell Cooperative Extension of Delaware County, Walton, NY 13856

Livestock manure is one of the largest potential sources of nutrient enrichment for the reservoirs in the New York City drinking water supply. The Nutrient Management Program of the Watershed Agricultural Program supports implementation of effective NMPs in three specific ways, development of user friendly NMPs, farmer education, and Nutrient Management Credit (NMCredit) incentive program. We have developed a planning protocol and format enabling a NMP that meets all standards and requirements while being quick and easy to interpret. All important information needed to identify manure rate, timing and application restrictions can be viewed on a laminated aerial photo map that can be easily interpreted by farm managers and employees. Targeted workshops presented at convenient times and locations are presented annually to keep farms up to date on current issues related to crop production, crop fertility, soil health and environmental losses of nutrients. The Nutrient Management Credit program encourages heightened stewardship of manure resources by implementing an incentive for farmers to follow their NMP closely on a daily basis. Farmers who follow their NMP earn an annual credit to be used for equipment or services that are part of their nutrient management strategy. The nutrient management program is carried out through partnerships with County Soil and Water Conservation Districts, USDA Natural Resource Conservation Service, and funding by the New York City Department of Environmental Protection.

BACKYARD WOODLOT OWNERS: A GROWING ISSUE AND NEW APPROACH

Downing,* A. K.¹, Kays, J. S.², Finley, J. C.³

¹. Extension Agent, Virginia Cooperative Extension, Forestry and Natural Resources Northern District, Madison, VA 22727

². Extension Specialist, Maryland Cooperative Extension, Western Maryland Research & Education Center, Keedysville, MD 21756

³. Associate Professor and Extension Specialist, The Pennsylvania State University, School of Forestry, State College, PA 16802

As populations expand into rural areas, the Eastern United States, particularly, is experiencing forest fragmentation and parcelization. This process creates major challenges for natural resource managers, as rural forest and agriculture land convert into suburban developments. Meeting the diverse ownership objectives on these smaller forestland parcels, which do not often focus on timber production, requires innovative and sophisticated methods of communication to convey both the benefits and responsibilities associated with land stewardship. Landowners with less than 10 acres of forest own 59% of forest properties in the Eastern United States. While the overall acreage of this audience is still relatively small (8%), they represent a growing underserved audience and a significant political base that could provide support for forestry programs. Forests in this changing landscape can provide myriad environmental benefits to society as well as raw materials for forest industry. Landowners who believe non-management is the best management practice do not think about their connection to natural resources, or they have insufficient information for making informed decisions about improving the ecological function of this evolving urban landscape. As a result, landowners do not understand the intrinsic benefits gained from managing their forestland, no matter how small. A new educational tool and approach entitled, "The Woods in Your Backyard" is available to encourage small acreage landowners to understand their role in conserving forest values and to lead them to more active involvement with their natural resources.

SEEING IS BELIEVING WITH PESTICIDE APPLICATOR TRAINING

Draper*, E.A.¹, Marrison, D.L.², Zondag, R.³

¹. Extension Educator, Ohio State University Extension, Geauga County, Burton, Ohio, 44024

². Extension Educator, Ohio State University Extension, Ashtabula County, Jefferson, Ohio, 44047

³. Extension Educator, Ohio State University Extension, Lake County, Ohio, 44077

One of the most difficult audiences to teach and reach through the creation of a meaningful interactive learning environment is the audience which is "required to attend". This is the typical audience of any recertification training for private or commercial pesticide applicators. Our training consortium took an entirely different teaching approach by utilizing small group, interactive breakout sessions. Training began with participants

quickly writing down the steps to prepare a boom sprayer for the upcoming season. A visual demonstration, using a Spray Chek sprayer simulation table, graphically corroborated the effect of common errors on spray patterns; namely, boom nozzle spacing, excessive or insufficient nozzle height to target, plugged nozzles and nozzles with different spray angles. Alternatives to typical flat fan nozzles, like the Turbo TeeJet or XR (extended range) nozzles were shown. The group was divided into equal groups for three-30 minute interactive exercises. Stations consisted of: sprayer pressure gauge testing and how water-sensitive paper can be used to determine efficacy of a spray application; the inaccuracy of using common items, like a quart jar or coffee cup, to guesstimate or measure pesticides; and how to detect cracks and avoid rupturing older, sun-exposed polymer bulk tank for pesticide storage. Each attendee received an accurate 2-quart measuring cup with their certification experience. Of the 150 respondents in this year's training, only one person stated that they didn't like the teaching methods used. This unsolicited comment says it all, **"Used to be as dry as high school English—now enjoyable"**!

ECONO-RANGE, AN ANALYSIS TOOL FOR DETERMINING THE ECONOMIC FEASIBILITY OF RANGELAND IMPROVEMENTS

Feuz,*B.F.

Extension Educator, University of Wyoming
Cooperative Extension, Uinta County, Evanston,
Wyoming 82930

Investing in range improvements can often be very beneficial for Wyoming producers. However, many potential range improvements require a significant upfront investment that may take several years to recover. Econo-Range is a web based analysis tool that allows producers to evaluate the economic feasibility of making range improvement investments. Producers are able to customize the model by entering the actual cost of the investment, any associated annual costs, the annual projected improvement in animal unit months, the cost of comparable pasture and the interest, or discount, rate associated with the investment. The model returns a five, ten and fifteen year net present value for the investment, as well as a break-even year. To facilitate the use of the model links to Wyoming custom machinery rates and Natural Resource Conservation Service guidelines for potential range improvements and associated potential benefits

are provided for users of the software. Producers in my local area have utilized this model to help them make range improvement decisions. Additionally, extension professionals and NRCS employees, in Wyoming, have utilized this model when working with producers to support the decision making process.

IMPROVING SKIDDER SAFETY AND EFFICIENCY

Fisher,*K.J.¹, Adler,J.², Phaup J.³, Wagner,B.⁴, Goerlich,D.L.⁵, Downing,A.K.⁶, Parsons,B.⁷

¹ Extension Agent, Virginia Cooperative Extension, Forestry and Natural Resources, Central District, P.O. Box 757, Halifax, Virginia 24558.

² Professional Training Instructor, Northeast Woodland, Inc., P.O. Box 1202, Charlestown, New Hampshire 03603.

³ Industry Forester, Greif Riverville, LLC, P.O. Box 379, Amherst, Virginia 24521.

⁴ Logging Instructor, Forestry Mutual Insurance Company, 261 Old Blacksmith Rd., Bracey, Virginia 23919.

⁵ District Program Leader, Virginia Cooperative Extension, Central District, 150B Slayton Avenue, Suite 112D, Danville, Virginia 24540.

⁶ Extension Agent, Virginia Cooperative Extension, Forestry and Natural Resources, Northern District, P.O. Box 10, Madison, Virginia 22727-0010.

⁷ Water Quality Specialist, Virginia Department of Forestry, Salem Region Office, 210 Riverland Drive, Salem, Virginia 24153-0100.

Loggers participating in past trainings offered by Virginia Cooperative Extension and the Sustainable Timber Harvesting and Resource Professional (SHARP) Logger program have repeatedly expressed a need for in-woods skidder safety training. Logging generally is physically demanding, with most work time spent outdoors in poor weather and often in isolated locations. Long considered one of the nation's most dangerous occupations, skidder operators account for four out of every ten logging related injuries. Through funding provided by the Forest Resource Association Timber Harvesting and Transportation Safety Committee, a Virginia Cooperative Extension Program Excellence Grant, and other sources, skidder operators and their immediate supervisors participated in full day training sessions led by John Adler, Senior Instructor, Northeast Woodland Training, Inc. and Bryan Wagner, Forestry Mutual Insurance Company, Inc. In addition, a training supplement and DVD were produced. This

DVD will be used by logging crews in Virginia, and throughout the Mid-Atlantic and Southeastern states. As a result of this project, loggers will improve their implementation of appropriate safety routines, maintenance measures and overall efficiency.

HORTICULTURAL THERAPY WORKSHOP FOR VOLUNTEERS AND SPECIAL NEEDS PROGRAM ADMINISTRATORS

Flahive DiNardo, * M.¹

¹. County Agent, Rutgers NJAES Cooperative Extension, Union County, Westfield, NJ 07090

To inspire volunteer Master Gardeners and administrators of programs that serve special needs populations to offer horticultural therapy (HT) programs, Rutgers Cooperative Extension of Union County coordinated a 2007 "Horticultural Therapy" workshop. The event was attended by 80 Master Gardeners and professionals representing nine New Jersey counties. Each participant received a "Guidelines for Starting a Horticultural Therapy Program by Partnering with Volunteers" manual. To encourage participants to pursue certification as a registered horticultural therapist, arrangements were made for accreditation of the workshop by the American Horticultural Therapy Association. On program evaluations, participants indicated they increased their knowledge about careers in the HT field, how to facilitate HT programs and activities to offer clientele with special needs. Follow-up evaluation post cards were completed by fourteen participants. Master Gardeners in Morris County, NJ used the manual to start a Horticultural Therapy program. Two facilities utilized the manual to train staff or volunteers. Eight participants used the lesson plans.

SOYBEAN RESULT DEMONSTRATION IN PHILLIPS COUNTY ARKANSAS - 2007

Goodson, * R³, Akin, S⁴, Lorenz, G⁵, Monfort, S⁶, Reaper, T⁷, Ross, J⁸, Scott, B⁹

¹Extension Agent-Ag, Arkansas Cooperative Extension, Phillips County, Arkansas 72342

²Extension Entomologist, Arkansas Cooperative Extension, Monticello, Arkansas, 71656

³ Extension Entomologist, Arkansas Cooperative Extension, Lonoke, Arkansas, 72086

⁴ Extension Plant Pathologist, Arkansas Cooperative Extension, Stuttgart, Arkansas 72160

⁵ Extension Agronomist, Arkansas Cooperative

Extension, Little Rock, Arkansas, 72203

⁶ Extension Agronomist, Arkansas Cooperative Extension, Little Rock, Arkansas, 72203

⁷ Extension Weed Scientist, Arkansas Cooperative Extension, Lonoke, Arkansas, 72086

The soybean result demonstration program consisted of agriculture demonstrations individual producer's farms in Phillips County Arkansas. All demonstrations were carried to yield with a quality measurement included where possible. Demonstrations in soybeans included: herbicide burndown on no till soybeans, cruiser insecticide treated seed, soybean verification program, replicated fungicide demonstration, stinkbug control, maturity group IV variety, and a production survey. All demonstrations were carried out with producer equipment. Each demonstration was evaluated on its own merit and then combined into a county demonstration booklet. A major aspect of each demonstration was an economical ranking of each activity carried out. The verification program was used to compare Extension recommended production practices on an entire crop. The production survey was carried to insure that demonstration planned was what producers had actual issues with.

UTILIZING STOCKPILED TALL FESCUE TO REDUCE WINTER FEED COST FOR HORSE OWNERS

Griffin*, D.J.¹, Jones, S.M.², Jennings, J.³, Simon, K.⁴

¹. County Extension Agent – Staff Chair, University of Arkansas Division of Agriculture Cooperative Extension Service, Clinton, AR 72013

². Associate Professor – Equine Specialist, University of Arkansas Division of Agriculture Cooperative Extension Service, Little Rock, AR 72203

³. Professor – Forage, University of Arkansas Division of Agriculture Cooperative Extension Service, Little Rock, AR 72203

⁴. Program Associate – Forages, University of Arkansas Division of Agriculture Cooperative Extension Service, Little Rock, AR 72203

Tall fescue is the primary cool-season grass grown for pasture in north-central Arkansas. Demonstrations in Van Buren County utilizing stockpiled Tall Fescue for late fall or early winter grazing have shown to be a money saving practice for beef cattle producers. Horse owners in north-central Arkansas have not given this practice much attention due to the perception of Tall

Fescue being an undesirable forage for horses. The hay feeding season in north-central Arkansas usually extends from November 15 to April 1. This period of time for horse owners can be expensive due to cost of hay and concentrate feed. Grazing stockpiled forages with horses will reduce the winter feed cost for horse owners. Laboratory analyses of fall-grown stockpiled Tall Fescue have shown it to meet nutritional requirements of horses under light work. We conducted this grazing demonstration for three years with an average of 25 horses per year. The horses maintained or increased body condition scores and body weight. The producers extended the grazing season by an average of 42 days. Two year data showed an average savings of \$14.40 per animal unit. The producer in this demonstration earns significant income from a riding stable and significantly reduced their feed costs due to this practice.

YOUTH LEARN ABOUT ENTOMOLOGY THROUGH 4-H SCHOOL ENRICHMENT PROGRAMS

Ham*, C. H.¹

¹ Extension Agent, University of Arkansas, Division of Agriculture, Cooperative Extension Service, Franklin County, Arkansas, 72949

Youth in Franklin County learned about basic entomology through 4-H school enrichment programs. The entomology project materials presented to the youth served as a supplement to the teacher's regular school curriculum. Each year, the school enrichment programs are conducted for three 7th grade science classes in Charleston Public School to teach them about insects and making insect collections. It is important for anyone who wants to learn about the world around them to spend part of their time learning about insects. A power point presentation on basic entomology was presented to the youth. Insect collecting equipment and insect collections were also used to provide youth with the opportunity to be hands-on with insects and the equipment needed to collect insects for making a collection. The overall goal of the school enrichment programs was to expose youth to 4-H project work and the 4-H program in Franklin County. The 4-H school enrichment programs on entomology reached a total of 78 youth in 2007 and 83 youth in 2006. 4-H school enrichment programs provide teachers an additional educational resource that will complement their classroom instruction while educating youth about 4-H project work and the county 4-H program.

COMPOUNDING THE IMPACT: TRAIN-THE-TRAINER URBAN FORESTRY EDUCATION

Hammond, S.¹, Bauske, E. M.², Sheffield, M.C.³, Hubbard, W.⁴, Peiffer, G.⁵, Hutcheson, W.⁶, Macie, J. L.⁷, and Blackmon, L.⁸.

¹Northwest District ANR Coordinator, UGA Cooperative Extension, 1109 Experiment St., Griffin, GA, 30223-1797.

² Program Coordinator, Georgia Center for Urban Agriculture, 1109 Experiment St., Griffin, GA, 30223-1797.

³Paulding County Agent, UGA Cooperative Extension, 530 W Memorial Drive, Dallas, GA 30132-4116.

⁴Regional Extension Forester, SW, Forestry Bldg 4 Rm 402, Athens, GA 30602-4356.

⁵DeKalb County Agent, UGA Cooperative Extension, 4380 Memorial Drive, Ste. 200 Decatur, GA 30032-1239.

⁶Spalding County Coordinator, UGA Cooperative Extension, PO Box 277, Griffin, GA 30224-0227.

⁷Rockdale County Coordinator, UGA Cooperative Extension, 1400 Parker Road Lobby A Conyers, GA 30094-5953.

⁸Fulton County Extension Agent, UGA Cooperative Extension, East Point Education Center 1757 Washington Road, East Point, GA 30344-4151.

The objective of this project was to advance the field of green infrastructure and sustainable urban ecosystem development through train-the-trainer education in the Southeast. The Urban Forestry Issue Team developed an educational module for County Extension Agents to use to train Master Gardeners and others in urban and community tree care. After extensive training in Georgia, the team turned its attention to the Southeast region. Training arrangements were made by the Georgia Center for Urban Agriculture. The Center worked with the Urban and Community Foresters in each state and the Master Gardener Coordinators in Alabama, South Carolina, and North Carolina, and the Assistant Director of ANR in Virginia. Teams of two to three agents traveled to Alabama, North Carolina, South Carolina, and Virginia to present the two-day training sessions. Local speakers with successful projects promoting or sustaining green infrastructure also presented. A total of 89 agents were trained in the four states. Pre- and post-training exams demonstrated the impact of the training on program participants. A six months follow up survey documented the impact of the training on the participants and their educational programs. The training empowered the participants.

The survey results clearly indicate an increase in confidence, available resources, ability to do educational programs, and comfort with urban trees questions and issues. In addition to training Master Gardeners, the respondents reported using the information and materials in a wide range of activities and educational programs unforeseen when this project was conceived.

WILDLIFE DAMAGE BECOMING A MAJOR CONCERN IN BACKYARDS

Harris, * A.S.¹, Futral, T.D.²

¹ County Extension Coordinator, Alabama Cooperative Extension, Tallapoosa County, Dadeville, Alabama 36853

² Regional Extension Agent, Alabama Cooperative Extension, Tallapoosa County, Dadeville, Alabama 36853

An increasingly common occurrence in East Central Alabama is people encroaching the living spaces of wildlife and vice versa. It is common for this relationship to clash and a homeowner to experience wildlife damage, such as, finding his or her lawn has been torn up by an armadillo, or newly planted spring flowering annuals have been eaten by deer, or a squirrel has taken shelter in the attic. An increased number of phone call inquiries to local Extension offices reveal that such situations with wildlife and the damage they can cause is on the rise. Almost every homeowner in Alabama has had some sort of run in with an animal near the home or garden and has had to deal with the consequences of its presence. Unfortunately, there is not an easy solution for living with backyard wildlife and limiting the damage they might cause. However, knowing what will and will not work and the legal methods one can use is the best advice one can get. On Tuesday evening, August 14, 2007, the Alabama Cooperative Extension System in partnership with the Alabama Department of Conservation and Natural Resources addressed this very topic in Dadeville, Alabama, and hosted a "Critter Control and Cures Seminar" to discuss controlling backyard wildlife, limiting their damage, and applying legal and effective methods to control them. Approximately 65 participants attended this educational seminar and gained advice from a panel of seven wildlife experts on how to legally and effectively manage backyard wildlife.

4-H AND FFA YOUTH FIELD DAYS: BUILDING COMPETENCIES FOR SUCCESS IN YOUTH LIVESTOCK PRODUCERS

Heitstuman,* M.D.¹, Schmidt, J.L.², Sanford, K.A.³

¹ Extension Educator, Washington State University, Asotin County, Asotin, WA 99402

² Extension Educator, Washington State University, Whitman County, Colfax, WA 99111

³ 4-H Program Coordinator, University of Idaho, Nez Perce County, Lewiston, ID 83501

In Southeastern Washington and Northern Idaho, over 60% of all 4-H youth are enrolled in market livestock or equine projects. With the public concern over food safety and quality assurance, animal welfare and personal safety of both youth and animals, there was a documented need to provide research based information to a diverse audience from a large geographical area. Since 2004, Youth Field Days have been conducted in different locations through out the region, focusing on providing knowledge and skills to youth, leaders and parents that will insure their success in animal projects. Topics for the field days included: selection, feeding, health updates, quality assurance, fitting and showing, conformation and judging, the Danish System of Judging and more. Speakers for the field day included: extension faculty and staff, FFA Advisors and youth, veterinarians, 4-H leaders and members and WSU college students. Registration was a nominal \$5 per person and lunch was provided. All field days were well attended with audience size ranging from 45 to 90 adult and youth participants. Each field day was evaluated using a retrospective evaluation. Knowledge gains were reported in the following areas: selecting and feeding market animals, steps to take to ensure food safety and quality assurance, enhanced skills in fitting and showing animals for fair, animal first aid and health care. Participants rated the field days as an excellent opportunity to gain relevant knowledge, skills and competencies for the various 4-H projects and contribute to a successful 4-H experience.

ECO-VENTURES AT THE COOPERATIVE EXTENSION EARTH CENTER

Hlubik*, W. T.¹, Bovitz, L.², Weidman R.³, Kesely A.⁴, Smela, D.⁵, Bickerton, M.⁶, Baculis, J.⁶, Ochoa-Alvarez, J.⁶

¹ County Agent, ² 4-H Agent, ³ Program Associate, Agriculture, ⁴ 4-H Program Assistant,

⁵. Public Information Assistant ⁶. Rutgers School of Environmental and Biological Sciences Undergraduate Student Assistants, Rutgers NJAES Cooperative Extension, EARTH Center, North Brunswick, New Jersey 08902

Eco-Ventures at the Cooperative Extension Earth Center is a 3 day summer hands-on educational program for youth entering grades 5 through 7. This program provides a unique opportunity for youth to progress from environmental awareness to environmental action. Participants learned the following: how to start and maintain a compost pile, how to use compost in the yard and garden, how to start vermicomposting, how to identify invasive and native plants, how to recycle and re-use containers to reduce landfill trash, how to reduce contamination to ponds, lakes and streams by reducing excessive use of pesticides and fertilizers, and how to identify and determine the health of pond and forest ecosystems. The program was created by designed by Extension Staff in cooperation with Rutgers University School of Environmental and Biological Sciences students. Additional assistance was provided by the Middlesex County Department of Solid Waste Management and the Middlesex County Parks Department. Twenty youth participated in the 2007 program, the maximum allowable due to space limitations. End of program evaluations indicated 95% of participants planned to share knowledge gained, and 90% of participants were interested in learning more about the topics covered. Pre to post survey scores increased an average of 49%. The three month follow-up survey indicated that 89% of youth changed their attitudes and behaviors toward the environment, and 89% had a positive influence on the environmental behavior of others.

CHARTING A NEW COURSE

Holland, * R.W.¹, Wilcox, M. D.² and Burress, K.M.³

¹. Extension Specialist, University of Tennessee Extension, Center for Profitable Agriculture, Spring Hill, Tennessee 37174.

². Extension Specialist and Assistant Professor, University of Tennessee Extension, Agricultural Economics. Knoxville, Tennessee 37996..

³. Extension Agent, University of Tennessee Extension, Wayne County, Waynesboro, Tennessee 38485.

A series of three fee-based workshops were conducted in Tennessee's rural Wayne County to assist

a variety of farmers and small business managers with their consideration and development of new enterprises. Titled "Charting A New Course," this pilot educational program was developed by the county Extension agent and two state Extension specialists. Local sponsorships were cultivated and workshops were planned with a goal of ten participants. The program targeted a new audience of Extension clientele, encouraged participation through offering a workshop-style learning environment and aimed to foster regular follow-up programs. The workshops were designed to deliver content on new enterprises, product marketing and business management. A total of 8 prepared presentations, from 4 different instructors, were delivered and three problem-solving and team-building exercises were integrated into the program to actively engage participants. Twenty-nine people participated in the course. Program evaluation results showed that the problem-solving exercises were helpful, the "Grants 101" presentation was most applicable as was the session on business planning and budgeting. In order to gauge the economic benefit to participants of the information gained and changes planned in their operations, participants were asked to indicate the economic value of the workshop – 44 percent of the participants indicated that the course was worth more than \$1,000.

FORAGE PRODUCTION ECONOMICS: MAXIMIZING YOUR DOLLARS AND SEN\$E

Howard, * L.L.¹, McKinley, T.L.², Rhea, * A.J.³

¹Extension Area Specialist – Farm Management, The University of Tennessee, Kingston, TN, 37763

²Extension Assistant II, The University of Tennessee, Knoxville, TN 37996

³Extension Area Specialist – Farm Management, The University of Tennessee, Maryville, TN, 37804

Production agriculture is vastly changing and the profit margin is shrinking due to rising input costs. One area that has been dramatically affected by rising fuel and fertilizer costs is forage production. Feed cost is the largest variable expense in a cow/calf operation and the method used to store the feed can greatly impact those costs. The method of storage can impact the quality of hay which has a direct affect on the performance and efficiency of the herd. A series of presentations were made regarding forage production economics and the economic effect of storage methods. Production expenses for 2007 cool season grass / clover hay were estimated to be \$101.83 per

ton. Hay stored outside uncovered would lose approximately 30% of its weight and quality resulting in a conservative financial loss of \$8.25 per bale or \$16.50 per ton. These losses result in additional hay needed for the cow herd which requires additional acres or purchased hay. Producers gained a greater understanding of the total cost of producing forage and the added expense of various storage methods. Tennessee offers funding through the Ag Enhancement Programs for hay storage barns and many producers have taken advantage of the cost-share program which will significantly reduce hay losses. This information was presented at field days and producer meetings across the state. PowerPoint and flipcharts were used to convey the message to over 1,000 Tennessee producers.

THE EFFECTIVE MARKETING OF SOUTHEAST FEEDER CATTLE

Hudson, R.G.¹, Prevatt, J.W.², Windham, S.T.³

¹ Regional Extension agent, Alabama Cooperative Extension System, Wiregrass Research & Extension Center P.O. Box 217, Headland, Alabama 36345

² Extension Specialist, Alabama Cooperative Extension System, Department of Agricultural economics, 208B Comer Hall, Auburn University, Alabama 36849

³ County Extension Coordinator, Alabama Cooperative Extension System, coffee County, 5 County Complex, New Brockton, Alabama 36351

Southeast feeder cattle are shipped for finishing to the grain producing regions of the United States. This transport is a stressful event that may result in calf sickness, lower performance, or death. As a result, Southeast feeder cattle sometimes receive negative stereotyping along with discounted prices. In 1994, a group of fifteen Southeast Alabama beef producers engaged Extension for help. Extension education addressed production methods and management practices necessary to produce quality feeder calves. With a health and pre-conditioning program outlined, the producers organized into a marketing group, Southeast Alabama Feeder Cattle Marketing Association (SAFE). Ear tags, specifically designed with the SAFE logo and the outlined shape of the state (Alabama) with individual farm numbers embedded, were adopted to provide source verification and brand the SAFE product. This identification system allows members to combat negative perceptions about Southeast feeder cattle. SAFE has conducted thirteen

annual feeder calf sales (1995 – 2007), marketing over 18,000 head of feeder calves, weighing more than 11 million pounds, grossing more than \$11 million dollars in sales, and returning additional revenues from \$25 to \$150 per calf to producers. From its inception, SAFE has been utilized by over sixty-five individual producers with membership from Alabama, Florida, and Georgia. In fact, the success of the program has led to the formation of a sister marketing group in Southwest Georgia that utilizes the SAFE reputation and held its sixth annual feeder calf sale in 2007. Through Extension education, members have realized the effective marketing of Southeast feeder cattle.

VIRTUAL CONFERENCING IN EXTENSION: REACHING AUDIENCES, SAVING RESOURCES AND IMPACTING THE ENVIRONMENT

Hurt, T.^{*1}, Abreu, M.E.², Martinez-Espinoza, A. D³, Mickler, K.⁴

¹ Training Coordinator, Center for Urban Agriculture, University of Georgia, 1109 Experiment St. Griffin, GA 30223.

² Agricultural and Natural Resources Agent, University of Georgia Cooperative Extension, Gwinnett Co. Lawrenceville, GA 30045.

³ Associate Professor, Department of Plant Pathology, University of Georgia, 1109 Experiment St. Griffin, GA 30223.

⁴ Agricultural and Natural Resources Agent, University of Georgia Cooperative Extension, Floyd Co., Rome, GA 30161

The mission of UGA Extension is to deliver research based information to all the counties and the citizens of Georgia in a timely fashion. Automobile travel costs, employees productive professional time, budget debits and unnecessary carbon emissions has prompted us to develop creative ways to deliver information. Horizon Wimba (web classroom) allows interaction between presenters and audiences through real-time presentations, multiple location access, slide viewing, live conversation, and voice and written messaging board. We have taken advantage of this technology to implement multi-location, real-time educational programs to deliver science-based information to statewide audiences in the State of Georgia. 349 people participated the 4 workshops lunch and learn series in 17 counties representing all four Extension Districts in Georgia. Using a conservative estimate of only one vehicle travel from each location roundtrip to training venue for each of the four workshops yields the

following approximate savings: \$6000 in mileage reimbursement, 200 hours of UGA Employee time, and 3,400 less pounds of carbon emitted to the environment.

LOST RIVERS GRAZING ACADEMY

Jensen, *K.S.¹, Cheyney, C.², Hawkins, J.³, Shewmaker, G.⁴, Gray, W.⁵, Williams, S.⁶, Gerrish, J.⁷, Griggs, T.⁸

¹ Extension Agent, University of Idaho Extension-Owyhee County, Marsing, Idaho 83639,

²Superintendent, University of Idaho Nancy M. Cummings Research and Extension Center and Butte County Extension Agent, Arco, Idaho, 83213

³ Extension Agent, University of Idaho-Custer County, Challis, Idaho, 83226

⁴ Extension Forage Specialist, University of Idaho-Twin Falls R&E Center, Twin Falls, Idaho, 83303

⁵Extension Ag Economist, University of Idaho-Twin Falls R&E Center, Twin Falls, Idaho, 83303

⁶Extension Agent, University of Idaho-Lemhi County, Salmon, Idaho, 83467

⁷Grazing Lands Consultant, May, Idaho, 83253

⁸ Forage Specialist-Utah State University, Logan, Utah, 84322

Domestic pastures are generally grazed season-long. According to Gerrish and Roberts (1999) pastures grazed longer than 30 days have a harvesting efficiency of 40% or less. High stocking rates and low stock densities are common, leading to severe grazing, which limits re-growth potential and overall yield. Pasture operators lack motivation to improve management because: 1) conventional management has traditionally been viewed as adequate; 2) good irrigated pastures are undervalued; 3) pastures appear to be more resilient to abuse than other crops; 4) land typically planted to domestic pasture is perceived as marginal and therefore of limited financial value; and 5) producers have not recognized the ecological value of pastures. To improve livestock operator understanding and implementation of the principles of Management-intensive Grazing (MiG), outreach programs featuring multi-day hands on workshops for operators have been held across southern Idaho. Topics covered in the intensive 4 day, hands-on workshop include the five principles of grazing, tools for managing grazing, anatomy and physiology of forage plants, grazing cell design, low stress livestock handling techniques, and livestock health considerations as well as others. Participants in these workshops come away with a

better understanding of the principles involved and often put what they learn into practice on their own places. This growing network of operators is developing, adapting and implementing more economically efficient and environmentally acceptable methods for harvesting and utilizing forages.

OKLAHOMA MEAT GOAT BOOT CAMP

Jones, J.E.¹, Sparks, D.G.², McDaniels, J.T.³, Rice, C.K.⁴, Freking, B.M.⁵, Wallace J.D.⁶

¹ Area Agricultural Economics Specialist, Oklahoma Cooperative Extension Service, Southeast District, Ada, Oklahoma 74820

² Area Food Animal Quality and Health Specialist, Oklahoma Cooperative Extension Service, Southeast and Northeast District, Muskogee, Oklahoma 74401

³ Extension Educator, Oklahoma Cooperative Extension Service, Pontotoc County, Ada, Oklahoma, 74820

⁴ Area Agronomist, Oklahoma Cooperative Extension Service, Southeast District, Ada, Oklahoma, 74820

⁵ Extension Educator, Oklahoma Cooperative Extension Service, LeFlore County, Poteau, Oklahoma, 74953

⁶ Area Animal Scientist, Oklahoma Cooperative Extension Service, Southeast District, Ada, Oklahoma, 74820

The Oklahoma Meat Goat Boot Camp is a three day workshop that teaches producers several of the basic production methods necessary to operate a successful meat goat operation. This workshop is unique in that it combines classroom presentations with hands-on exercises. Even the classroom portions of the camp have written exercises to aid in the teaching process. The hands-on exercises allow participants to perform the practice demonstrated on live goats. Participants are allowed to practice as many times as they think is necessary. Production methods demonstrated include ear tagging, tattooing, hoof trimming, castrating, herd health practices, kidding, neonatal care, FAMACHA, fecal egg counts, forage management, ration balancing, forage testing, reproduction, pregnancy detection and business management. To date 111 producers from fifteen states have participated in two boot camps. Evaluations from these boot camps have indicated participants find 80% of the classes very useful. Participants also indicated a financial worth of the class to be \$93,600 to their operations.

THE NORTHWEST LAMBOREE: A SUCCESSFUL VOLUNTEER-LED EDUCATIONAL EFFORT

Kerr,* S.R.¹

¹ County Extension Director, Washington State University Extension, Klickitat County, Goldendale, Washington 98620

In 2005, a small but dedicated group of Klickitat County (WA) 4-H sheep project leaders approached county Extension personnel to discuss the need for a high-quality but affordable educational event for area sheep project youth. Novice and non-farm youth, in particular, needed to learn how to select, care for, feed, fit and show their project animals successfully. However, these volunteers wanted to sponsor an event that would highlight the entire sheep industry, not just the youth market lamb project. Thus, the Annual Northwest Lamboree was born. Each Lamboree has included educational workshops highlighting the nature and importance of each segment of the sheep industry; educated youth and adult producers about the importance of quality assurance; helped producers improve their management skills; promoted networking, interaction and camaraderie; and provided a fun, memorable and affordable educational event for families in the northwest. Lamboree attendees participate in supplemental activities such as halter making, felting, knitting, spinning, a skillathon and more. Four excellent meals are provided, including a restaurant-quality lamb dinner. Assessment of the 2006 Lamboree revealed at least 40 people volunteered over 551 hours to the event; this donated labor was valued at \$11,271. Participants' evaluations document the educational impact of this program. Volunteers continue to be the heart of the Lamboree, creating a well-regarded program that attracts more than 100 people annually.

BASIC BEEF PRODUCTION MEETINGS TARGET NEW PRODUCERS.

Kirkpatrick*, D.L.¹, Griffin B.S.²

¹ Extension Agent, University of Arkansas, Division of Agriculture, Logan County, Paris, Arkansas, 72855

² Extension Agent, University of Arkansas, Division of Agriculture, Johnson County, Clarksville, Arkansas 72830.

Arkansas beef and forage producers rely on Extension to provide educational programs that will help their agricultural operations. Located in the Arkansas

River Valley, Johnson and Logan Counties contribute an estimated 18 million dollars annually to the state's economy from beef production alone. Basic Beef Production meetings targeted newcomers to the beef community, i.e. those who had entered the cow-calf business within the last five years. The overall goal was to enhance the individual's general knowledge of beef production. Program objectives included: (1) To inform producers of the importance of proper herd health, (2) To increase knowledge of beef nutrition, (3) To provide producers with technical knowledge needed to improve forage production (4) To discuss the importance of a sound breeding management plan and (5) To illustrate the proper vaccination handling and working procedure through a "hands on clinic." A total of 25 people attended the Beef Production meetings. Sixteen producers completed evaluation forms and rated the meetings as good or excellent, 9 producers indicated they would adopt new vaccination practices while 13 indicated they would change their weed management programs. The Johnson/Logan County Basic Beef Production meetings comprise a vital educational program. It is through these meetings that producers acquire the knowledge to make more informed management decisions.

MARKETING MEAT GOATS IN NEW JERSEY

Komar,* S. J.¹, Mickel, R. C.²

¹ County Agent, Rutgers NJAES Cooperative Extension, Sussex County, Newton, New Jersey 07860

² County Agent, Rutgers NJAES Cooperative Extension, Hunterdon County, Flemington, New Jersey 08822

New Jersey processes and consumes over thirty-six percent of all meat goats slaughtered domestically. However, very few goats are raised in the state. In 2006 an educational program was initiated by Rutgers Cooperative Extension faculty to determine the suitability of raising meat goats in New Jersey. The program consisted of two components including an educational series and an on-farm demonstration project. The educational programs were well attended with 163 local producers attending the two-day sessions. In response to the high level of interest an on-farm trial was conducted in 2007 to quantify the potential for raising meat goats in New Jersey. Goat kids were imported from Texas and separated into two production groups. Goats were slaughtered on two separate dates and fabricated into traditional lamb cuts.

A partial budgeting analysis was utilized to compare the different production systems. Differences were observed in average daily gain, production costs and gross-returns with animals produced in a feed lot system performing better than animals maintained in the pasture-based system. Genetic variation among test animals may have contributed to performance variability. Initial results suggest that meat goat production may be a viable option for New Jersey producers. More research is needed to determine optimum feeding program, breed selection and optimum marketing strategies for New Jersey production.

LEASE OF DEVELOPMENT RIGHTS AS A FARMLAND PROTECTION TOOL

Leech, * R.P.¹, Stanley, T.A.²

¹ Extension Agent, Virginia Cooperative Extension, Animal Science, Highland County, Monterey, Virginia 24465

² Extension Agent, Virginia Cooperative Extension, Farm Business Management, Augusta County, Verona, Virginia 24482

Highland County has an exceptionally low population density. Assessed values of undeveloped land have increased by over 300% in less than five years. Small land tracts (under 20 acres), homes, and other improvements increased by 59% in assessed value. Over 50% of all the land in Highland is owned by non-residents. These changes have shifted the tax burden in the county from homeowners to people who own larger tracts of undeveloped land. Consequently, the tax obligation of most farm families more than doubled. In the spring of 2006 a group of farmers came to Virginia Cooperative Extension seeking advice on public policy tools that could address this problem. A farmer/producer steering committee was formed with the authors serving as educational advisors. This committee educated themselves and the public about farmland protection tools that are available to assist limited resource farmers facing the circumstances described. A program was developed with the help of the authors for conservation leases with a five-year term. This program would allow the locality to lease the development rights of qualifying agricultural land for an annual cash payment. The revenue to pay for the program would come from raising real estate taxes and an application fee paid by program participants. This program is still under consideration in Highland County. An alternative Farmland Protection Program was developed, reviewed by legal counsel, and now is ready

for adaptation to any interested Virginia locality. Farmland Protection Leases are a tool to protect farmland without permanently relinquishing development rights.

ENHANCING OHIO DAIRY PROFITABILITY WITH ARTISAN CHEESE

Marrison, D.*¹, Kline, T.²,

¹ Agriculture and Natural Resources Educator, Ohio State University Extension, Ashtabula County, 39 Wall Street, Jefferson, Ohio 44047

² Agriculture and Natural Resources Educator, Ohio State University Extension, Wayne County, 428 West Liberty Street, Wooster, Ohio 44691

OSU Extension is helping dairy producers enhance their profitability by offering hands-on cheese making short courses. These three-day programs titled, "Hands-on Basic Cheese Making - Enhancing Dairy Profitability with Cheese" were designed to teach dairy producers how to make artisan cheese and provided the tools for developing a business plan for this value-added opportunity. This short course has been offered three times across Ohio. Due to the hands-on nature of the course, each session was limited to 15 students. Each course was sold out with a total of 45 individuals participating. During these workshops, the participants learned about milk quality, ingredients used in cheese making, processes for making a variety of cheeses, techniques for aging cheese, and tips for establishing a farmstead cheese business. The heart of this workshop was the hands-on opportunity for participants to make a number of cheeses themselves. Participants learned how to make Gouda, Havarti, Lactic, Tomme, Alpine, Caciocavallo, Cheddar, Mozzarella and Ricotta cheese during the workshops. Ninety-two percent of the attendees indicated they plan to explore a cheese making business. Ninety percent of the attendees also indicated they would be interested in participating in a cheese marketing cooperative. One of the couples in the first short course has already opened a cheese house and is marketing cheese in the Cleveland Metropolitan area. This poster will provide information on course objectives, curriculum, and provide tips for Extension Educators who wish to start an artisan cheese short course in their state.

MEASURING PASTURE GROWTH IN OHIO

McCutcheon, J.S.¹, Hendershot, R.²

¹Extension Educator, Ag & NR, Knox County, Mount Vernon, OH 43050-1268

²State Grassland Conservationist, USDA, NRCS, Lancaster, OH 43130

In 2005 the Ohio Pasture Measurement Project was started to help producers understand the value of timely measurement of their forages. The two objectives for this project are 1) to provide a source of current, objective information on the relative performance of forages growing in Ohio and 2) to demonstrate the use of pasture measurement/monitoring to aid in the management of grazing. Initially, the project involved taking forage measurements weekly at three different farms in Ohio. In 2007, eight farmers cooperated, measuring 38 fields. The pastures measured contain typical forages found in Ohio pasture fields including: tall fescue, orchard grass, timothy, perennial ryegrass, festulolium, bluegrass, and white clover. Management of the pasture fields including when to graze, clip or fertilize was up to the cooperating farmer. Measurements were taken weekly, from April through November, with additional measurements before and after grazing. Pasture growth was determined by a rising plate meter with calibration using clipping and drying 2'x 2' quadrants. At each location a target residual level of forage was maintained in the pasture. Target residuals were 1200 lbs.DM/ac. The average growth measured on the 38 fields during the months of May through October was 4,684 lbs. DM/ac. Predicted growth using the 3.5 ton average pasture production for the same months is 5,040 lbs. DM/ac. 2007 was a dry year. Pasture growth trends in 2007 showed pasture growth rates in mid May dropping to levels typically seen in mid July.

TENNESSEE BEEF EVALUATION: THE FARMER-TO-FARMER CONNECTION

McKinley,* T.L.¹, Rawls, E.R.²

¹Extension Assistant II, The University of Tennessee, Knoxville, TN 37996

²Professor, The University of Tennessee, Knoxville, TN 37996

Often times there is a disconnect between the cow/calf producer in Tennessee and the finishing and packing phases of the beef industry. With the finishing and

packing phases primarily taking place in states west of the Mississippi River, many Tennessee producers have not seen where their cattle go and how they are fed and processed after they leave the farm. The Tennessee Beef Evaluation is an educational program for cow/calf producers to learn about this part of the beef industry. The program is designed for cow/calf producers who are not able on their own to send a load of cattle to be finished in a custom feedlot. Working through University of Tennessee Extension Agents and Specialists, loads of 48,000-50,000 pounds of cattle from multiple producers are gathered and shipped to Tri-County Steer Carcass Futurity member feedlots in Southwest Iowa to be finished. Once the cattle are fed for approximately 150 days, they are harvested through Tyson's packing plant in Denison, Iowa. Feedlot performance data and carcass data is gathered and analyzed on individual animals and provided to the producers. Producers have used the data to make changes in the genetics of their breeding herd, decided to focus on raising high quality feeder calves and used the data to promote sales of their feeder calves in Tennessee. Once a year producers are given the opportunity to go the feedlots and see their cattle on feed prior to harvest and to tour the packing plant where they will be harvested.

MASTER GARDENER SCHOOL GRANT PROGRAM: PROVIDING "SEED" MONEY FOR CLASSROOMS

Mechling, M.W.

Extension Educator, Ohio State University Extension, Muskingum County, Zanesville, Ohio 43701

The Muskingum County Master Gardeners initiated a grant program in 2004 for teachers to apply for grants up to \$100 to teach horticultural practices and principles. To date, twenty-six teachers have been provided a total of \$2,397 in the past four school years. In the fall, all interested teachers complete the application that includes objectives, the educational value of the project and the cost of materials to complete the project. Master Gardeners reviews the applications and submits their recommendations on which applications should be funded to the entire organization's membership. One or two Master Gardeners are assigned to each project as a resource. They are available to assist the teacher in completing the project if needed. Teachers are expected to share their results of the project with the Master Gardeners by the end of the school year. Examples of projects and topics funded by the Master

Gardeners have included establishing a butterfly garden, purchasing grow-lights to conduct experiments on fertilizer and light, raising a pizza garden, growing vegetables in raised beds, conducting field trips to orchards and greenhouses, purchasing butterfly kits and starting a Junior garden club. Teachers have integrated the horticultural activities into their curriculum. As a result of these grants, students in twenty-six classrooms have learned about horticultural principles and practices in an active and practical manner. Funding for the grants has been raised from bus trips and a unique activity called Earth to Art that combines pottery and flowers.

WINTERSCHOOL ON THE ROAD “ROME’N THE GREEN”

Mickler, * K.D.¹; Hurt, R.T.².

¹ Extension Agent, The University of Georgia Cooperative Extension, Floyd County, Rome, Georgia 30161.

² Training Coordinator, The University of Georgia Center for Urban Agriculture, Griffin, Georgia, 30223

The urban agriculture industry has become the second largest agriculture industry in Georgia. Urban agriculture is an \$8.12 billion industry, with over 7,000 companies and 80,000 employees. In 2006 and 2007, a series of educational events were held throughout Georgia as a follow-up to the Georgia Green Industry Association’s Winterschool. These events were a team effort between The University of Georgia Cooperative Extension in Floyd and Houston County, Georgia Green Industry Association, The Center for Urban Agriculture, and USDA Risk Management Agency and Coosa Valley Technical College. Together these cooperators produced events in Perry and Rome, Georgia. The Floyd County Extension agent was the lead cooperator for the event *Winterschool on the Road “Rome’n the Green”*. There were 107 attendees in 2006 and 121 in 2007 (70 of them being commercial applicators in 2006 and 75 in 2007) at *Winterschool on the Road* in Rome. Combined survey results from 2006 and 2007 Rome’n the Green indicated that 100 percent of attendees thought that the program was helpful and would attend future programs of this nature. Ninety percent said they would implement principles learned. Based upon estimates from the UGA Center for Agribusiness and Economic Development, each hour of pesticide credit given has a value economic value of \$6,427.00 per business represented. Therefore, the 5 pesticide credit hours for the 2006 program had and economic value of

\$2,249,450 and the 5 pesticide credit hour for the 2007 program had an economic value of \$2,410,125.00 for the participants in the program.

LANDSCAPE INTEGRATED PEST MANAGEMENT (IPM) ADVISOR PROGRAM FOR MAUI COUNTY, HAWAII

Nagata, * N.M.¹, Shimabuku, R.¹, Ebesu, R.H.², DeFrank, J.³, Evensen, C.I.³, Uchida, J.⁴, Anderson, J.⁵, Yonahara, B.⁶, Oishi, D.⁷, Teramoto, K.⁸, Bronstein, A.C.⁹

¹ Extension Agent, Maui County Cooperative Extension Service, University of Hawaii, Kahului, Hawaii 96732

² Extension Agent, Kauai County Cooperative Extension Service, University of Hawaii, Lihue, Hawaii 96766

³ Extension Specialist, College of Tropical Agriculture and Human Resources, University of Hawaii, Honolulu, Hawaii 96822

⁴ Plant Pathologist, College of Tropical Agriculture and Human Resources, University of Hawaii, Honolulu, Hawaii 96822

⁵ Pesticide Specialist, Hawaii Department of Agriculture, Kahului, Hawaii 96732

⁶ Weed Specialist, Hawaii Department of Agriculture, Kahului, Hawaii 96732

⁷ Entomologist, Hawaii Department of Agriculture, Honolulu, Hawaii 96819

⁸ Bio-Control Section Chief, Hawaii Department of Agriculture, Honolulu, Hawaii 96823

⁹ Medical Director, Rocky Mountain Poison and Drug Center, Denver Colorado 80204

A 2003 survey on 159 landscapers in Maui County indicated a priority on educational programs on plant pests. Therefore, a landscape IPM certificate program was developed and offered in August 2005, which included 30 hours of training on concepts of IPM; insects; weeds; diseases; plant diagnosis; pesticide usage, calibration and first aid; mechanical, cultural, biological and regulatory controls; and environmental/ water protection. To earn this certificate, students were required to submit an insect/disease collection and obtain an 80% score from weekly quizzes and a final exam. A maximum of 24 students enrolled with 8 people obtaining an 80% grade or better. However, only 2 students completed their collections and were awarded an IPM certificate. These 2 individuals have renewed their certificate for 2007 and 2008 by acquiring 6 educational credit hours each year on topics relating to

pest management. Below are the responses of 13 people who participate in an evaluation on this program. Prior to their enrollment, only 4 of 13 people (4/13) knew about IPM; 9/13 would rely solely on pesticides, 3/13 would use both chemical/mechanical methods and 1/15 would practice IPM for their pest problems. Following these classes, everyone would practice IPM and use pesticides as a last option. Their knowledge on IPM increased by an average of 80%, ability to identify pests improved by 63% and awareness to different pest control options increased by 73%. Everyone felt this program was worthwhile and wanted it to continue. Pesticide credits from the Hawaii Department of Agriculture were also awarded.

BEEF CATTLE QUALITY: DEFECT AND CULLING GUIDE: MANAGE EVERY ANIMAL FOR CONSISTANT QUALITY

Parsons*, C.T.

Livestock Extension Agent, Oregon State University
Cooperative Extension
Baker County Office, 2610 Grove St., Baker City, OR.
97814

As the Beef Quality Assurance (BQA) coordinator for the State of Oregon and Oregon State University it is my responsibility to provide BQA educational programs, assist with BQA certification, and come up with new and innovative ideas to help beef cattle producers in Oregon provide a consistent healthy, quality product free of physical defects. One way to do this is by producing and distributing new educational formats such as fact sheets and poster displays. During the spring of 2007 I submitted a request for funds from the National Cattleman's Beef Association (NCBA) to help financially with the design, format, publication and distribution of a poster/fact sheet that would serve as a guide for beef cattle producers when assessing the physical soundness of their livestock. I was awarded \$10,000 from the NCBA and was able to design, format, publish and distribute over 8,500 of the Beef Cattle Quality: Defect and Culling Guide's. Topics covered include eyes, udder and teat scoring, body condition scoring, feet and leg conformation and structure, proper injection site location, aging and teeth condition, and disposition. These guides were sent to Cooperative Extension Agents and livestock producers from over four States; Oregon, Utah, Idaho and Nevada. These educational posters have been widely requested and utilized by beef cattle producers in the Pacific Northwest and beyond.

IMPROVING EFFICIENCY OF LANDSCAPE IRRIGATION SYSTEMS WITH IRRIGATION AUDITS

Price*, Jacob G.¹, Byrne, R.J.²

¹ Extension Agent, University of Georgia, Lowndes County, Valdosta, Georgia, 31601

² Extension Agent, University of Georgia, Thomas County, Thomasville, Georgia 31799

Water conservation has become a major issue in Georgia since the drought of 2007. In 2007 many north Georgia counties were under a total ban for outdoor water use (level 4 restriction) and many south Georgia counties were limited to certain days and times to use water outdoors (level 2 restrictions). Water restrictions will again be in place for 2008. With such scrutiny on outdoor water use it is imperative that water be used efficiently. Educational programs were conducted in Lowndes and Thomas counties on four separate days and covered the following topics, "Landscape Irrigation Troubleshooting", "Drought Tolerant Trees and Shrubs", "The Basics of Xeriscaping", "Drought Disaster Relief", "Five Major Steps of an Irrigation Audit", and "Conducting and Irrigation Audit", which was a hands-on field training. Evaluations after the meetings yielded the following results. 60% of participants indicated that the drought had a negative financial impact on the business with an average of 20% decrease in revenue. All attendees believed that through education and irrigation water audits, landscape water use can be reduced by 20%. Landscapers and irrigation operators indicated they learned and now understand how to conduct an irrigation audit and believe the service would add value to their business. It was also found that landscapers believe that most of their clients do not properly understand how to operate and maintain their irrigation system. This shows there is a great need to provide further irrigation training.

IMPACTS OF FERTILIZATION TREATMENTS ON LOBLOLLY PINE SEEDLING SURVIVAL AND GROWTH IN WEST ARKANSAS

Rhoades, * S.R.¹, Cunningham, K.K.², Walkingstick, T.L.³

¹ Extension Agent - Staff Chair, University of Arkansas Division of Agriculture, Scott County, Waldron, Arkansas 72958

² Extension Forestry Instructor, University of Arkansas Division of Agriculture, Little

Rock, Arkansas 72203

³. Extension Forestry Specialist, University of Arkansas Division of Agriculture, Little Rock, Arkansas 72203

A demonstration project was conducted in Scott County, Arkansas to illustrate the effects of traditional fertilizer and poultry litter application on loblolly pine (*Pinus taeda L.*) seedling growth and survival. The study site selected was a moderately productive old field exhibiting a phosphorus level of only 15lbs./A at planting. Loblolly pine seedlings were planted on an 8x10 foot spacing in February 2006. The planting was followed by three treatments including: (1) 100 lbs./A of diamonium phosphate (DAP), (2) 2 tons/A of unprocessed poultry litter, and (3) no fertilization. Twenty seedlings within each treatment were selected and tagged for measurement. Initial, year 1, and year 2 growth and survival measurements were taken. Growth measurements included groundline diameter in inches (GLD) and height in feet. Year 1 survival for treatments 1, 2, and 3 was 95%, 95%, and 100%, respectively. No mortality was observed in year 2. Year 1 GLD percent increase for treatments 1, 2, and 3 were 150%, 214%, and 100%, respectively. Year 1 height growth percent increase for treatments 1, 2, and 3 were 200%, 327%, and 144%, respectively. Year 2 GLD percent increase for treatments 1, 2, and 3 were 200%, 211%, and 197%, respectively. Year 2 height growth percent increase for treatments 1, 2, and 3 were 166%, 178%, and 150%, respectively. Results from this demonstration reveal that poultry litter can have an impact on pine tree production. This demonstration has been utilized by Extension to educate producers on fertility issues associated with pine tree establishment.

REFUGEE FARMERS' MARKET SUCCESS

Riley, * J.A.¹

¹. Extension Agent, University of Alaska Fairbanks, Cooperative Extension Service, Anchorage, AK 99508

Anchorage began welcoming its first Hmong refugees late in 2004. Farming in Laos on terraced mountain slopes and then in refugee camps in Thailand, the Hmong have a strong agricultural tradition. Finding themselves relocated to Anchorage, Alaska at 61° N. latitude they needed to learn new growing techniques. The UAF Cooperative Extension Service (CES) helped ten families to grow vegetables at a community garden site in 2005. The success of this project resulted in Catholic Social Services Refugee Assistance &

Immigration Services (RAIS) program seeking a USDA Risk Management grant to teach the refugees small business skills by selling vegetables that they had grown at a farmers' market. The project was collaboration between RAIS, CES, businesses and individuals in the community. Participants started attending weekly classes in February and planted a 8,000 square foot garden on municipal property in June. Selling under the name Fresh International Gardens, the group first went to market on July 11 and continued selling twice weekly until October 3. Participants who were able continue with the project the entire season included 4 Hmong refugees and a young Chinese immigrant who had never gardened. The group grew 31 types of vegetables, 4 kinds of cut-flowers and 3 herbs. Together they earned a total of \$6,615 and felt the project was so successful that they want to double the size of their garden in 2008.

YOUTH EDUCATION IN AGRICULTURE, FORESTRY, AND NATURAL RESOURCES

Roberts, * T.G.

Extension Agent, University of Tennessee Extension, Shelby County, Memphis, Tennessee 38120

It is imperative for youth to understand the importance of agriculture and its association to natural resources. Youth Education in Agriculture, Forestry, and Natural Resources is a unique program. This program has been built around the National Science Curriculum to assist schools and teachers in providing education in an outdoor setting. In most cases, the students are not only learning concepts but they can see, touch, and smell what they are learning to enhance their education. This program utilizes different activities to educate multiple grades from Kindergarten to the Twelfth grade. Plant Exploration Tour, Discover the Forest, Cowboy Up!, and Plant Camp are some of the activities available. The programs are both educational and fun for the students and appeal to visual learners, audio learners, and kinesthetic learners. All activities in this program take place at Agricenter International in Memphis, Tennessee. It is a very unique place in that it is a working farm in the middle of Memphis, surrounded by a million people in the Memphis Metro Area. This educational program attracts students from West Tennessee, North Mississippi, and East Arkansas. Plant Exploration concentrates on cotton, corn, and soybeans, then focuses on roots, reproduction, and leaves, respectively. Discover the Forest centers on forestry, ecosystems, and wildlife, everything you would find in

the forest. Cowboy Up! is all about rodeos and ranching and Plant Camp is plants.

GILES COUNTY EXTENSION DROUGHT MANAGEMENT PROGRAM

Rose,* Kevin L.

Extension Agent, University of Tennessee Extension, Giles County, Pulaski, TN 38478

The summer of 2007 saw one of the worst droughts in over 50 years in Tennessee. Southern Middle Tennessee was one of the worst hit areas of the state. Rainfall totals were calculated at 19 inches below normal for the year. Many producers were out of pasture before the end of the summer. Hay yields were reduced on average by 40%. Many water sources dried up forcing producers to sell cattle. Through Extension's leadership in Giles County, an advisory committee of county agencies and cattleman representatives was organized and met to discuss options in assisting drought stricken county producers. As a result a drought meeting was planned to provide producers with options in obtaining and using various feed resources and to provide information that could help them manage their herds through the drought and into the winter and spring. UT Extension beef animal science specialist along with USDA county office personnel, local agri-businesses and the County Extension Agent provided information to the 292 farmers and producers who attended the special program. This was the most attended Extension meeting in over 21 years. Producers indicated that the meeting was very helpful in providing feed resources and information that helped them make some very crucial decisions for their farming operation.

"GARDENING IN THE PANHANDLE" A DISTRICT CONSUMER HORTICULTURE NEWSLETTER

Rudisill,* K.R.¹, Adcock, C.W.², Bolles, E.R.³, Brasher, C.L.⁴, Dunning, S.O.⁵, Friday,*T.L.⁶, Marshall, D.W.⁷, Mullins, D.E.⁸, Powell,E.⁹, Rosenthal,S.¹⁰, Stevenson,C.¹¹, Williams,L.L.¹²

¹. Extension Faculty, Florida Cooperative Extension, Bay County, Panama City, Florida 32401

²Extension Faculty, Florida Cooperative Extension, Washington County, Chipley, Florida 32428

³. Extension Faculty, Florida Cooperative Extension, Escambia County, Cantonment, Florida 32533

⁴. Extension Faculty, Florida Agriculture and Mechanical University Extension, Jackson County,

Marianna, Florida 32448

⁵. Extension Faculty, Florida Cooperative Extension, Okaloosa County, Crestview, Florida 32536

⁶. Extension Faculty, Florida Cooperative Extension, Santa Rosa County, Milton, Florida 32570

⁷. Extension Faculty, Florida Cooperative Extension, Leon County, Tallahassee, Florida 32301

⁸. Extension Faculty, Florida Cooperative Extension, Santa Rosa County, Milton, Florida 32570

⁹. Extension Faculty, Florida Cooperative Extension, Walton County, DeFuniak Springs, Florida, 32433

¹⁰. Extension Faculty, Florida Cooperative Extension, Leon County, Tallahassee, Florida 32301

¹¹. Extension Faculty, Florida Cooperative Extension, Escambia County, Cantonment, Florida 32533

¹². Extension Faculty, Florida Cooperative Extension, Okaloosa County, Crestview, Florida 32536

Extension faculty spends many hours preparing informative, educational newsletters. In an effort to reduce this time, the horticulture faculty in Florida's Northwest District combined their efforts to create a bi-monthly consumer horticulture newsletter. The newsletter is made available to all counties in the district, even those without horticulture faculty in an effort to disseminate research-based information to the district clientele. The faculty decided on a name and worked with the University of Florida Extension Communications Department on the layout of the newsletter. Each faculty member chose a topic area and is responsible for generating an article for the newsletter. Faculty also post upcoming events which help to showcase educational programs in the district. One faculty member is assigned to be the coordinator. Articles are sent to the coordinator, then to the university, which configures the newsletter. The coordinator proofs and approves the newsletter. The finished newsletter is sent to the faculty coordinator in pdf format in color and black and white for distribution to the faculty. Faculty members then post the newsletter to their webpage, send the newsletter by email, postal mail, and/or print out hard copies for distribution in the office or local horticulture businesses. The first edition was published in July of 2007. Over 7,600 copies have been sent by mail, 3,154 by email, and there have been over 42,988 web hits. The responses to the newsletter have been very positive from consumers and university administration.

BUILDING THE CAPACITY OF THE YAVAPAI COUNTY MASTER GARDENER PROGRAM THROUGH VOLUNTEER ENGAGEMENT

Schalau*, J. W.¹, Barnes, M.C.²

¹Associate Agent, Agriculture and Natural Resources, University of Arizona Cooperative Extension, 840 Rodeo Dr #C, Prescott, AZ 86305

²Yavapai County Master Gardener (Volunteer Coordinator), University of Arizona Cooperative Extension, 840 Rodeo Dr #C, Prescott, AZ 86305

Between 1998 and 2007, the Yavapai County Master Gardener Program has increased the numbers of clients served, active Master Gardener volunteers, and documented volunteer service hours. The increased participation and clientele service can be attributed to multiple factors which include the Arizona Highlands Garden Conference, web-based resources (monthly newsletters, electronic volunteer reporting, and meeting information), volunteer recognition events, introduction of continuing education requirements, formation of a Master Gardener Association, formalized volunteer coordination and a mentoring program. During the same period, Master Gardener service hours per year increased by 550%, number of clients served per year increased by 235% and the dollar value of volunteer service to Yavapai County communities per year increased by 738%. Formalized volunteer coordination (provided by Master Gardener volunteers) was critical to achieving these increases in service and associated dollar values. This data indicates that by providing expanded educational opportunities and volunteer recognition, adding electronic reporting, and creating opportunities for social networks, Yavapai County Master Gardeners are more likely to remain engaged and provide increased service to their communities.

WSU EXTENSION, COMMUNITY SERVICE LEARNING AND STUDENTS: A WINNING COMBINATION

Schmidt,* J.L.

Washington State University Extension-Whitman County, Colfax, WA 99111

Washington State University is committed to providing a world class experience for undergraduates as they acquire a degree and prepare for the workforce. A unique method to accomplish this objective evolves around forming a partnership between WSU Extension-Whitman County 4-H, the Center for Civic Engagement

and WSU students. WSU Extension is the connection to youth, families and communities in every county across the state. Connecting students to Extension through Community Service Learning creates experiential learning opportunities for students that reflect real life. With the overall theme of 4-H promotion and recruitment of leaders and members for the Whitman County 4-H Program, students from two Human Development 205 Communications classes and one English 402 Proposal Writing class focused on the development of 4-H materials, conducted recruitment activities with the schools, implemented two on campus events for 4-H youth and carried out an after-school program. Students demonstrated the ability to effectively work in teams, connect with community and carry out activities to accomplish their goals. Parents, youth and students became more aware of opportunities available through the 4-H program. Materials developed by youth will be used for future 4-H promotional events. This three-way partnership enabled students to create solutions to real world problems and gain a world class experience. It was a winning combination designed for success.

REDUCING THE RISK OF PATHOGEN CONTAMINATION OF THE NEW YORK CITY WATERSHED THROUGH CONSERVATION PRACTICES - CALF HOUSING AND MANAGEMENT

Shea,* E.S.¹, Thurgood, J.T.²

¹ Dairy/Livestock Resource Educator, Cornell Cooperative Extension, Delaware County, Walton 13856

² Watershed Agricultural Extension Program Leader, Cornell Cooperative Extension, Delaware County, Walton 13856

Livestock agriculture is a potential source of pathogens such as *C. parvum* and *Giardia sp.*, with calves 0-3 months of age having the greatest risk of becoming infected and shedding pathogens in manure. This makes calf manure an important potential source of *C. parvum* and *Giardia sp.* contamination in the New York City watershed. The goal of the New York City Watershed Agricultural Program is to educate farmers on management protocols that will improve calf health and conservation practices that will reduce the threat of pathogens entering the watershed. An initial on-farm evaluation is done to assess existing environmental conditions that relate to pre-weaned calf management and manure management. If the evaluation identifies a potential risk to water quality, then further consultations

with the farmer explore alternatives for calf housing and address management issues. Conservation practices installed on farms to improve calf health include the following housing options: calf hutches, calf kennels, fabric-covered structures, and calf pen ventilation renovations. Before installation, the farmer is educated on management of the new calf housing and commits to follow an Operation and Maintenance agreement for the lifespan of the practice. Calf housing conservation practices, as well as producer education, have decreased morbidity and mortality rates and increased calf growth rates. Providing calves with a dry, well-ventilated environment and proper nutrition improves calf health and, in turn, is expected to reduce the shed of pathogens into the watershed.

COLLABORATIVE REGIONAL EQUINE PROGRAMMING: REACHING NEW AND DIVERSE CLIENTELE

Smith,* C.E.¹, Swanson, C.A.²

¹ Extension Agent, Virginia Cooperative Extension, Animal Science, Warren County, Virginia 22630.

² Extension Agent, Virginia Cooperative Extension, Animal Science, Albemarle County, Virginia 22902.

Reaching new and diverse audiences through educational programming is important to the relevance and sustainability of Extension programs, and also fulfills federal guidelines on reaching previously underserved audiences. A collaborative regional approach to equine programming was attempted using two programs as models; Equine Nutrition Series and Caring for the Older Horse. The programs were offered on different dates and locations in PD7 (Northwest District) and PD10 (Northern District). Both programs reached diverse audiences, as typically horse programs attract white females ages 19-64. Equine Nutrition Series (n=59) reached 68% W F 19-64, 19% W M 19-64, 8% W F 65+, 3% B/AA F 19-64, 2% Asian M 19-64. Caring for the Older Horse (n=99) reached 70% W F 19-64, 7% W M 19-64, 7% W F 65+, 1% W M 65+, 1% H/L F 19-64, 1% H/L M 65+, 1% AI/AN F 19-64, 12% Incomplete Demographic Data. Equine Nutrition Series attracted 83% of the participants from within PD7 and PD10 and 17% were from outside the region. Caring for the Older Horse attracted 43% from within PD7 and PD10 and 58% were from outside the region. Most importantly, clientele that had never participated in local extension programs attended. In PD7, Equine Nutrition Series reached 12 (35%) new clients; Caring for the Older Horse reached 20 (44%) new clients. In PD10, Equine

Nutrition Series reached 21 (84%) new clients; Caring for the Older Horse reached 45 (83%) new clients.

SWEET POTATO RESEARCH VERIFICATION PROGRAM INITIATED FOR LOUISIANA SWEET POTATO PRODUCTION IN 2007

Smith, T. P., Sistrunk, M.², Guidry, K.³

¹ Extension Specialist, LSU Agricultural Center, Sweet Potato Research Station, Chase, LA,

² Extension Agent, LSU Agricultural Center Louisiana Cooperative Extension Service, Oak Grove, LA,

³ Extension Specialist, LSU Agricultural Center Dept. of Agricultural Economics and Agribusiness,

Louisiana is a leader in sweet potato production in the United States. Approximately 16,000 acres of sweet potatoes were planted in Louisiana in 2005-2007 and the estimated total value of the crop in 2007 exceeded \$110 million. Production costs for one acre of sweet potatoes range from \$2,000-\$3000 and several variables can affect crop performance and profitability.

A pilot verification program was initiated in 2007 in West Carroll Parish, Louisiana on one producer's farm. A verification program demonstrates to producers the importance of implementing research based recommendations in the production of their commodity, with an overall goal of maximizing production and improving quality.

The sweet potato verification program encompasses many aspects of production and begins with field identification, seed selection, fertilization and plant bed production and management. Several other aspects of production are monitored throughout the course of the production season including but not limited to: plant spacing, insect, disease and weed management, and irrigation. At harvest, yield data are collected and an economic analysis is conducted. The first year of the study yielded valuable baseline information on production and management costs. Total yields in the verification fields were 23 and 30% higher respectively compared to the 2007 parish average.

The aim of this program is to extend information to producers by evaluating the LSU AgCenter's recommendation practices for sweet potato on farm and to ultimately increase the economic sustainability of Louisiana sweet potato producers.

READING THE RANGE

Sprinkle, * J. E.¹, Schalau, J. W.², Ruyle, G. B.³

¹ Area Extension Agent, Gila County Cooperative Extension, University of Arizona, Payson, AZ 85541

² Extension Agent, Yavapai County Cooperative Extension, University of Arizona, Prescott, AZ 86305

³ Extension Specialist, School of Natural Resources, University of Arizona, Tucson, AZ 85721

There is considerable controversy regarding the best and highest use of federal lands as well as how to properly manage resources. Decisions regarding proper use of resources need to be based upon the best science available. By having this information available, it will enable land managers, ranchers, and the public to have a better starting point from which to base decisions and mediate conflict. In 2000, a USDA grant, Reading the Range (RTR) was obtained and demonstration ranches for range monitoring were established with technical assistance provided. It was hoped that establishment of demonstration ranches for range monitoring would encourage neighboring ranches to consider implementing similar practices on their ranches. Expectations for rancher participants were to assist in data collection and to be willing to share the process with others. The USDA grant expired in 2002, but with additional grant support (\$170,000), RTR has been able to continue. From the original 6 participants with 100,000 acres RTR has now grown to 33 ranches with 900,000 acres. Currently, approximately 30% of the Tonto National Forest is enrolled in the RTR program. There have been 57 Extension Reports produced encompassing approximately 8,000 pages. An online database for entering monitoring data is available at <http://cals.arizona.edu/gila/animalsciences/downloadsprdsht.html>. Monitoring data are being included in National Environmental Policy Act grazing permit renewals. Several participants in RTR have received awards from the Arizona Cattlegrowers' Association, the National Cattlemen's Beef Association, and the Arizona Section, Society for Range Management for environmental stewardship and range management.

MASTER GARDENERS BUILD A DEMONSTRATION RAIN GARDEN IN DOWNTOWN CHATTANOOGA

Stebbins, * T.C.

Extension Agent, University of Tennessee Extension,

Hamilton County, Chattanooga, TN 37416

Master Gardeners of Hamilton County designed and build a "rain garden" in Chattanooga, Tennessee. Rain gardens allow water to be held by plant roots rather than becoming polluted runoff. Many native plants were used since they are well adapted to the Chattanooga area. It is also called a butterfly/hummingbird garden since so many flowering plants are used. The garden was built on City of Chattanooga property located between the two main buildings of The Tennessee Aquarium. This is a very visible site for a demonstration rain garden. Master Gardeners worked with city officials for approval. They solicited all the building materials at no cost to the city. Over fifty Master Gardeners from 12 states shared in the initial planting event during the Southern Regional Master Gardener Conference. The garden is a training ground for new Master Gardener interns. There are several work days and training sessions in spring, summer, and fall. A trellis was added in 2007. A local artist donated a sculpture. A sign which reads "Another Master Gardener Project" is visible. Plant labels are presently being made. Thousands of people pass the garden on their way to visit other attractions along the Chattanooga waterfront. Many people stop and exclaim "What a beautiful area". We inform them that it is also a rain garden. Education activities in the garden are provided for school groups.

EXPANDING FOOD SAFETY AND QUALITY ASSURANCE EDUCATION FOR MISSOURI YOUTH EXHIBITING FOOD ANIMALS

Davis, B.¹ Gallup, B.² Goode, A.³ Humphreys, J.⁴, Schleicher, A.⁵, Shannon, M.⁶, Stewart, * M.⁷

¹ University of Missouri Extension, Regional Livestock Specialist, 1st Floor, Courthouse, Farmington, MO 63640

² University of Missouri Extension, State 4-H Specialist, 813 Clark Hall, Columbia, MO 65211

³ University of Missouri Extension, Regional Livestock Specialist, 14 E. 19th St., Suite 102, Higginsville, MO 64037

⁴ University of Missouri Extension, Regional Livestock Specialist, P.O. Box 32, Savannah, MO 64485

⁵ University of Missouri Extension, Regional Livestock Specialist, 201 Highway 136 E., Rockport, MO 64482

⁶ University of Missouri Extension, State Swine Specialist, S133d Animal Sciences Center, Columbia, MO 65211

⁷ University of Missouri Extension, Regional Livestock

At the 2003 Audrain County 4-H Fair, beef and swine project members competed in species specific skill-a-thons that included food safety/quality assurance questions on proper injection sites. Injection site selection is a part of the Youth Pork Quality Assurance (YPQA) curricula and in Missouri, most youth nine years of age and older who exhibit swine were YPQA certified, and had been trained in injection site selection. Of the 19 youth who participated in the swine skill-a-thon, 16 answered the injection site questions correctly. In the beef skill-a-thon, only 5 of 14 participants answered the injection questions correctly. Many youth project members forget to think of their project animals as 'food' and don't understand the food safety issues that can arise. The results documented in Audrain County mirrored many youth and livestock educators concerns about youth livestock project members understanding food safety issues and where they, as livestock producers fit in the food production process. With the support of the Missouri Department of Agriculture and the National Pork Board, state and regional 4-H and livestock specialists developed a new curriculum "Show-Me Quality Assurance" (SMQA) addressing all food animals typically shown in Missouri. Curriculum from Texas, Iowa and Nebraska was reviewed and used as a basis for the Missouri curriculum. Missouri's SMQA program was designed to be taught by Regional 4-H Youth Specialists, Livestock Specialists and Vo-Ag Instructors who have been certified. Certified trainers have the authority to train others, they deem qualified, to teach Show Me Quality Assurance to the membership.

CONDUCTING A SOIL QUALITY WORKSHOP

Sundermeier, A.P.¹, Bruynis, C.², Clevenger, B.³, Hoorman, J.⁴, Islam, K.R.⁵

¹. Extension Educator, Ohio State University Extension, Bowling Green, Ohio 43402

². Extension Educator, Ohio State University Extension, Upper Sandusky, Ohio 43351

³. Extension Educator, Ohio State University Extension, Defiance, Ohio 43512

⁴. Extension Educator, Ohio State University Extension, Lima, Ohio 45804

⁵. Extension Specialist, Ohio State University Extension, Piketon, Ohio 45661

consultants, Natural Resource Conservation Service and Extension Educators on the benefits of achieving healthy soils and equipped participants with tools to determine the quality of their own soils. By testing participants' soil samples brought from their own fields or test plots, we were able to improve farmers' perception of what is a quality soil. Participants will then be able to monitor future soil quality improvements by using an instant soil quality test kit provided at the workshop. Lecture topics included: Fundamentals of soil quality properties, carbon sequestration, soil quality tests, interpretation, and recommendations. Hands on exercises included: Fixed wavelength field colorimeter, Ohio Soil Health Card for self-assessment of soils, soil quality test kit. In-field demonstrations included: Soil compaction comparison with penetrometer, water infiltration, earthworm inventory, soil aggregate sizing. Participants brought 2 samples of poor and 2 samples of good quality soil from fields or test plots. An instant analysis was conducted. Evaluation data collected at the workshops assessed knowledge gained by participants by conducting a pre – post survey. On a 1 – 5 scale, the topic of "fundamentals of soil quality" knowledge gained 1.10, the topic "instant soil quality test kit" had 2.11 knowledge gained. Soil samples collected from participants were analyzed for soil quality indicators. Recommendations were then made where soil quality improvements can be affected. Data was collected from participants regarding their perception of low, medium, or high quality soils from their own farms.

WSU FRUIT SCHOOL: NEW TECHNOLOGIES EMERGING IN HOW WE GROW FRUIT AND DELIVER INFORMATION

Suvery, N.A.¹, Hoheisel, G.A.², Olmstead, J.³, Bush, M.³, Lewis, K.⁴, Smith, T.⁵, Auvil, T.⁶

¹Extension Educator, WSU Okanogan County Extension, Okanogan, WA 98840

²Extension Educator, WSU Benton County Extension, Prosser, WA 99350

³Extension Educator, WSU Yakima County Extension, Yakima, WA 98901

⁴Area Extension Educator, WSU Grant/Adams Extension, Ephrata, WA 98823

⁵Area Extension Educator, WSU Chelan/Douglas/Okanogan County Extension, Wenatchee, WA 98801

⁶Research Horticulturist, Washington Tree Fruit Research Commission, Wenatchee, WA 98801

With rising inflation and labor costs, tree fruit growers must seek new technologies and horticultural practices to ensure long-term viability in the industry. Similarly, Extension must adapt to new technologies to deliver

The Soil Quality Workshop instructed farmers, crop

information to agricultural producers. Competitive Orchard Systems are designed to sustain a positive return on investment and generate income by producing and marketing only profitable fruit, capitalizing on existing and evolving horticultural practices, and increasing efficiencies in all aspects of orchard management. WSU Extension has often used Fruit Schools to transfer information and assist producers in implementing new technologies and methods. Fruit Schools are traditionally conducted in one location with a written proceeding. However, to bridge the distance gap, we conducted the Fruit School in Wenatchee and televised it to Yakima. In a pre-workshop survey, 58 of 186 participants indicated they would have traveled to attend the workshop. Clearly, learning and adopting videoconferencing technologies is crucial to maintaining attendance and increasing the impact in future programs. We recorded the workshop and are making a video proceeding. Already, this format has been well received in that people are expressing excitement over hearing the presentations and asking for the proceedings as soon as possible. Surveys indicated plans to adapt components of Competitive Orchard Systems and identified successes and challenges for adopting technology in Extension programs. It is clear that our industry benefited greatly from this type of high impact and geographically diverse program.

GRANT COUNTY SCHOOL ENVIRONMENTAL PROGRAM, TEACHING RESPECT FOR NATURE, WHILE BUILDING MENTAL AND MORAL DEVELOPMENT

Thomas,* R. B.¹

¹. Cooperative Extension Agent-Staff Chair, Arkansas Cooperative Extension, Grant County, Sheridan Arkansas 72129

Problem recognized: Teaching our youth to be concerned for natural resources is a priority of the Arkansas State Department of Education as well as the University of Arkansas Cooperative Extension Service. **Goal established:** Rebecca Thomas pursued and received an Innovative grant to teach natural resources in Science classes at Sheridan Intermediate School. Project Wet and Project Wild curriculum was utilized. The “hands on” labs were the **teaching method** of choice for this project. Our **target audience** consisted of 600 students attending SIS. **Measurable results,** Third grade participants were able to differentiate among complete metamorphosis, incomplete metamorphosis, and embryonic

development. Fourth grade students are able to generalize that people and other animals share a basic need to have a home and evaluate the effects on wildlife and the environment as a result of their own energy-use practices. Fifth grade students learned (1) to identify various factors involved in a wildlife management issue and (2) evaluate alternative in a complex issue involving wildlife components of habitat that are essential for most aquatic animals to survive. Each students involved was encouraged to enroll in the Grant County 4-H Program. To date 239 of the students are enrolled in the Grant County 4-H Program.

GRAZING SCHOOL FOR HORSE OWNERS SEEKS TO MEET EDUCATIONAL NEEDS OF ALABAMA HORSE INDUSTRY

Thompson,* G.L.¹, Stanford, M.K.², Ball, D.M.³

¹ Regional Extension Agent, Alabama Cooperative Extension System, Tennessee Valley Region, Belle Mina, AL 35619

² Regional Extension Agent, Alabama Cooperative Extension System, Sand Mountain Region, Pell City, AL 35125

³ Forage Crop Agronomist, Alabama Cooperative Extension System, Auburn University, Auburn, AL 36849

The horse industry contributes significantly to the Alabama economy. According to a 2006 Auburn University study, the horse industry directly produces goods and services valued in excess of 573 million dollars. Over 44,000 Alabama households are involved in the industry as horse owners, service providers, employees, and volunteers, and there are over 186,000 horses in Alabama. To meet the educational needs of this rapidly growing industry, agents for the Alabama Cooperative Extension System (ACES) worked cooperatively with USDA-NRCS, the College of Agriculture at Auburn University, and the Alabama Forage and Grasslands Coalition to develop a “One-day Grazing School for Horse Owners”. In order to reach a broad range of people, the course was offered on consecutive days in two different locations in northern Alabama. The courses were attended by a total of 69 persons representing 19 different Alabama counties, plus one from Georgia. Topics for this course included grazing methods, physiology of plant growth, environmental impacts of grazing, fertilization, fencing and watering technology, poisonous plant identification, nutritional needs of horses on pasture, minimizing hay requirements, and techniques of weed control. In

addition to classroom instruction, students also participated in several outdoor field exercises. Over 81% of the respondents to the post-course survey indicated that participation in the course would have either a “significant” or “very significant” economic impact on their horse operation. This unique program has allowed ACES to build a better working relationship with horse owners in Alabama while continuing efforts to meet their educational needs.

CLOSE ENCOUNTERS WITH AGRICULTURE

Tregoning, D.T.

Extension Agent, Maryland Cooperative Extension,
Montgomery County, Maryland 20855

Close Encounters with Agriculture is an outreach agricultural awareness education program geared for Montgomery County 4th grade students. Since 1993, almost 40,000 students have participated in the program. The students have gained an awareness and appreciation for agricultures’ importance in their daily lives. About 52 elementary schools from all over the county participated over a 3-week period in early spring and again in the fall of 2007. Learning activities are short and hands on to keep students attention. Production agriculture, the environment and nutrition are the focus of the program. Six hands-on learning stations consisting of grain and grain products, dairy, beef, swine/ goats, horticulture and horses are used to teach production agriculture concepts. The environmental segment emphasizes the positive relationship farmers and farming practices have on the environment. Students are taught and shown how all sources of pollution impact the Chesapeake Bay. They are also taught about Montgomery County soils and what animals need to survive in a habitat. The nutrition segment emphasizes the relationship of agricultural products to nutritious diets and focuses on the uses and benefits of grain products. A “Jeopardy” type nutrition bowl game is used to promote interactive learning and to reinforce the concepts that were covered. Participating schools and teachers are provided with teaching packets containing learning activities for the students prior to their field trip to the Extension Office Farm Park. Follow up activities are also included in the teaching packet including pre/post tests to measure the students learning.

FARM SUCCESSION AND ESTATE PLANNING WITH PERSONAL COACHING FOR PARTICIPATING FAMILIES

Tuck,* B.¹, Roberts, D.², Kerr,* S.³, Corp, M.⁴, Mills, R.⁵, Fouts, J.⁶, Esser, A.⁷, and Viebrock, M.⁸

- ¹ Oregon State University Extension Service-Wasco County, 400 E. Scenic Drive, Suite 2.278, The Dalles, OR 97058
- ² Washington State University Cooperative Extension-Spokane County, 222 N Havana St., Spokane, WA 99202
- ³ Washington State University Cooperative Extension-Klickitat County, 228 W. Main St. MS-CH-12, Goldendale, WA 98620
- ⁴ Oregon State University Extension Service-Umatilla County, 2411 NW Carden, Umatilla Hall, Pendleton, OR 97801
- ⁵ Oregon State University Extension Service-Umatilla County, 2411 NW Carden, Umatilla Hall, Pendleton, OR 97801
- ⁶ Washington State University Cooperative Extension-Walla Walla County, 328 W. Poplar Street, Walla Walla, WA 99362
- ⁷ Washington State University Cooperative Extension-Adams County, 210 W. Broadway, Ritzville, WA 99169
- ⁸ Washington State University Cooperative Extension-Douglas County, 2033 S. Rainier, WA 98858

County faculty from Oregon and Washington Extension initiated a farm succession planning project based on needs assessment of farm families in eastern Washington and Oregon. The project is funded by the Western Center for Risk Management Education and USDA-CSREES. From 2006 to 2008 we held 3 farm succession planning workshops at each of 6 locations across the region. Participation in these workshops greatly exceeded expectations with 40-60 attending at each site. Workshop topics included; reasons for developing a farm succession plan; communicating successfully with all family members involved; identifying appropriate professional input; an overview of relevant state laws; discussion on estate laws and writing wills; conducting successful family meetings; overcoming difficulties encountered in the process; making good use of attorney time; specifying inheritance of treasured personal items; protecting the business in the event of a sudden death; and getting motivated. We recognize that farm succession and estate planning is a challenging process for most families. A unique

feature of this project is that the 90 farm families who committed to developing a succession/estate plan received free coaching throughout the project. The coaches were hired initially and trained by WSU to advise farm families who were experiencing financial difficulty. The coaches all had experience in business and/or the banking industry. They contacted the client families on a regular basis by phone or e-mail to encourage them through the steps of the process. If requested, they met in person with the client families to assist with goal-setting or to facilitate family meetings.

THE PROS AND CONS OF RAISING VERSUS PURCHASING REPLACEMENT BEEF HEIFERS

Vaught, * C.J.¹, Troxel, T.R.²

¹ County Extension Agent – Staff Chair, University of Arkansas Cooperative Extension Service, Polk County, Mena, Arkansas 71953

² Professor and Associate Department Head - Animal Science, University of Arkansas Cooperative Extension Service, Little Rock, Arkansas 72203

Beef producers are constantly under economic pressure to reduce their bottom line on the farm. Close evaluation of the cost of producing heifers versus the cost of purchasing quality heifers from reliable sources is one way that producers can ensure wise decisions about the future of their cowherd. Several factors are important in deciding how to keep productive females in the cowherd. Production goals as well as the availability of quality replacements are points that each producer must weigh individually. Key points to consider about genetic improvement as well as information collected as part of the Arkansas Beef Improvement Program's Replacement Heifer projects are utilized on this poster. This poster was developed as an educational tool to use at fairs, trade shows, and field days.

RENOVATING EQUINE EXERCISE LOTS TO REDUCE SOIL EROSION AND NUTRIENT RUNOFF

Wilson, G.W.¹, Hoorman, J.J.²

¹OSU Extension, 7868 CR 140 Suite B, Findlay, OH 45840

²OSU Extension Specialist, 3900 Suite B, Lima, Ohio 45801

Ohio's horse industry has 192,000 horses (7th

nationally) and generates \$776 million per year, \$2.8 billion with allied industries. Most of the 48,500 Ohio horse owners have 2-5 horses on 2-5 acres of land. Many equine exercise lots and high uses areas are little more than mud due to over-grazing. A USDA Great Lakes Commission Soil Erosion and Sedimentation Grant (2005-2007) was obtained to demonstrate how equine exercise lots could be designed to reduce soil erosion, improve nutrient runoff, and provide sound footing for horses. Eleven horse owners with 5 to 350 horses (mean=80) were selected. Mean water quality runoff samples from 11 exercise lots showed 2397 mg/l TSS, 68 mg/l TN, and 20.5 mg/l TP. Depending on size of farm, recommendations included: rerouting surface water, land grading, constructing lots with geotextile fabric and stone, resizing horse pastures, and over seeding grass tolerant species into heavy traffic areas. Seventeen exercise lots (70,100 SF, for 139 horses) were installed averaging 504 SF per horse. Three farms installed spouting (514 feet), two farms installed grass waterways (1200 feet), and twelve farms reseed pastures (41 acres). Surveys (1 Low 10 High) showed that the geo-textile fabric and stone exercise lots worked well (9.0), owners would install another exercise lot (91%) and owners were well satisfied (91%). After the project, only 2 owners mentioned standing water for a short period of time after 2-4 inch rains in December 2007. Twenty-seven educational meetings on renovating equine exercise lots were conducted (2005-2007) with over 2,105 participants.

EXTENSION EDUCATION: TRAINING AGENTS IN WATER USE EFFICIENCY

Winstead,* A.T.¹, Griffith, W.G.², Derrick, D.E.³, Hall, M.H.⁴

¹ Multi-County Extension Agent - Precision Agriculture, Alabama Cooperative Extension System, Belle Mina, Alabama, 35615

² Regional Extension Agent, Alabama Cooperative Extension System, Fayette, Alabama, 35555

³ Regional Extension Agent, Alabama Cooperative Extension System, Centre, Alabama, 35960

⁴ Extension Specialist, Alabama Cooperative Extension System, Huntsville, Alabama, 35801

Water is often the limiting factor for plant growth and has a significant influence on crop yield. While Alabama is blessed with abundant rainfall and water resources, producers continue to face record periods of water deficiency, especially during the summer growing season. Additionally, water shortages continue to

plague the nation due to the steadily increasing population. Integration of systems such as water harvesting technology, variable-rate irrigation, and water storage facilities are examples of new opportunities for producers to more efficiently utilize irrigation and water resources, thereby increasing sustainability and productivity on their farms. A need emerged for Extension Agronomy Agents and Specialists to be trained in water use efficiency and irrigation strategies. A study tour of the San Joaquin Valley, one of the most prolific and water dependent agricultural areas in the world, was conducted to allow Extension personnel to meet with researchers, government officials, farmers and industry representatives who have dealt with these issues. Results from trip evaluations report Extension personnel feel better equipped to work with clientele to educate and implement strategies to improve water management on Alabama farms. Knowledge gained from the training has been transferred to Alabama growers through Extension meetings, posters, and one-on-one farm visits. Recent projects and initiatives in Alabama are focusing on water use strategies to improve the maintenance and utilization of our water resources.

OHIO FARM WOMEN LEARN SKILLS TO IMPROVE COMMUNICATION WITHIN FARM FAMILY BUSINESSES

Woodruff, *J.N.¹, Herringshaw, D.I.²

¹ Extension Educator, Ohio State University Extension, Ashland County, Ashland, OH 44805

² Extension Educator, Ohio State University Extension, Wood County, Bowling Green, OH 43402

According to the 2002 Census of Agriculture, there was a 22% increase in the number of women principal operators of farms in Ohio from 1997 to 2002. This accounts for 7660 women operators. It is also recognized that many farm wives play a vital role in the operation of the farm business. While Ohio offers many agricultural programs for farmers, farm women are not usually targeted and many times are too intimidated to ask questions if they do attend programs. The statistics, current interest and lack of programming for women showed that it was time to start addressing the needs of Ohio women involved in agriculture. One of the primary focuses of the Ohio Women in Agriculture Conferences and Annie's Project has been family and business communications. Much of the communication related to family farm businesses flows through the

women involved in the farm, making it vital that farm women are skilled in business communications. Real Colors® personality assessment, writing a farm mission statement, conducting farm business meetings, and learning to minimize barriers to communication sessions were part of each of the eight Annie's Project Workshops held throughout Ohio in 2007 and 2008. 2007 Annie's Project participants indicated an 85% increase in family communication after the workshops. After participating in the Erie County 2008 Annie's Project Workshop, 64% of the women reported that they had written or begun the process of writing a farm business mission statement with their business partner(s).

SUCCESSFUL FEE BASED COUNTY PROGRAMMING IN AREAS OF BEEF AND HORSE PRODUCTION

Woods,* H.T.

Extension Agent, University of Tennessee Extension, McMinn County, Athens, Tennessee 37303

Three successful fee based programs have been conducted in areas related to beef and horse production, The McMinn County Beef College, McMinn County Horse Workshops, and the Master Beef Producer Program. Fees obtained from these programs have been used to conduct the programs, provide operating and travel funds for other programs and utilized to attend state and national meetings. Surveys and follow up interviews were used for each program and impact was recorded. Ninety eight percent of Beef College participants rated the knowledge gained as high or very high for all 40 sessions. The average participation fee for the college has been \$31. The average economic benefit over nine years has been \$85,000 per year, for an average of \$2,274.50 per producer. Ninety seven percent of participants rated their knowledge gained from each session of the horse workshops as high or very high for all twelve sessions. The participation fee is \$25 and the average economic benefit for the past three years has been \$4125 per year, which is an average of \$290 per horse owner. The Master Beef Program was conducted twice in 2007 for a fee of \$150.00. The Tennessee Department of Agriculture provided \$100 scholarships through the Agricultural Enhancement Program, so the cost to producers was \$50. One hundred and eleven producers completed and evaluated the training. The total economic benefit reported for both programs was \$197,000 for an average of \$1,775 per producer. The total fees acquired

from these programs for the county has totaled \$18,075.00

MONITORING FOR ASIAN SOYBEAN RUST IN ALABAMA'S BLACK BELT REGION

Yates, R.P.¹, Sikora, E.J.², Delaney, D.P.³, Delaney, M.A.⁴

¹ Regional Extension Agent, Alabama Cooperative Extension System, Marengo County, Linden, Alabama 36748

² Extension Plant Pathologist, Alabama Cooperative Extension System-Auburn University, Auburn, Alabama 36849

³ Extension Specialist, Alabama Cooperative Extension System-Auburn University, Auburn, Alabama 36849

⁴ Epidemiologist, Auburn University, Auburn, Alabama 36849

Kudzu, soybean sentinel plots, and commercial soybean fields were monitored for Asian soybean rust (ASR) in Alabama's Black Belt Region in 2006 and 2007 in an effort to provide soybean farmers early warning to the disease's presence and to aid in coordinating control measures. Suspect leaf samples were collected and sent for examination to the Plant Diagnostic Laboratory at Auburn University. Farmers were informed about the monitoring and movement of ASR through various means including meetings, telephone conversations, the Auburn University Soybean Rust Hotline, and the USDA National Soybean Rust Sentinel and Monitoring Network website. In 2006, ASR was found only in Sumter County in the Black Belt Region. The disease was detected in a commercial field after harvest had been completed. As a result of the monitoring efforts for ASR in 2006, Black Belt soybean farmers did not have to spray over 12,000 acres of soybeans for the disease therefore potentially saving over \$180 thousand in fungicide application costs. In 2007, ASR was found in three commercial soybean fields in Marengo, Sumter, and Lowndes counties. The disease was also detected on kudzu in Montgomery and Wilcox counties. Because ASR was found relatively early in the season, area soybeans were at risk for economic damage. Farmers were alerted to its presence and updated on the multiple fungicides available. Farmers were able to make informed management decisions on whether to apply fungicides to over 13,000 acres of soybeans based on the physiological stage of their crop and their crop's yield potential.

WAGES & BENEFITS FOR FARM EMPLOYEES – A SUMMARY OF OHIO FARM OPERATORS

Zoller*, C.T.¹, Ward, B.²

¹Extension Educator, ANR/CD, OSU Extension, Tuscarawas County, New Philadelphia, Ohio 44663

²Extension Program Leader, Agricultural, Environmental and Development Economics, Columbus, Ohio 43210

Farm managers constantly struggle with how much to pay their employees and often ask Extension professionals for answers. Because very little data exists to help clients answer these questions the "Wages and Benefits for Farm Employees" study was conducted by Ohio State University Extension. The study was conducted by distribution of surveys by Extension Educators, Agricultural, Environmental and Development Economics Faculty and Staff and allied organizations. Surveys were returned and summarized for 122 farm employees in 2007. We collected data for full and part-time employees to determine differences in the value of wages, benefits and bonuses, years of experience and hours worked to calculate a total compensation per hour rate. Based on the responses we were able to separate out the same data for crop farms only as a group. Data from this study has been shared at meetings and in publications across Ohio. An Ohio State University Extension Fact Sheet has also been developed as a result of the study. This poster will display in detail the findings of the study and assist other Extension professionals in collecting data for their own programs.

(Footnotes)

1 Extension Agent – Staff Chair, Arkansas Cooperative Extension, Madison County, Huntsville, Arkansas 72740

2 Extension Specialist – Aquaculture, Arkansas Cooperative Extension, University of Arkansas at Pine Bluff, Newport, Arkansas 72112

Duckweed (*Lemna sp.*) a small, floating aquatic plant that is very common in Arkansas. It frequently colonizes ponds, and other quiet areas with little or no water current, that possess adequate nutrients. Its ability to reproduce both sexually and asexually allows it to grow and spread quickly under optimal conditions. This can lead to the formation of dense mats of duckweed that can entirely cover small ponds. At present, only two herbicides currently legal in Arkansas have a response rating as either good (diquat; brand

name Reward) or excellent (floridone; brand name Sonar). Cattle watering ponds tend to be small and nutrient loaded, making them ideal duckweed habitat. During the summer of 2006, three ponds were selected in Madison County for a demonstration project involving Sonar A.S for duckweed control. Ponds were randomly selected for treatment at the highest labeled rate (90 ppb AI), the lowest labeled rate (45 ppb AI), or for no treatment as a control pond. All ponds were located in pastures and used by cattle throughout the summer. The High Rate pond was approximately 0.22 acres with assumed average depth of 5 feet. The rate was calculated as 8.5 ounces of Sonar A.S. The Low Rate pond was approximately 0.21 acres with an assumed average depth of 5 feet. The rate was calculated as 4.2 ounces of Sonar A.S. The control pond was a similar depth and area. At both the low rate and high rate, the ponds stayed clear of duckweed all summer.

Award Winners

2008 NACAA

**93rd
Annual Meeting
and
Professional Improvement Conference
Greensboro, North Carolina**

EXTENSION PROGRAM NATIONAL JUDGING RESULTS

CROP PRODUCTION AWARDS

NATIONAL WINNER

INTEGRATED MANAGEMENT OF BLACKBIRDS IN SUNFLOWER

Nels. M. Peterson, Extension Agent/Nelson County, North Dakota

Formal needs assessments conducted with Crop Improvement Association Directors, County Commissioners and Agribusiness managers in December 2005 identified sunflower production as important to Nelson County and surrounding area.

Programming in 2006 and 2007 consisted of meetings, news releases, newsletters, 'kitchen table' meetings of neighbors, one-on-one contacts and production tours.

Program evaluation was conducted formatively and summatively. Formative evaluations were those that were gathered during the programming and growing seasons. Many of the statements are anecdotal with participants supplying comments and information using a variety of feedback methods. Information was also gathered on acreage increases, producer cooperation, integrated techniques being used in fields and agency cooperation.

With price increases in 2006 and 2007 additional income may range up to as much as nearly a half million dollars for Nelson County Producers. Increased prices received for sunflowers in early 2008 indicate an even greater potential for increased profits for area producers that incorporate sunflowers and integrated management plans into their cropping sequence.

National Finalists:

ON-FARM TESTING FOR BETTER FARMS & FAMILIES

Esser,² A.D.¹

¹ Extension Agronomist Washington State University Extension, Lincoln-Adams Area, Ritzville, Washington 99169. e-mail: aarons@wsu.edu phone: (509) 659-3210

The most significant piece of agriculture in the Lincoln-Adams Extension Area is dryland winter wheat production, as it's one of the largest wheat growing areas in the nation. Here, most wheat is produced in rotation with a year of tilled "dust mulch" fallow. Unfortunately, this practice degrades soil quality through excess soil erosion and reduced organic matter. The WSU Lincoln-Adams Area Extension on-farm testing (OFT) program is helping growers adopt best management practices (BMP) that improve farm crop productivity and profitability in a manner that reduces erosion and improves soil quality. Over the past three years, I have conducted thirty four on-farm tests encompassing over four hundred acres throughout this area focus on multiple factors to adopting BMP's. Over the last three years farmers in the Lincoln-Adams Area received an estimated \$3.5 million annually in additional government support for implementing BMP's. OFT results conclude area producers can apply nitrogen fertilizer in the fall for spring grain production, thus increasing producer equipment, labor and cash flow flexibility. OFT results has shown winter wheat directly seeded into no-till fallow has produced crop production yields and profits equal to conventional tillage methods when seeding at the same time. At the initiation of this work one area grower incorporated no-till fallow in rotation, and today ten producers have incorporated no-till fallow into rotation encompassing over 35,000 acres. These acres are significantly less susceptible to erosion. My project is clearly focused on working with producers striving for conservation, profitability, and overall excellence in crop production.

ALTERNATIVE ENERGY PROGRAM

Hulle,* L.R.

Cornell Cooperative Extension of Orange County Education Center, 18 Seward Avenue, Suite 300 Middletown, NY 10940

Alternative Energy opportunities in southeastern NY are being aggressively pursued. A bio-fuel grant was secured to provide funds to plant switch grass and reed canary grass in local trial plots to allow our field crop producers to learn about the costs and yields first hand. An "Energizing Agriculture" conference was held that dealt with new energy technologies including how to use renewable energy. A bio-diesel seminar was held to demonstrate how local businesses are benefiting from making their own bio-diesel and how the participants can adapt these technologies on their farms. The program objectives were to have local farm participants change how they viewed alternative energy

crops and products and to pursue the best options for their operation. Dairy and field crop farmers learned first hand that switch grass production is a lengthy process with initial establishment and maintenance costs that were \$245.35 per acre. Conventional seeding of reed canary grass on marginal land was \$405.35 per acre. Using field meetings, conferences and newsletters, farmers learned about the economical benefits of using alternative energy technologies. Of the participants in this program, 90-100% said the research was of high value to their future energy needs of their farm and housing systems. Participants of the Alternative Energy program will change their management to plant and use alternative energy crops, because they realize the economic benefit as a result of this program.

State Winners:

SOYBEAN CYST NEMATODE MANAGEMENT PROGRAMMING IN SOUTHERN MINNESOTA

Miller, * R.P.¹

¹. Extension Educator, University of Minnesota Extension, Extension Regional Office, 863 30th ave. SE, Rochester, MN 55904-4915

Soybean Cyst Nematode (SCN) is a major disease of soybeans that is capable of dramatically reducing soybean yield if it is not managed appropriately. Farmers were surveyed with an Integrated Pest Management Assessment that was conducted during Private Pesticide Applicator Training meetings in southern MN. The Minnesota IPM Assessment covers all major agronomic crops in Southern MN and includes questions on general agronomics, weed management, insect management and disease management. The IPM assessment was conducted in 2003, 2004, 2005, 2006, and 2007 with a total of 3200 assessments having been completed. From the IPM assessment it was determined that only fifty percent of farmers were scouting for SCN and about thirty percent of farmers were not managing SCN at all. Based on these assessment results a series of research and outreach activities were designed and implemented in Southern Minnesota. For growers managing SCN the use of resistant varieties was the primary strategy. In 2006 and 2007 a series of SCN soybean variety trials were conducted. In 2007 the trial was expanded to include four sites with two sites infested with SCN and two sites not infested with SCN. The results from these trials were published in the Southeast Minnesota Regional

Research and Demonstration Summary and were utilized for teaching during summer field days and winter crop production meetings. The goals of these research and outreach efforts were to increase grower awareness of SCN and to provide them with a better set of tools to manage SCN.

CORN PRODUCTION PROGRAM FOR WILKES COUNTY, NC

Miller, * M.S.

Extension Agent, North Carolina State University Cooperative Extension, Wilkes County, Wilkesboro, North Carolina 28659

About 80% of Wilkes County's corn acreage is utilized as corn silage and is in continuous corn. The primary problem growers face is a lack of information on hybrids that are superior for yield and nutritive value.

On-farm tests have been successful in providing growers with a local source of information on hybrid selection, especially for silage. Insecticide seed treatments and Bt root expression have been widely adopted, resulting in reduced insecticide use and farmer exposure while increasing yields and profits.

Field days, meetings, fact sheets, and mass media coverage was used to disseminate information to county and area growers and agribusiness dealers.

Silage yield could typically be increased by 6 tons per acre by proper hybrid selection which translates into \$180/acre extra gross income.

Growers are using this localized information as a factor in corn hybrid selection which has resulted in higher yields of better quality silage and has increased profits.

Growers are kept aware of new and developing technology and assisted in interpreting if and how this technology can benefit them.

CROP PRODUCTION IN SOUTHWEST INDIANA

Neufelder*, J.R.¹, Michel, G.A.², Schmidt, O.P.³, and True, J.A.⁴

^{1,2,3,4} Extension Educator, Agriculture and Natural Resources, Purdue Extension

¹Posey County Office, 126 E. Third Street, P.O. Box

546, Mt. Vernon, IN 47620

²Warrick County Office, Courthouse, 107 W. Locust St., Suite 111, Boonville IN 47601

³Spencer County Office, Courthouse, 200 Main Street, P.O. Box 309, Rockport, IN 47635

⁴Gibson County Office, 800 S. Prince Street, Room, 35, Princeton, IN 47670

Crop Production is important to Southwestern Indiana with over a million acres of corn, soybeans and wheat grown. These three crops account for over 192,000 acres in Gibson County, 172,000 acres in Posey County, 113,000 acres in Spencer County, and 80,000 acres in Warrick County. There are also an additional 500,000 acres in surrounding counties. Farmers are always concerned about which crop varieties to select in order to maximize yields and income. Farmers and agribusinesses look to the Purdue Extension Service to provide unbiased crop variety data and current marketing and agronomic information. The Agricultural Educators in Southwestern Indiana work to provide a variety of crop data to help farmers increase their yields and profitability. A variety of educational programs to meet the needs of area farmers and agribusiness are also conducted to provide for better informed decision making. Specialists from Purdue University, University of Kentucky, University of Illinois, and a variety of companies and other sources are utilized to provide the latest information related to crop production and marketing. Field scouting and scouting surveys are conducted and diagnostic tools are utilized to assist farmers in management decisions. Farmers are kept informed of pending concerns and management alternatives through both printed and electronic newsletters, radio, and personal contacts. Plot data from the various field trials and other information is also available on the web at: www.ces.purdue.edu/warrick/ag/plots.

COTTON EDUCATION PROGRAM YIELDS RESULTS

Parker, *W¹

¹ County Extension Coordinator, University of Georgia Cooperative Extension, Jenkins County, Millen, Georgia 30442

Jenkins County currently has over 17,000 acres of cotton, therefore, the demand for timely production information and being able to tackle issues in the cotton industry is a must for the County Extension Coordinator. For the last three years, growers in Jenkins County have been plagued by low market prices, not understanding

the mechanics of the farm bill, and glyphosate resistant pigweeds. The county extension coordinator made an effort to educate farmers on different means of maximizing the full benefits of the farm bill. Using a farm service agency computer program, the county extension coordinator held several individual farm bill consultations with farmers. After two months of consultations, farmers added an additional \$100/acre to their farming operation. The County Extension Coordinator also started a marketing club. At these marketing meetings, farmers had the opportunity to hear a cotton-marketing specialist via telephone. These meetings resulted in farmers capturing a higher price for their cotton. Currently, 20% of all pigweeds in the county are resistant to glyphosate. With this number growing each year, the county extension coordinator is currently testing different herbicides to aid farmers' efforts in combating resistance. The County Extension Coordinator held several specialized educational meetings that focused on the management of glyphosate resistant pigweeds. As a result of these educational efforts, farmers have learned other cultural and mechanical ways to control pigweeds.

CROP PRODUCTION CLIENTELE BENEFIT FROM A TEAM APPROACH TO EXTENSION PROGRAMING

Tyson,* R.V.¹, White, C.T.², Welshans, J.L.³, Popenoe, J.⁴, Atwood, R.A.⁴, Asuaje, C.R.⁵

¹ Multi-county Agent, Cooperative Extension, Seminole County, Sanford, Florida 32773

² Horticulture Agent, Cooperative Extension, Orange County, Orlando, Florida 32812

³ Horticulture Agent, Cooperative Extension, Osceola County, Kissimmee, Florida 34744

⁴ Multi-county Agent, Cooperative Extension, Lake County, Tavares, Florida 32778

⁵ Agriculture Agent, Cooperative Extension, Palm Beach County, W. Palm Beach, Florida 33415

Four central Florida counties (Orange, Lake, Osceola and Seminole) have 3,594 farms on 1 million acres with annual sales of \$505 million. Many farms use restricted use pesticides to produce crops, and this requires license certification. Extension agents in these counties formed a pesticide applicator training group with the following educational objectives: 1) focus efforts on license categories with high public demand by agriculture and green industry clientele 2) increase the number and quality of educational programs offered and 3) improve the pesticide exam passing percentage of

participants. Program activities and teaching methods over the last 3 years included identifying or developing presentations, fact sheets, label exercises and calibration problems to target 4 license and 2 certification categories. Twenty three training classes were conducted across the region with 630 individuals taking exams after classes. Six recertification CEU Days were attended by 677 individuals. Two Extension agents team taught each class allowing more classes to be scheduled while reducing the time each agent spent on the program. Clients taking license exams after class were compared to clients taking exams without training by appointment. Results indicate an increased average passing percentage of 21 %. Extension agents can significantly impact the educational and economic benefits to clientele, even with limited program resources, by reaching across county lines in a regional team approach. Three random sampling mail surveys to program participants, several class surveys, and one phone survey to agribusinesses were conducted to determine perception and economic benefits of the program.

SEARCH FOR EXCELLENCE IN CROP PRODUCTION IN PHILLIPS COUNTY ARKANSAS

Goodson, * R

County Extension Agent – Agriculture, Arkansas Cooperative Extension Service, Phillips County, Helena, Arkansas 72342

Crop production education in the Mississippi River Delta is a major area of emphasis for a County Extension Agent. To insure a quality program different teaching methods needs to be used to reach as many clientele as possible. In Phillips County the education program uses production meetings, farm visits, integrated pest management meetings, mass media, result demonstrations and crop verification programs. Activities conducted during the time frame varied from farm visits to solve individual production issues to large group educational programs associated with all crops grown in the area. A major area of education was result demonstrations. Efforts were made to conduct these as efficiently as possible and provide the producers of the county with information that would be beneficial to their operation. Not only was production practices covered but economical information was included as well. The program was evaluated by the number of agriculture clientele using Extension crop information as well as the number of request for Extension speakers by area businesses.

SOUTHWEST REGION VALUE-ADDED BEEF IMPROVEMENT PROJECT IMPROVES PRODUCER PROFITS AND ANIMAL MANAGEMENT IN TRADITIONAL TOBACCO PRODUCING REGION

¹Phil Blevins, ²Scott Jessee, ³Walter Robinson, ⁴Scott Jerrell, ⁵Harold Jerrell, ⁶Brad Mullins, and ⁷Kevin Spurlin

¹Washington County Virginia ANR Agent; 234 West Valley St. Abingdon, VA 24210; pblevins@vt.edu; (276) 676-6309

²Russell County Virginia ANR Agent; P.O. Box 697, Lebanon, VA 24266-0697; djessee@vt.edu; (276) 889-8056

³Smyth County Virginia ANR Agent; 121 Bagley Circle, Suite 434, Marion, VA 24354-2874; warobins@vt.edu; (276) 783-5175

⁴Scott County Virginia ANR Agent; 131 Military Lane, Gate City, VA 24251-2874; sjerrell@vt.edu; (276) 452-2772

⁵Lee County Virginia ANR Agent; P.O. Box 10, Jonesville, VA 24315-0069; hjerrell@vt.edu; (276) 346-1522

⁶Dickinson County Virginia ANR Agent; P.O. Box 1160, Clintwood, VA 24288-1160; wmullins@vt.edu; (276) 926-4605

⁷Grayson County Virginia ANR Agent; P.O. Box 129, Independence, VA 24348-0129; spurlink@vt.edu; (276) 773-2491

Abstract

Beef cattle are the largest agricultural enterprise in Southwest Virginia. In the 10 cooperating counties, there are approximately 5,466 beef cattle farms with 279,000 cows and calves. Livestock marketing was identified as a priority issue by 7 of the 10 participating counties during the recent VCE Situation Analysis. Inadequate working facilities and the lack of BQA trainings have discouraged smaller producers from participating in value-added programs.

Value-Added Marketing [e.g. the Virginia Quality Assured (VQA) program] is essential to the long-term prosperity of the beef industry. To help producers improve livestock income, local Extension Agents in cooperation with the Abingdon Feeder Cattle Association have applied for two grants through the Virginia Tobacco Indemnification and Community Revitalization Commission. Funds allocated were used in a 50:50 cost share arrangement to assist beef producers in improving working facilities and/or genetics (bulls or VAPAH bred heifers).

As a result of this collaborative effort, \$913,500.00 in funding has been received. Producers have matched this funding with an additional \$1,093,827.00. Approximately 320 producers have or will receive cost share. VQA sales, which have resulted from this project, have improved farm income. In 2005, 551 VQA feeder calves sold for \$34,665.00 more than the traditional in-barn graded sale held the same night. This project has generated tremendous enthusiasm in beef production. Over 978 area producers have completed BQA training (almost 400 in 2006 - a 43% increase). As a result of these accomplishments, the Commission has recently awarded and additional \$300,000.00 in funding for the program.

FARM AND RANCH FINANCIAL MANAGEMENT

NATIONAL WINNER

VIRGINIA REGIONAL MARKET ANALYSIS AND ECONOMIC OUTLOOK SEMINARS UTILIZING THE INTERNET AS AN INTERACTIVE DELIVERY SYSTEM

Roberts,* MR¹

¹ Extension Agent, Virginia Cooperative Extension, Prince George County, Prince George, VA 23875

Changing commodity fundamentals, large speculative influences, and higher input costs have producers, extension educators and agricultural community influencers scrambling for ways to increase agricultural prosperity. Beginning in 2006, this project utilized the internet and other interactive communication tools to bring risk management education to participants. Remote and on-site presentations were made by agricultural economists and experts from many states. Remote presentations were fully interactive allowing participants to see, hear, and question presenters in real time. Presenters included extension educators from eleven land grant Universities, the Federal Reserve Bank of Richmond, Virginia, and various agribusiness community influencers. Evaluations via written and telephone survey, as well as personal contact show that the majority of participants are very accepting of this type of extension program delivery method. Savings in speaker travel costs over the three years of the project were \$68,405.00. Participants reported increased net profits in excess of \$1,427,616.50 over the last three years as a direct result of attending one or more seminars.

National Finalists:

SEARCH FOR EXCELLENCE IN FARM AND RANCH FINANCIAL MANAGEMENT

Marrison, D.¹, Zoller, C.², Breece, D.³; Ward, B.⁴, Bruynis, C.⁵, Woodruff, J.⁶, McCutcheon, J.⁷, Gastier, M.⁸

¹ Agriculture and Natural Resources Educator, Ohio State University Extension, Ashtabula County, 39 Wall Street, Jefferson, Ohio 44047

² Agriculture and Natural Resources Educator, Ohio State University Extension, Tuscarawas County, 419 16th Street SW, New Philadelphia, Ohio 44663

³ Extension Specialist, ANR/Economics Farm Management, Lima Extension Center at Findlay

⁴ Leader, Production Business Management, OSU Extension Department of Agricultural, Environmental and Development Economics, 2120 Fyffe Road, Columbus, Ohio 43210

⁵ Agriculture and Natural Resources Educator, Ohio State University Extension, Wyandot County, 109 S Sandusky Ave-Room 16, Upper Sandusky, Ohio 43351
1219 West Main Cross St. (SR 12) Suite 202, Findlay, Ohio 45840-0702

⁶ Agriculture and Natural Resources Educator, Ohio State University Extension, Ashland County, 804 US Route 250 East, Ashland, Ohio 44805

⁷ Agriculture and Natural Resources Educator, Ohio State University Extension, Knox County, 1025 Harcourt Road, Mt Vernon, Ohio 43050

⁸ Agriculture and Natural Resources Educator, Ohio State University Extension, Huron County, 180 Milan Avenue, Norwalk, Ohio 44857

This Search for Excellence in Farm and Ranch Financial Management application is for the efforts of eight Extension Professionals in Ohio for their work in the area of transition planning. This team designed curriculum and taught four two-day workshops to help farm families discuss and plan for the future. The workshops challenged participants to critically assess the future of their farm business giving special attention to management transfer, business structure, and retirement planning alternatives. It also provided participants with the skills needed to develop a farm transfer plan and to increase family communication. One-hundred twenty-seven individuals (105 farmers and 22 Extension Educators as train the trainer) attended the four regional workshops. The project team also conducted six additional mini-sessions reaching an

additional 170 individuals and taught at three national conferences reaching an additional 135 individuals. The project team revamped the OSU Extension publication "Transferring Your Farm Business to the Next Generation" and authored eleven fact sheets on transition planning.

FARM FINANCIAL MANAGEMENT

Crowe, Aliesha*
University of Wisconsin Extension, Agriculture Agent
Rusk County UW Extension
Ladysmith, WI 54848 U.S.A.

Rusk County statistical data and needs assessments indicated producers could benefit from Farm Financial Management education programs. Previous programs relating to financial management were well-attended with positive evaluation results. Major programs conducted in Rusk County focused on women in agriculture, cow/calf producers, and dairy producers. Program delivery methods included day-long conferences, a series class, on-farm producer meetings, and farm team formation. Sixty-eight farm women attended three Heart of the Farm-Women in Agriculture Conferences, and sixteen farm women attended the Annie's Project Series. Eight farm-based teams formed to address farm financial management related issues. Over 120 cow/calf producers and industry professionals attended spring and fall cow/calf meetings over a three year period. Farm women reported beginning computer record-keeping for their farms. Dairy producers who formed Milk Money Teams reported decrease in somatic cell counts of at least 100,000 on all farm teams. Cow/calf producers reported increased knowledge of farm financial management principles.

FARM TRANSITION AND ESTATE PLANNING PROGRAM

Hachfeld, G.A.¹, Bau, D.B.², Holcomb, R.E.³, Craig, W.J.⁴, Kurtz, J.N.⁵

¹Regional Extension Educator, Ag Business Management, Mankato, Minnesota 56001

² Regional Extension Educator, Ag Business Management, Worthington, Minnesota 56187

³ Regional Extension Educator, Ag Business Management, Lamberton, Minnesota 56152

⁴ Regional Extension Educator, Ag Business Management, Crookston, Minnesota 56716

⁵ Regional Extension Educator, Ag Business Management, Worthington, Minnesota 56187

Farm transition needs to be addressed as a majority of farm families have not named a successor nor developed an up-to-date farm business transition and estate plan. This Farm Transition and Estate Planning program effort was designed to enable these farm families to gain a better understanding of the process required and thus develop and implement a farm transition and estate plan. Participants indicated their understanding of the main educational points of the workshop improved due to attending the workshop. Twenty-two Workshops were provided to 853 participants last year. In follow up surveys 61.8 percent stated they had started to develop or update their farm business transfer plan, 67.2 percent stated they had started to develop or update their personal estate plan. In 2006-2007 post-meeting evaluations indicated: over 90% said they better understood the strategies available for use in a transfer plan; the importance of assessing the financial strength of the farm; wills, trusts, and estate planning strategies. Ninety percent said they have improved their understanding of life insurance, power-of-attorney, and health care issues. Eighty-seven percent of participants said they had improved their understanding of tax issues related to the farm transfer process. While 81% stated that as a result of attending the workshop, they would begin the transition process by developing a transfer and estate plan beginning that year. Based upon six month follow-up evaluative data, over 59% had begun developing a farm transfer plan with 12.5% completed. Fifty-seven percent had begun updating their estate plan with 7.3% completed.

LIVESTOCK PRODUCTION AWARDS

NATIONAL WINNER

OKLAHOMA MEAT GOAT BOOT CAMP

Jones, J.E.¹, Sparks, D.G.², McDaniels, J.T.³, Rice, C.K.⁴, Freking, B.M.⁵, Wallace J.D.⁶

¹ Area Agricultural Economics Specialist, Oklahoma Cooperative Extension Service, Southeast District, Ada, Oklahoma 74820

² Area Food Animal Quality and Health Specialist, Oklahoma Cooperative Extension Service, Southeast and Northeast District, Muskogee, Oklahoma 74401

³ Extension Educator, Oklahoma Cooperative Extension Service, Pontotoc County, Ada, Oklahoma, 74820

⁴ Area Agronomist, Oklahoma Cooperative Extension Service, Southeast District, Ada, Oklahoma, 74820

⁵ Extension Educator, Oklahoma Cooperative Extension Service, LeFlore County, Poteau, Oklahoma, 74953

⁶ Area Animal Scientist, Oklahoma Cooperative Extension Service, Southeast District, Ada, Oklahoma, 74820

Meat goat production has become a rapidly expanding livestock enterprise in Oklahoma and the U.S. Oklahoma now ranks fifth in total number of meat goats. With this expansion have come new educational opportunities. Many producers interested in goat production have had little or no experience in agricultural production. Even those producers with general livestock production skills have found it difficult to adapt to the differing production needs of a goat operation. Therefore, the Oklahoma Meat Goat Boot Camp was created. This camp is a three day camp that combines hands-on exercises with class room presentations and exercises. Producers attending also have the opportunity to practice any production method on a group of live goats as many times as they feel necessary. Production methods demonstrated include ear tagging, tattooing, hoof trimming, castrating, herd health practices, kidding, neonatal care, FAMACHA, fecal egg counts, forage management, ration balancing, forage testing, reproduction, pregnancy detection and business management. The response to the workshops has been outstanding, not only in Oklahoma but across the U.S. To date 111 producers from fifteen states have completed the boot camp. Evaluations have showed a favorable response to the workshop with producers wanting more education. Eighty percent of the classes have been reported as very useful with an overall predicted value to the knowledge gained from the workshop to be \$93,600.

NATIONAL FINALIST

ADAPTING TO LIMITED AVAILABLE PASTURE: OPPORTUNITIES IN THE DRYLOT

Butler, L. M.¹, Keimig, J.², Lounsbery, J.³, Melroe, T. A.⁴, Vaith, K.⁵, Daly, R.⁶, and Anderson, V. L.⁷

¹ Livestock Extension Educator, South Dakota State University Cooperative Extension, McPherson County, Leola, SD 57456

² Livestock Extension Educator, South Dakota State University Cooperative Extension, Hutchinson County, Olivet, SD 57052

³ Livestock Extension Educator, South Dakota State University Cooperative Extension, Lincoln County, Canton, SD 57013

⁴ Livestock Extension Educator, South Dakota State University Cooperative Extension, Marshall County, Britton, SD 57430

⁵ Livestock Extension Educator, South Dakota State University Cooperative Extension, Beadle County, Huron, SD 57350

⁶ Extension Veterinarian Specialist, South Dakota State University Cooperative Extension, Veterinary Science Department, Brookings, SD 57007

⁷ Animal Scientist, North Dakota State University, Carrington Research Extension Center, Carrington, ND 58421

Producers evaluating cost pressure on grazing cattle were interested in alternative available management systems. Cost pressure is the result of increased pasture rental rates, conversion of grazed lands to tillable acres, and a decreased carrying capacity due to drought. A multi-year program was developed to assist cow/calf producers and feedlot operators manage cow/calf operations in a feedlot environment during the typical grazing periods. In year 1, 79% of 146 attendees from five states currently leased pasture (75-8000 acres) with a mean rental rate of \$28.65 (± 7.06). These producers improved knowledge by 31% on bull fertility in the drylot and 28% on managing calf scours. 76% made a management alteration with 9% moving to year round drylot and 39% planting an annual forage. Long-term impacts showed 7% improved profits/cut costs by >\$5000 and 34% were between \$2500 and \$5000. In year 2, educators received hands on training at the Carrington Research Extension Center, Carrington, ND. 135 producers from five states attending seminars in five locations in the winter of 2008 dramatically (>45% change) improved knowledge in grazing versus feeding cost comparison, effects of long-term drylotting, drylot health protocols, and economic and environmental impact of year round drylotting. Through the evaluation it can be concluded producers are in competition for pasture acres and seek alternatives. Drylotting appears to be a viable option that is being implemented.

PROFITABLE LIVESTOCK PRODUCTION – UTILIZING INTEGRATED RESOURCE MANAGEMENT AND ALTERNATIVE MARKETING TO ENSURE MAXIMUM PROFITABILITY

Covington, C.A.

Area Extension Agent-Animal Science/Forages,

Mississippi State University Extension Service,
Claiborne County, P.O. Box 529, Port Gibson, MS 39150

The purpose of this educational program was to increase the individual profits of the livestock producers in Southwest Mississippi. My goal was to assist area livestock/forage producers (beef, goats, and horses) in identifying ineffective production practices, diagnosing their inefficiencies in production, and prescribing corrective measures to insure their maximum profitability through the optimum utilization of their farm resources. In order to achieve the overall goal of profitability, several smaller goals needed to be met. I utilized multiple program activities and teaching methods, recognizing that different producers learn in different ways. These educational activities included: 133 newsletters/circular letters, 128 newspaper articles, and 121 group activities that reached 15,457 producers. The producers participating in the program indicated through personal surveys the value of the information they gained from these educational activities in the form of savings and increased profits to their operations at over \$6 million. However, the increase in knowledge by these producers is a much more valuable indicator of its true success and effectiveness. This is especially true in the areas of equine and forage production.

EXCELLENCE IN LIVESTOCK PRODUCTION THROUGH EXTENSION EDUCATIONAL PROGRAMMING IN EQUINE BUSINESS MANAGEMENT

Smith,* C.E.¹, Whittle, W.H.²

1. Extension Agent, Virginia Cooperative Extension, Warren County, Front Royal, VA 22630
2. Extension Agent, Virginia Cooperative Extension, Page County, Stanley, VA 22851

The 2006 Virginia Equine Report reported a 26% increase in the number of horses (215,000) and a 41% increase in operations (41,000) in the last five years. The growth, cost, and risks associated with the industry presents an opportunity for Virginia Cooperative Extension (VCE) to meet the needs of this new clientele. To do so VCE developed a Horse Boarding Guide, held a conference on *Managing the Risks of Equine Enterprises*, and completed a 6-month follow-up evaluation to the conference to assess practice change. The objective of the program was to increase participants' practice of equine business management principles. A Horse Boarding Guide was developed from

a survey of boarding operations that described costs, amenities, and management. The conference covered topics liability law, insurance, business planning, barn safety, agricultural stewardship, farm labor, and taxation. A conference evaluation revealed that 94% of the respondents (n=51) considered the information useful to very useful. For most topics, there was over a one unit (scale = 1 to 5) increase in knowledge of the subject matter. The 6-month follow-up evaluation revealed the following practice changes resulted from the program; develop business plans (50%), protect water quality (47%), review liability issues (83%), review barn safety protocol (83%), review insurance policies (66%), develop labor records (24%), and review tax issues (72%). When asked what practices implemented have helped manage risks respondents replied signage and releases used, limited liability companies formed, and commercial liability insurance obtained. The evaluation revealed future needs; record keeping and accounting for horse operations.

Educational Objective

The objective this equine educational programming is to increase participants' knowledge and practice of equine business management principles. The educational approaches used targeted different knowledge and practice areas. The objective of the Horse Boarding Guide for the Northern Shenandoah Valley was to increase knowledge of the costs, amenities, and management offered in order to assist in price setting and market research for other local service providers. The objective of the conference on *Managing the Risks of Equine Enterprises* was to increase knowledge and foster practice changes in the following; liability law, insurance, business planning, barn safety, agricultural stewardship, farm labor, and taxation. The objective of the six-month follow-up evaluation was to assess the success of the program in fostering practice changes and to identify needs for future programming.

Program Activities

2006 Horse Boarding Guide for the Northern Shenandoah Valley

During the summer of 2006, Extension distributed a survey by mail to horse owners and equine service providers in a five-county area of Virginia's Northern Shenandoah Valley. The survey contained over 50 questions related to the types of services provides, cost of those services, and the overall management of the facility. Forty boarding operations responded and their

responses were used to develop the *2006 Horse Boarding Guide for the Northern Shenandoah Valley*.

Managing the Risks of Equine Enterprises

In September 2006, Extension conducted a one-day conference on *Managing the Risks of Equine Enterprises* with sponsorship from USDA's Risk Management Agency and Valley Farm Credit. Topics covered included liability law, insurance, business planning, barn safety, agricultural stewardship, farm labor, taxation, and results of the 2006 Horse Boarding Survey of the Northern Shenandoah Valley. The program attracted over 80 participants from Virginia and surrounding states, and over 50 additional individuals requested program proceedings.

Assessing Practice Change from Equine Business Management Programming

Extension conducted an initial and a six-month follow-up survey by mail to determine participants learning and behavior changes after attending the conference on *Managing the Risks of Equine Enterprises*. Additional areas of client interest were also identified through the evaluation to be shared with Extension faculty, volunteers, and clientele.

Teaching Methods

The conference on *Managing the Risks of Equine Enterprises* was an informational program, with many developmental tools presented in the lectures and in the proceedings. Business Planning for Equine Enterprises, Liability Law & Equine Liability Law, Minimizing Injuries to Horses and Humans, and Farm Labor Laws & Tax Issues provided tools and templates to use to plan and guide discussions both during and after the program. The Horse Boarding Guide was used primarily as a business planning and marketing tool for horse owners, and is constantly referred to as a resource. Lastly, the Evaluation is used primarily for internal Extension planning and reporting purposes.

Results

2006 Horse Boarding Guide for the Northern Shenandoah Valley

The results indicate that most facilities are operated by owner-managers who take a very active part in the day-to-day management, even when they have employees. The types of boarding facilities ranged from pasture to

stall boarding with varying degrees of turnout. A single operation often includes more than one variation of boarding. Also, the results show the availability of a wide array of amenities, including outdoor and indoor arenas, providing exercise for horses, providing a winter blanketing service and providing tack storage ranging from individual tack lockers to heated and air conditioned tack rooms. The boarding facilities that offered more amenities generally charged more for their boarding services. Detailed results are included in the supporting materials.

Managing the Risks of Equine Enterprises

A conference evaluation revealed that ninety-four percent of the attendees (n=51) considered the information useful to very useful. For most topics, there was over a one unit (scale = 1 to 5) increase in knowledge of the subject matter. The majority of participants also planned to implement management tools learned; develop business plans (84.0%), protect water quality (62.0%), review liability issues (98.2%), review barn safety protocol (94.0%), review insurance policies (86.3%), develop labor records (57.5%), and review tax issues (89.8%).

Assessing Practice Change from Equine Business Management Programming

The 6-month follow-up evaluation revealed the following practice changes had taken place; develop business plans (50%), protect water quality (47%), review liability issues (83%), review barn safety protocol (83%), review insurance policies (66%), develop labor records (24%), and review tax issues (72%). When asked what practices now implemented have best helped manage risks respondents replied appropriate signage and releases were used, limited liability companies were formed, and commercial liability insurance was obtained. The evaluation also revealed needs for future programming including a record keeping and accounting program for horse owners.

Impact Statement & Evaluation

Assessing Practice Change from Equine Business Management Programming

Relevance: With over 215,000 horses, the Virginia equine industry creates jobs and contributes over \$782 million to the state's economy annually (VA Equine Survey Report, 2006). Equine businesses must address a number of issues related to risk and business

management to thrive and grow. This effort addresses the key initiative of Agricultural and Environmental Sustainability and the planned program, Animals and Animal Products.

Response: VCE utilized an initial and 6-month follow-up evaluation method to determine participants learning and behavior changes after attending the program *Managing the Risks of Equine Enterprises*. Additional areas of client interest were also identified. Evaluation results were shared with Extension faculty, volunteers and clientele at the NACAA Annual Meeting.

Results: At the conclusion of the program, participants planned to implement the following tools; develop business plans (84%), protect water quality (62%), review liability issues (98%), review barn safety protocol (94%), review insurance policies (86%), develop labor records (58%), and review tax issues (90%). The 6-month follow-up evaluation revealed the following practice changes had taken place; develop business plans (50%), protect water quality (47%), review liability issues (83%), review barn safety protocol (83%), review insurance policies (66%), develop labor records (24%), and review tax issues (72%). When asked what practices now implemented have best helped manage risks respondents replied appropriate signage and releases were used, limited liability companies were formed, and commercial liability insurance was obtained. The evaluation also revealed needs for future programming including a record keeping and accounting program for horse owners.

SOUTHWEST REGION VALUE-ADDED BEEF IMPROVEMENT PROJECT IMPROVES PRODUCER PROFITS AND ANIMAL MANAGEMENT IN TRADITIONAL TOBACCO PRODUCING REGION

¹Phil Blevins, ²Scott Jessee, ³Walter Robinson, ⁴Scott Jerrell, ⁵Harold Jerrell, ⁶Brad Mullins, and ⁷Kevin Spurlin

¹Washington County Virginia ANR Agent; 234 West Valley St. Abingdon, VA 24210; pblevins@vt.edu; (276) 676-6309

²Russell County Virginia ANR Agent; P.O. Box 697, Lebanon, VA 24266-0697; djessee@vt.edu; (276) 889-8056

³Smyth County Virginia ANR Agent; 121 Bagley Circle, Suite 434, Marion, VA 24354-2874; warobins@vt.edu; (276) 783-5175

⁴Scott County Virginia ANR Agent; 131 Military Lane, Gate City, VA 24251-2874;

sjerrell@vt.edu; (276) 452-2772

⁵Lee County Virginia ANR Agent; P.O. Box 10, Jonesville, VA 24315-0069;

hjerrell@vt.edu; (276) 346-1522

⁶Dickinson County Virginia ANR Agent; P.O. Box 1160, Clintwood, VA 24288-1160;

wmullins@vt.edu; (276) 926-4605

⁷Grayson County Virginia ANR Agent; P.O. Box 129, Independence, VA 24348-0129;

spurlink@vt.edu; (276) 773-2491

Abstract

Beef cattle are the largest agricultural enterprise in Southwest Virginia. In the 10 cooperating counties, there are approximately 5,466 beef cattle farms with 279,000 cows and calves. Livestock marketing was identified as a priority issue by 7 of the 10 participating counties during the recent VCE Situation Analysis. Inadequate working facilities and the lack of BQA trainings have discouraged smaller producers from participating in value-added programs.

Value-Added Marketing [e.g. the Virginia Quality Assured (VQA) program] is essential to the long-term prosperity of the beef industry. To help producers improve livestock income, local Extension Agents in cooperation with the Abingdon Feeder Cattle Association have applied for two grants through the Virginia Tobacco Indemnification and Community Revitalization Commission. Funds allocated were used in a 50:50 cost share arrangement to assist beef producers in improving working facilities and/or genetics (bulls or VAPAH bred heifers).

As a result of this collaborative effort, \$913,500.00 in funding has been received. Producers have matched this funding with an additional \$1,093,827.00. Approximately 320 producers have or will receive cost share. VQA sales, which have resulted from this project, have improved farm income. In 2005, 551 VQA feeder calves sold for \$34,665.00 more than the traditional in-barn graded sale held the same night. This project has generated tremendous enthusiasm in beef production. Over 978 area producers have completed BQA training (almost 400 in 2006 - a 43% increase). As a result of these accomplishments, the Commission has recently awarded and additional \$300,000.00 in funding for the program.

REMOTE SENSING & PRECISION AGRICULTURE

AUTONOMOUS UNMANNED AERIAL VEHICLES AND CROP BIOSECURITY: NEW TOOLS FOR DISEASE PREVENTION, DISCOVERY, AND OUTREACH

David G. Schmale III, Ph.D.
Assistant Professor, Department of Plant Pathology,
Physiology, and Weed Science
Virginia Polytechnic Institute and State University,
Blacksburg, VA 24061-0390
Email: dschmale@vt.edu , Phone: (540) 231-6943,
FAX: (540) 231-7477

Abstract.

Improved technologies are needed to anticipate, prevent, prepare for, and respond to the introduction of high risk plant pathogens (HRPPs) into the United States. Many HRPPs may be transported over long distances in the atmosphere (e.g., soybean rust and tobacco blue mold), threatening agriculture in the United States from both inside and outside the borders of the country. I have developed and implemented the first-ever autonomous (self-controlling) unmanned aerial vehicle (UAV) for collecting HRPPs tens to hundreds of meters above crop fields. The UAVs are equipped with unique spore-sampling devices, cutting-edge digital imaging systems and telemetry, and a sophisticated GPS-guided autopilot. These UAVs have been used to collect numerous HRPPs and other microorganisms from the atmosphere, many of which are unculturable and may be new to science. The ability to detect, monitor, and forecast the movement of HRPPs in the atmosphere is essential for establishing effective quarantine measures, preventing the spread of plant disease, and mitigating potentially damaging events targeted at our Nation's agriculture and food supply. My work impacts commercial growers and producers of agricultural commodities, improves the retention of students and agricultural professionals in science and engineering, and forges new discoveries in biology and engineering.

EDUCATING YOUTH ABOUT GLOBAL POSITIONING SYSTEMS AND COMPASS USING TRAIN THE TRAINER METHODS

Wyatt, G.J. ¹, Gupta, A. ²

¹ Regional Extension Educator, University of Minnesota

Extension, Mankato, MN 56001

² Regional Extension Educator, University of Minnesota
Extension, Rochester, MN 55904

Global positioning systems (GPS) are becoming more user friendly and available to the public for many professional and private purposes; landowners identifying property boundaries, agronomists mapping soil samples, fertilizer applications and crop yields, foresters marking high value trees for saw logs and hunters and fisherman marking their favorite spots.

A limited number of GPS educational opportunities have been offered to youth in this area. In an effort to educate youth about GPS in southern MN, we purchased 2 GPS/Compass kits that included 10 GPS units, 10 compasses, and supporting program materials and began a train the trainer workshop program for 4-H educators and other volunteers who were interested in teaching youth about GPS/Compass. These trainings involved classroom instruction plus hands-on lessons with GPS and compass units. Twenty-two adult participants in two workshops were trained. Activities and lessons which the adults could use at youth learning workshops were reviewed with participants. In the past 2 years, over 700 youth were taught the basics and how to use handheld GPS units and compasses.

After completing the leader workshop trained leaders can check-out the kit for a minimal, \$10, rental fee and use it for educational purposes. This program has allowed 4-H and the Natural Resources and Environment (NRE) capacity areas of Extension greater opportunity to work together and meet mutual goals. This program has allowed Extension to reach new youth audiences to connect them with the use of GPS technology with agriculture, forestry and natural resources programming and careers.

Program evaluations for both the educators training workshops and youth participants, have been overwhelmingly positive. This program works nicely with Minnesota 4-H's drive to strengthen science, engineering, and technology programming.

DELAWARE COUNTY GREENSEEKER, N RICH STRIPS AND N RAMP TEST PLOTS

Jeremiah Butler

Extension Educator, Oklahoma Cooperative Extension
Service Delaware County, Jay Oklahoma.

With fuel, fertilizer and commodity prices on the rise it is becoming harder for Agricultural producers to get by.

There are producers that are losing parts of their farms that have been a part of their family for generations. Bermudagrass producers in Delaware County could be as good as any in the state. Mr. David Holcolmbe, Mr. Nevada Jefferies and Mr. Jack Caudill are the biggest bermudagrass producers in Delaware County. Caudill farms have been producing bermudagrass on over 1,150 acres for some time. After visiting with these producers I decided to use some new methods on their fields to try to maximize production and decrease the inputs. Nitrogen Rich strips and Nitrogen Ramps were applied in nine fields to gather data. By using the Nitrogen Ramps I was able to give in field nitrogen recommendations. After the first year we now have seven new producers that have seen the results and are ready to try new management practices and maximize production. I plan to continue my efforts with new test plots in the years to come and help these producers gain a better understanding of Nitrogen use efficiency.

LANDSCAPE HORTICULTURE

NATIONAL WINNER:

MASTER GARDENER WATER CONSERVATION OUTREACH PROGRAM

Sagers,* L. A.

Extension Horticulture Specialist, Utah State University Cooperative Extension, Thanksgiving Point Office, Lehi, Utah, 84043-3506

Utah is the second driest and one of the fastest growing states in the nation. Water or lack of it was a problem when the state was settled and is still a critical issue. Landscape watering uses 50% of the water during the irrigation season and conservation is critical. Long-term studies by Utah State University Extension show that most homeowners apply twice the water needed by landscape plants. Master Gardener Advisors identified the critical need for information to train others in Waterwise Gardening. Using grants from the United States Bureau of Reclamation (USBR) and Utah State University, the curriculum was developed. It teaches water users the importance of using this precious resource to full advantage. Advanced Master Gardeners in four different counties were trained using the materials as part of their curriculum. They in turn use the curriculum to teach interested groups in their own communities. The author wrote the curriculum and developed the educational materials. The course consists of 18 PowerPoint Presentations on Waterwise Landscaping, Plant Selection and related subjects; fact

sheets, workbooks and other educational materials. It includes more than 3000 of the author's photographs. They were prepared in Extension Offices using Microsoft Office Program and distributed to 125 Advanced Master Gardeners, who made presentations to more than 2000 class participants. It has also been distributed by the USBR in seven Western States.

NATIONAL FINALIST

GROWING AND ENJOYING ROSES IN MISSISSIPPI: A 5-WEEK INTERACTIVE VIDEO SHORT COURSE

Kelly, L.S.

Consumer Horticulture Specialist, Mississippi State University Extension Service, North Mississippi Research and Extension Center, PO Box 1690, Verona, MS 38879

Evaluation surveys conducted at consumer programs indicated there was an immediate need for more information on growing roses. In addition, Master Gardeners indicated a need for more educational credit hour opportunities. As budgets and positions have continued to be cut, developing client-driven programs that can be delivered economically with maximum impact and an economy of time and effort is imperative. This rose short course was an effort to meet these needs. The American Rose Society offered to support this endeavor as they saw it as an educational outreach to fulfill their stated mission.

The basic educational objective was to encourage participants to grow more roses by providing basic information on rose culture. Other objectives were to deliver requested information to the broadest audience in the most efficient and thorough manner, to provide educational and service hour credits for Master Gardeners and to support the unprecedented partnership with the American Rose Society.

This course was delivered through interactive video to 500 participants in weekly 2 hour sessions over a 5 week period. Sixty-three percent of participants were Master Gardeners. When asked to rate the value of the information presented, 65% said excellent and 34% said good. Eighty-three percent of those already growing roses stated they would purchase more as a result of the short course. Eighty percent of those not growing roses stated they would purchase roses as a result of this course. It was clear this short course had encouraged people to grow more roses.

UF/IFAS NASSAU COUNTY EXTENSION “LIVING LABORATORY” DEMONSTRATION GARDEN

Jordi, R.L.

Extension Agent, University of Florida/IFAS Nassau County Extension, Callahan, FL 32011

The objective of a “Living Laboratory” garden was to demonstrate Best Management Practices (BMP) for NE Florida landscapes adopted from the University of Florida’s “Florida Yards and Neighborhoods” (FYN) program. Additional ideas were adapted from the Green Industry’s “BMP for Protection of Water Resources in Florida.” The “Living Laboratory” was developed specifically for newcomers, residents, children and businesses to exhibit the proper care and maintenance of landscape plants. These principles included: micro-irrigation, “Right Plant/Right Place”, mulching, recycling, attracting wildlife, and Integrated Pest Management (IPM). Land for the garden was donated by the Board of County Commissioners but the preparation, planning, planting, purchasing, irrigation and management was done by Master Gardener volunteers and the Horticulture Extension Agent. Education classes on site included topics such as beneficial insects, micro-irrigation, butterfly gardening, and plant propagation. Numbers attending the classes have increased in size by threefold in the last three years. Youth and adults attending the classes indicated 73% could identify beneficial insects. In 2007 alone, media exposures reaching local residents and the surrounding area were 1,241,028. Annual “walk-by” exposure in 2007 to the garden was 245,336. In the last two years, thirty-two Master Gardener volunteers contributed over 2,500 volunteer hours valued at \$18.04 per hour would compute to over \$45,100. The Extension Demonstration Garden has been a tremendous benefit to the local community as an excellent example of plant selection and maintenance by reducing water usage and pesticide application when using IPM and BMP practices which are safer for residents and the environment.

PRACTICAL RESEARCH BY MASTER GARDENERS

Mitchell, C.C.¹, Pinkston, C. B.², Wheeler, E. J.³

¹ Extension Agronomist-Soils, Dept. Agronomy & Soils, Auburn University, AL 36849

² Regional Extension Agent, Alabama Cooperative Extension System, Cullman, AL 35055

³ Regional Urban Extension Agent, Alabama Cooperative Extension System, Guntersville, AL 35976

Master Gardener volunteers and interns ask very practical questions based upon their gardening experiences. Some can be addressed by practical, applied research. The objectives of this project were to (1) solve practical, horticultural questions through applied research, (2) introduce Master Gardener volunteers to the science of replicated research, and (3) foster a better relationship between research units of the Alabama Agricultural Experiment Station (AAES) and local home owners and gardeners. Cooperative field research was conducted on outlying units of the AAES over several years by Master Gardener volunteers under the supervision of regional extension agents, state specialists, and the local AAES superintendent. Research addressed garden tillage and soil compaction at 3 locations, excessive P for blooming plants at 2 locations, and Master Gardeners are working on a new project for 2008 involving Epsom salts for ferns. Results of these projects have been published in Extension publications and presented as posters at local and national meetings and have been submitted for publication in the new NACAA AM/PIC Proceedings. Master Gardeners have hosted field days at local research stations and have created a new respect for agricultural research that did not exist prior to their involvement at the local research stations. Enthusiasm for this type of practical research is continuing as new Master Gardeners request to be involved.

State Winners/Other:

LANDSCAPE HORTICULTURE CLIENTELE BENEFIT FROM A TEAM APPROACH TO EXTENSION PROGRAMING

Tyson, R.V.¹, White, C.T.², Welshans, J.L.³, Popenoe, J.⁴, Atwood, R.A.⁴, Asuaje, C.R.⁵

¹ Extension Agent, Florida Cooperative Extension, Seminole County, Sanford, Florida 32773

² Extension Agent, Florida Cooperative Extension, Orange County, Orlando, Florida 32812

³ Extension Agent, Florida Cooperative Extension, Osceola County, Kissimmee, Florida 34744

⁴ Extension Agent, Florida Cooperative Extension, Lake County, Tavares, Florida 32778

⁵ Extension Agent, Florida Cooperative Extension, Palm Beach County, W. Palm Beach, Florida 33415

The landscape horticulture industry in four central Florida counties (Orange, Lake, Osceola and Seminole) includes wholesale ornamental plant production valued at \$393 million in annual sales. Restricted use pesticides are used to produce and maintain landscape plants and this requires pesticide license certification. Extension agents in these counties formed a pesticide applicator training group with these objectives: 1) focus training efforts on license categories with high public demand 2) increase the number and quality of educational programs offered and 3) improve the pesticide exam passing percentage of program participants. Program activities and teaching methods over the last 3 years included identifying or developing presentations, fact sheets, calibration and label exercises to target 4 license and 2 certification categories. Twenty three training classes were conducted across the region with 630 individuals taking exams after classes. Two Extension agents team taught each class allowing more classes while reducing the time each agent spent on the program. Nearly 2,419 exams were administered in 11 license categories and 3 certifications. Clients taking license exams after class were compared to clients taking exams without training by appointment. Results indicate an increased average passing percentage of 21 %. Extension agents can significantly impact the educational and economic benefits to clientele, even with limited program resources, by reaching across county lines in a regional team approach. Three random sampling mail surveys to program participants, several class surveys, and one phone survey to agribusinesses were conducted to determine perception and economic benefits of the program.

AMERICA'S ANNIVERSARY GARDEN –ENHANCING HORTICULTURE OPPORTUNITIES THROUGH A STATWIDE GARDEN THEME

DuBois, * L.P.¹, Appleton, B.L.², Latimer, J.G.³, Close, D.D.⁴

1. Extension Agent, Virginia Cooperative Extension, James City County, Toano, Virginia 23168
2. Extension Specialist, Virginia Cooperative Extension, Hampton Roads AREC, Virginia Beach, Virginia 23455
3. Extension Specialist, Virginia Tech, Blacksburg, Virginia 24061
4. Extension Specialist, Virginia Tech, Blacksburg, Virginia 24061

America's Anniversary Garden (AAG) engaged

homeowners, gardeners, green industry professionals, garden clubs, volunteers, tourism, community and political leaders in a statewide beautification project that supported the commemoration of the 400th anniversary Jamestown Settlement. The goal was to increase the number of Virginia gardeners by developing an attractive vehicle for engagement of industry, community and private partners in supporting the commemoration. Increasing the number of gardeners and landscapes in Virginia supports the Green Industry which represents the fastest growing segment of agriculture in Virginia. Development of the AAG project drew upon the plant selection knowledge, landscape design and marketing skills of the faculty involved. A unique logo and aggressive marketing plan initiated the project with the assistance of a grant from the Jamestown 2007 Foundation. Nine Extension publications were developed to promote the project and enhance horticulture education. The project also assisted in stimulating economic opportunities in the green industry. Over 207,000 Extension publications were distributed statewide. A website with links to partnering associations experienced over 137,500 hits. Tourism, municipal leaders and volunteer organization committed to planting and promoting the AAG throughout the state. Community and resident involvement in the project was assessed by participation in a statewide contest and by local VCE agents and Master Gardener volunteers working on local level projects. The AAG successfully engaged a wide and varied audience in supporting a significant Virginia historic event through a creative horticultural outreach model.

WINTERSCHOOL ON THE ROAD: INNOVATIVE WORKSHOPS ADDRESS THE NEEDS OF GEORGIA'S LANDSCAPE WORKFORCE

Harris, * H.M.¹; Chance, W.O.²; Morgan, J.L.³; Webb, J.K.⁴; Mickler, K.D.⁵; Hurt, T.⁶

¹UGA Cooperative Extension, Worth County, Sylvester, GA 31791

²UGA Cooperative Extension, Houston County, Perry, GA 31069

³UGA Cooperative Extension, Dougherty County, Albany, GA 31701

⁴UGA Bamboo Farm and Coastal Garden, Savannah, GA 31419

⁵UGA Cooperative Extension, Floyd County, Rome, GA 30161

⁶Georgia Center for Urban Agriculture, UGA-Griffin Campus, Griffin, GA 30223

The landscape horticulture industry is the fastest growing segment of Georgia's agricultural economy, employing about 80,000 workers. To address emerging issues and educational needs of the industry, professionals from UGA and the Georgia Green Industry Association (GGIA) collaborated to plan and conduct single-day, regional trainings for the landscape industry.

Winter School on the Road trainings were located across Georgia to provide easy access to trainings. Workshops were advertised using the large GGIA mail list, and trainings and speakers were planned specific to each region. GGIA conducted registration, relieving Extension Offices of this burden and saving an estimate \$3,000 over hiring this service. Concurrent workshops and Spanish training was provided at two locations.

Total attendance was more than 500 over the four locations and attendee satisfaction was very high. Trainings address emerging trends and issues of the landscape industry. One impact of Winter School on the Road has been to provide low cost training and pesticide recertification credits for businesses. One business estimated they saved \$100 per employee in training expense.

YOUNG, BEGINNING, SMALL FARMERS AND RANCHERS

NATIONAL WINNER

BEGINNING BEEKEEPING SHORT COURSE

Drake, G.K.¹, Schreiber, C.D.²

¹Butler County Cooperative Extension Agent for Agriculture & Natural Resources, Morgantown, Kentucky 42261

²Warren County Cooperative Extension Agent for Horticulture, Bowling Green, Kentucky 42101

The Beginning Beekeeping Short Course was developed to help producers that were previously tobacco dependent develop competence in beekeeping to increase on-farm products and sales. Over the course one year, forty-nine participants from twelve states participated in this program learning about Bee Biology, Equipment, Assembling Wood Ware, Hive Management, Pests and Diseases, Hive Inspections, Extracting Honey, and Marketing Honey Products. Extension Agents compiled and developed learning modules for each participant and developed and

presented all PowerPoint presentations. A pre- and post-test indicated significant increase in knowledge across all participants. A post-course evaluation indicated an increase of knowledge, practice change across all areas that were taught, and overall program satisfaction. This was also a great opportunity to reach audiences that have previously not utilized the Cooperative Extension resources; however, 100% now indicate that they are regular users of their local Cooperative Extension Office services.

National Finalist:

NORTHEAST REGIONAL SMALL FARM & RURAL LIVING EXPOSITION & TRADE SHOW

Mickel, R.C.¹ *, Komar, S.J.² *, Joyce, L.³, Hulcoop, L. C.⁴

(Footnotes)

¹ Rutgers Cooperative Extension, PO Box 2900, Flemington, New Jersey 08822

² Rutgers Cooperative Extension, 129 Morris Pike, Newton, New Jersey 07860

³ Cornell Cooperative Extension, 1 Ashley Drive, Middletown, New York 10940

⁴ Cornell Cooperative Extension, Millbrook, New York 12545

The development and growth of small farms and related rural living issues has created a new audience for Extension at both the local and regional levels. To address this need, Cooperative Extensions in New Jersey, Pennsylvania and New York have collaborated over the last seven years in the design, delivery and development of the "Northeast Small Farm & Rural Living Exposition & Trade Show, aka. the Expo. The Expo has alternated across the three respective states being held in Pennsylvania three times and twice in New Jersey and New York respectively. The Expo was designed as a two-day educational program where science and research based information could be presented combined with applied technologies and agency programs for adults and youths. The event to date has attracted over 24,000 participants from eleven states and four countries, with assistance from over 900 volunteers and 300 businesses and support agencies. Over 500 Extension lectures and demonstrations have been presented by faculty and other professionals. The planning committee members have secured over \$165,000 in grants and sponsorships to host the annual event. The goal of the Expo is to assist both new and existing small farm growers with the knowledge development, strategies,

technologies and the tools essential for them to be successful. The multi-tract educational sessions, the hands-on demonstrations and workshops combined with net-working potentials create a dynamic learning atmosphere for participants. Exit card evaluations have indicated that the Expo has been extremely beneficial to small farm endeavors by providing sound information to make decisions based information gained at the Expo. In addition, the Expo established a 501 (3) c status in 2005 to assist with the financial development of the program. A website (www.smallfarmexpo.org) was designed and implemented in 2002 to assist in the program delivery.

State Winners:

COMPREHENSIVE FARM MANAGEMENT EDUCATION PROGRAM FOR FARMS UNDER 250,000 GROSS INCOME

Campbell, J.C.

University of Tennessee Extension
P. O. Box 415, Columbia, TN 38402-0415

In my position as Area Farm Management Specialist, I work a nine county area in the southwestern part of Middle Tennessee. Approximately 9,100 farms in the area gross less than \$250,000 in farm sales each year. Two hundred eighty-one of these had sales between \$50,000 and \$250,000. The objective of the program was to teach farm financial management and marketing principles to farm families in order them to continue to be competitive in the changing agricultural economy. Teaching methods used in the program included intensive one-on-one work with farm families, educational meetings, workshops and field days, newspaper, newsletters, demonstration results, educational piece development, and enterprise budget development. Forty-eight farm families completed intensive farm plans. On 2,900 other occasions, farm families were assisted with or provided information related to farm financial management and marketing. Seventeen producer educational meetings and 4 computer workshops were conducted. Twenty-four educational pieces and 12 farm management newsletters were prepared. A survey of farm families using intensive farm planning indicated an average of \$11,500 per farm in increased income and/or reduced expenses as a result of the intensive planning. This would amount to \$552,000 for the three year period.

AG 101 SERIES FOR SMALL ACREAGE LANDOWNERS

Green,* J.R.

Extension Agent, Texas AgriLife Extension Service,
Parker County, Weatherford, Texas 76086

Small acreage landowners wanting to start a small farming or ranching operation but with limited agricultural knowledge are rapidly increasing in number here in Parker County. With local committee guidance and a needs assessment indicating subject matter to offer, an Ag 101 for Small Acreage Landowners Series was planned, conducted, and evaluated to reach this targeted audience. Four evening meetings as the teaching method was used since most of these people work days. Topics covered were: Agricultural Tax Exemptions, Beef Cattle & Horse Management on small acreage, Ag Resources & Web Sites, Goat Management on small acreage, Wildlife concerns on small acreage, Pond Management, Plant ID of Natives, Soil Testing & Fertility, Managing Improved Pasture, Hay Production, Alternative Crops, Tree Care, Earth Kind Gardening, and Rain Water Harvesting. At the end of the last evening, a retrospective post evaluation was administered with 100% completing. This instrument used the Likert Scale of 1=Poor, 2=Fair, 3=Good, 4=Excellent to reveal knowledge before the series and knowledge afterward. Change in these scores was indicated by the mean value differences between the before and after measurements. Mean change ranged from +1.0 to +1.9 with percent change ranging from 41% to 138% increase in knowledge of the above mentioned subject matter areas. The evaluation indicated that the series was successful in increasing agricultural knowledge of the targeted audience and it also indicated that 93%(26 of 28) gained the ability to analyze land situations and make better land management decisions.

CATTLE 101 MANAGEMENT

Conrad-Acuña,* T.J.¹, Melton,* R.V.², Shooter,* M.M.³, Wood,* R.B.⁴

¹ Extension Agent, North Carolina Cooperative Extension – Richmond County, Rockingham, North Carolina 28380

² Extension Agent, North Carolina Cooperative Extension – Anson County, Wadesboro, North Carolina 28170

³ Extension Agent, North Carolina Cooperative Extension – Robeson County, Lumberton, North Carolina 28360

⁴ Extension Agent, North Carolina cooperative Extension – Hoke and Scotland Counties, Raeford, North Carolina 28376

The objective of the Cattle 101 Management Program was to inform beginning beef cattle producers about practical production techniques and business management. The target audience was inexperienced cattle producers. The program included information about the cattle industry, finances, marketing, nutrition, reproduction, and health. These topics were selected because they were expressed needs by producers and the specialized advisory committees in each county.

The Cattle 101 Management Program was held in 2008 each week on a Thursday in January and February. The program ended with a hands-on cattle tour on Saturday. The hands on tour consisted of visiting 3 farms where the producers used techniques taught in the classroom. Twenty-four people participated in the 4 county area. The program was presented by all the above agents in a series. A table of contents is included on the first page of the notebook, so that program participants may refer back to certain topics. Tiffanee Conrad-Acuña formatted the notebook, and all agents submitted publications and wrote powerpoint presentations. It was printed, copied, and compiled by Carol Capel, Richmond County Secretary.

To evaluate the program, surveys were given to participants as a pre and posttest as well as an overall evaluation. Results based on exam answers showed a 21% gain in knowledge and 80% noted that they will change their marketing plan, forage plan, mineral program, nutritional program, and their vaccination program. 64% increased their confidence level in production practices. 89% of producers indicated that they would like to take an advanced class.

SARE

NATIONAL WINNERS

INTEGRATED CROPPING SYSTEMS MANAGEMENT: EXTENSION PROGRAMS FOR SUSTAINABLE DRYLAND FARMING IN THE NORTHERN GREAT PLAINS

Angvick,* T.¹, Cash, S.D.²

¹ Extension Agent, Montana State University Extension, Sheridan County, Plentywood, Montana 59254

² Extension Specialist, Montana State University Extension, Bozeman, Montana 59717

Agriculture remains the leading industry in the sparsely-populated northern Great Plains. Traditional cropping practices have predominantly relied on alternating years of annual grain crops and summer fallow to conserve moisture for reliable production. During the past three decades, family farms in this region have faced a number of pressures, including increased input costs, drought, declining commodity values, and an aging farm population. In short, the average farm of 2500 acres did not provide a viable or economically sustainable livelihood. Extension personnel have partnered with other research and service agencies to enact significant changes in this region. Specifically in Sheridan County, MT there has been very rapid adoption of reduced-tillage techniques, increased acreage of alternative crops, and increased acreage of continuously-cropped land. The measured impacts from Extension programming in integrated cropping systems management in Sheridan County have been: reduced erosion, improved soil moisture availability, consistent levels of grain production, valuable new crop options, and pest and rotational benefits provided by the alternative crops. Recent Extension programs have included on-farm demonstrations and tours, and in-depth one-on-one consultations with producers on agronomics and marketing of new crops, whole farm management, and integrated pest control.

CREATION OF A LOCAL AND SUSTAINABLY MANAGED FOODSHED ON MARYLAND'S LOWER EASTERN SHORE

Hunsberger, L.K.¹

¹Senior Agent, Agriculture and Natural Resources and County Extension Director, Worcester County, P.O. Box 219, Snow Hill, MD 21863

The goal of this project is to increase the number of farmers on Maryland's Eastern Shore using organic, sustainable farming practices. In doing so, a secondary goal is to provide marketing outlets for this increased network of farmers to sell their products locally. Through a liaison with LESSON (Lower Eastern Shore Sustainable Organic Network) and her individual efforts,

the Educator has created a 'Network of Farmers' interested in both farming organically and/or finding new potential markets. In the course of 6 different programs, 63 growers have attended one or more of the trainings offered over the past 2 years. Topics have included Organic Vegetable Production 101, the basics of drip irrigation, organic twilight tours, one-on-one with an organic inspector, understanding the timing of succession plantings, basic crop budgeting, and which implements and equipment are necessary for different acreage operations. The success of this group is in the informal social connections developed between farmers, allowing for the more experienced ones to work along side and teach the less experienced ones. The Educator has assisted 3 growers securing EQIP funds for Transitioning to Organic Production and has generated \$13,055 in grant monies to continue expanding sustainable vegetable production on Maryland's Lower Eastern Shore.

IMPACT OF TEACHING SOIL QUALITY CONCEPTS IN A HANDS-ON WORKSHOP AND USING POST-EVENT MULTI-MEDIA TECHNOLOGY

Clevenger, W.B.¹, Sundermeier*, A.P.², Islam, K.R.³, Hoorman, J.J.⁴, Bruynis, C.L.⁵

- 1 Extension Educator, Ohio State University Extension, Defiance County, Defiance, OH 43512
- 2 Extension Educator, Ohio State University Extension, Wood County, Bowling Green, OH 43402
- 3 Soil and Water Specialist, Ohio State University, South Centers, Piketon, OH 45661
- 4 Extension Educator, Ohio State University, Center at Lima, Lima, OH 45840
- 5 Extension Educator, Ohio State University, Wyandot County, Upper Sandusky, OH 43351

Seventy-five Ohio farmers, extension educators, and crop consultants participated in one of two, daylong workshops to learn about soil quality. The objectives of the workshops were to increase knowledge of (1) soil quality fundamentals, (2) factors contributing to soil quality, (3) an instant soil quality test kit, and (4) soil quality compared to actual soil quality analytical laboratory results. Participants learned from eight teaching/demonstration modules: (1) fundamentals of soil quality, (2) gypsum and soil amendments, (3) tillage, compaction and cover crops effects, (4) soil health score card, (5) water infiltration, earthworms, penetrometer, (6) instant soil quality testing, (7) Interpreting soil quality test results, (8)

recommendations for improving soil quality. Participants documented knowledge gained in all teaching/demonstration modules of the workshop. The scale used was 1-5. Averaged across both locations and modules, participants raised their score by 1.4 scale values by participating in the workshop. The range of improvement among the teaching/demonstration modules was 0.78 to 2.11 scale value gains. Also, 74% of the participants with soil samples were not accurately evaluating their own soil. As a result of the workshop, all participants were provided the instant soil quality test kit to more accurately measure soil quality. The Ohio Farmer Magazine used the workshop on the front cover for the October 2007 issue with approximately 30,000 subscribers. The long lasting impact of the Soil Quality Workshop is the development of the compact disk. The technology ensures that others can still learn and gain knowledge similar to the workshop participants.

2008 American/World Agriculture Award Recipient *John M. Woodruff*

John grew up on a farm in northwest Florida where he was involved in 4-H. With guidance and encouragement from his county agent, John received state and national 4-H awards. This experience gave John confidence to pursue a college education. After receiving his B.S. and M.S. degrees in agronomy from Auburn University and his PhD in crop physiology from Virginia Tech in 1971, he joined the faculty of the University of Georgia in 1972 where he had state-wide extension education responsibilities for soybeans and minor oilseeds. He developed and implemented guidelines for improving crop production efficiency. His plant management guidelines have been adapted and used in several states and countries.



John's peers and associates have recognized him with the following awards:

Tifton Campus Outstanding Faculty Award, 1998
Georgia Soybean Association Research Award, 1997
Walter Barnard Hill Distinguished Public Service Fellow, 1996
American Soybean Association Life Membership Award, 1995
Progressive Farmer Man of the Year Award/Georgia, 1994
Walter Barnard Hill Service Award, 1994
UGA Agricultural Alumni Distinguished Faculty Award, 1991
D. W. Brooks Extension Education Award, 1991
American Soybean Association Education Award, 1990
South American Soybean Mission, 1989
Extension Distinguished Service Award, 1988
American Soybean Association Research Tour, U.S. and United Kingdom, 1985
Georgia Soybean Association Extension Education Award, 1978

He is married to Ina Zeigler and has three children and four grandchildren. He enjoys fishing, hunting, and gardening and is committed to the belief that we are blessed to be a blessing. As such, he works wherever to help those in need. After retirement, John Woodruff travelled to Bangladesh, China, and Africa (four times) to help subsistence farmers improve crop productivity.



2008 NACAA Distinguished Service Award Winners

SOUTHERN REGION

Alabama

Michael A. Davis
John S. Pulliam

Arkansas

Andy Vangilder
Carla Vaught

Florida

Jacque W. Breman
Gerald R Edmondson
Eugene McAvoy

Georgia

Jim F. Crawford
Ricky Ensley
Laura Perry Johnson
John H. Pope

Kentucky

Susan Fox
Greg Tompkins

Louisiana

Shaney Hill
Richard M Letlow
Boyd Padgett

Mississippi

Dr. John T. Giesemann

North Carolina

Nelson Brownlee
Jeff Carpenter
Ron Hughes
Diana Rashash
Charles M. Young

Oklahoma

Mick Jones
Gary Strickland

South Carolina

Daniel M Howard
Mark J Talbert

Tennessee

Emmanuel Bedwell
Keith Hart
Tim Roberts
Philip W. Shelby

Texas

Eddie Baggs
Rachel Williams Bauer
Mark Currie
Thomas Leroy
Rogelio Mercado
Curtis Preston

Virginia

Donald J. Davis
Cynthia L Gregg

WESTERN REGION

Arizona

Jim Sprinkle

Colorado

Tommy L. Covington

Idaho

Kenneth N. Hart

New Mexico

J. David Graham

Oregon

Troy Downing

Utah

Troy Dick Cooper,

Washington

Aaron Esser

NORTHEAST REGION

Maryland

James C. Hanson

New Jersey

Wesley Kline

New York

Dale Dewing
James Grace

Pennsylvania

Thomas Butzler
John Rowehl

West Virginia

Craig W. Yohn

NORTH CENTRAL REGION

Illinois

Jeff West

Indiana

Greg Bossaer
Mike Manning

Iowa

Patrick Derdzinski

Kansas

Richard Fechter

Michigan

Erwin 'Duke' Elsner
Stanley J Moore

Minnesota

Brad Carlson

Missouri

Roger Eakins

Nebraska

Jennifer Nixon

North Dakota

Bradley T. Brummond

Ohio

John F. Grimes
Randy Zondag

South Dakota

Gary Erickson

2008 NACAA Achievement Award Winners

SOUTHERN REGION

Alabama

Claude E. Reeves
Michael D. Reeves

Arkansas

Sherry Beaty
Susan Scott,

Florida

Alejandro (Alex) Bolques
Jennifer Welshans-Pelham

Georgia

Jeremy Kichler
Wade Parker
Michael Wheeler

Kentucky

Brandon Bell
Vicki Shadrick

Louisiana

David Bourgeois

Mississippi

Dr. John Anderson
Mike Howell

North Carolina

Amy Andrews
Silas Brown
Keith B. Walters

South Carolina

Darren C. Atkins

Tennessee

Tracey Sullivan
Jeremy West

Texas

Samuel Gavito
Chad Gulley
Jay Kingston

Virginia

Bruce G. Jones
Glenn R. Slade

WESTERN REGION

Alaska

Jeffrey Smeenk

Arizona

Randall Norton

Idaho

K. Scott Jensen

Montana

Eric Miller

New Mexico

Ursula Rosauer, New Mexico

Oregon

Amy Derby

Utah

Clark Israelsen

Washington

Steve Van Vleet

Wyoming

Steve Paisley

NORTHEAST REGION

Maryland

Laura Hunsberger,

New Hampshire

Tina Savage

New Jersey

Brian Oleksak

New York

Shawn Bossard

Pennsylvania

Linda Saussy Wiles

West Virginia

Brian Wickline

NORTH CENTRAL REGION

Illinois

Paul A Mariman

Indiana

Scott Gabbard

Kansas

Krista Harding

Michigan

Beth Clawson
Philip R. Kaatz

Minnesota

Lizabeth Stahl

Missouri

Karisha Devlin

Nebraska

Gary Lesoing

Ohio

Harold Watters

South Dakota

Heather Gessner

Wisconsin

David W. Fischer

NACAA Hall of Fame Award

The NACAA Recognition and Awards Committee is proud to present these four recipients with the NACAA Hall of Fame Award. The Hall of Fame Award recognizes one member or life member from each NACAA region. Each state can nominate one individual. Based on a 500 word summary and three letters of support, the state nominees are evaluated on their Extension programming, state and national association activities and humanitarian efforts beyond the normal call of duty.

Our thanks to John Deere for sponsorship of the NACAA Hall of Fame Awards



JOHN DEERE

2008 Southern Region Hall of Fame Award **James Smith** Virginia 35 Years - Retired

Jim Smith of Virginia retired after a distinguished 35 year career as an Agriculture Natural Resources Extension Agent in Appomattox County. He began his career in Halifax County, Virginia as a 4-H Extension Agent, where he served for 5 years. He transferred to Appomattox County in 1955 until he retired in 1985. He served in World War II and was a Prisoner of War in Germany. He was awarded several accommodations including the Bronze Star. He also was a reserve officer during the Korean conflict.



Jim was instrumental in the development of the Bull Test Center at Knoll Crest Farm in Red House, Virginia. He worked tirelessly with his clientele to improve their agriculture operations and increase their economic stability.

During his career, Smith served as President of the State Association, as well as President of NACAA. He has received the Distinguished Service Award from NACAA and was chosen for the Wall of Fame at Virginia Tech. He has been an active Life member of NACAA, serving as the co-chair of the Life Members committee for the state association.

Smith is a Mason and a member of the Lions Club. Jim's lovely wife Nell accompanies him to the State and National Meetings as well as many other functions. They have 2 sons.

To begin to describe Jim as a mentor, professional, leader, listener, hard worker, and family man – just scratches the surface of this multifaceted gentleman.

2008 Western Region Hall of Fame Award **Larry Sagers** Utah 26 Years

Larry Sagers, Extension Horticultural Specialist Utah State University from Erda, Utah is the 2008 NACAA Hall of Fame Award for the Western Region. Sagers has been with Extension for 26 years. He takes Utah State University to Utah by hosting America's longest-running garden show and the Intermountain West's highest-ranked weekend radio show for 3-5 hours each Saturday for 25 years. Sagers started Beginning and Advanced Master Gardener programs in several counties, training more than 2300 Master Gardeners and is the State Master Gardener Coordinator. He has fielded 58,000+ garden questions and taught over 5000 classes in 26 of Utah's 29 counties, 38 states and four countries.



Sagers started Utah's Green Conference, now the largest industry event, helped organize the Utah Community Forest Council and served on 20+ professional and community boards. He is the first non-PhD Agent awarded full professorship and received Utah State University's highest Extension award.

Since his first Annual Meeting and Professional Improvement Conference in 1989, Sagers has missed only three. He has served on several national committees and has run for the office of NACAA Secretary. He has held all leadership positions in the Utah Extension Agents Association and chaired several committees. He has earned 70+ NACAA awards and many more state awards. These include first-place national awards in radio, television, photography, writing and slide sets.

Sagers' life is sharing. He served as a volunteer Bishop (pastor) for a 700 person congregation for seven years by teaching, counseling, giving spiritual guidance and financial help. He served a volunteer mission at Temple Square gardens for nine years and donated more than \$25,000 in goods and services to Thanksgiving Point Gardens.

Sagers has also served as a Boy Scout and 4-H leader for 20 years. He recently made significant donations to the Utah Historical Society and regularly donates his services to Utah Public Radio, Primary Children's Hospital, United Way schools and other fundraisers.

**2008
Northeast Region
Hall of Fame Award
S. Glenn Ellenberger
Pennsylvania
31 Years - Retired**

Glenn Ellenberger, Retired Senior Agent from Lehigh County Pennsylvania, is the 2008 NACAA Hall of Fame Winner for the Northeast Region.



Ellenberger, began his Extension career in Somerset County, Pennsylvania in 1946, then spent the remainder of his 31 year career in Lehigh County. He was instrumental in introducing no-till corn planting through a Corn Tillage Field day. That event is now called "Ag Progress Days" featuring most Pennsylvania field crops.

Glenn was great at maintaining good relationships between urban and rural residents, by his effective use of mass media. He initiated the monthly "Valley Market Basket" program from WLVT, the public television station, and his popular column "Garden Tips" was published in the local Sunday newspaper for more than twenty years.

Glenn was an active and enthusiastic member of both the state and national professional associations. He participated in almost every Annual Meeting between 1951 and 1980. He was President of PACAA and received the NACAA Distinguished Service Award in 1963. He was the Northeast Regional Director in 1964-1965 and also served as NACAA Address Coordinator from 1966-1975. In 1976, Glenn was President of the Pennsylvania Chapter of Epsilon Sigma Phi.

Glenn and his wife Lee, have been "pillars" at Asbury United Methodist Church. When their building burned in the early 1970's, Glenn gave strong leadership to the rebuilding process. He served his community through a wide variety of organizations including Parkland School Board, Allentown Lions Club, Lehigh County Conference of Churches, Lehigh County Vocational-Technical School, Lehigh Valley Hospital, Allentown

Chamber of Commerce, Lehigh County Community College, the American Red Cross, and Big Brothers of Lehigh Valley.

**2008
North Central Region
Hall of Fame Award
Donald Huls
Nebraska
40 Years - Retired**

Don Huls began his Extension career in 1965 in South Dakota. After receiving his Master Degree, Huls was hired as Extension Agent in Dawes County, Nebraska in 1969. After 40 years in Extension, Don retired in 2005. His extension program included crops, livestock and youth development. His youth program included 35 Interstate 4-H Junior Leader Exchange trips, annual 3 day Horse camps, and production of an annual Junior Leader Program 4-H Special newspaper.



Huls received the NACAA DSA Award in 1982, attended 10 NACAA Annual Meetings, served as the Nebraska Section President and as President of the Nebraska Cooperative Extension Association.

Don has been very active in his community, including chairing numerous events for the Chamber of Commerce, Cancer Society and Pine Ridge Job Corps community board. Don and his wife Adele were foster parents for 7 children.

Since retirement, Don has kept busy. In July, 2006, Dawes and Sioux Counties had a 62,000 acre wildfire caused by lightning. The Dawes/Sioux fire fund, received over \$200,000, loads of hay, feed, fencing materials, and other supplies donated to those who lost pasture, hay and fence. Don was asked by the community to take the leadership role in distributing those donations to ranchers.

Don continues to work on the Chamber of Commerce Ag Committee (started by Don 24 years ago). This past year, Don co-chaired the "Welcome Home Celebration" for the 1057th Transportation Unit from Iraq, securing sponsors, and conducting a parade, program, meal, news releases, and radio spots.

In 2007, the county named a new park "Don's Pine Tree Park", in recognition of his years of community service.

2007 P.R.I.D.E. Award **National Winner**

PRIDE PROGRAM APPLICATION

Mechling, M.W.

Extension Educator, Agriculture, Natural Resources and Community Development, Ohio State University Extension, Muskingum County 225 Underwood Street, Zanesville, OH 43701

A number of different methods were utilized that improved the understanding of agriculture in Muskingum County, Ohio. Muskingum County's agriculture is diverse, with beef, dairy, field crops and the green industry representing the most important commodities in terms of cash receipts. The community is experiencing increasing residential growth. Fewer individuals have a connection with agriculture.

As a result of an OSU Extension community-wide needs assessment, improved agricultural literacy was identified as an issue that should be emphasized more. County agricultural agencies including OSU Extension identified the need to bring farm and non-farms interests together for discussion of local issues.

A number of different activities have improved the understanding of agriculture by the community. An "Ag Breakfast" is held on a monthly basis to discuss local, topical issues. OSU Extension facilitates the breakfast and is responsible for securing a topic and speaker. A Farm-City Day is held on an annual basis that provides the opportunity for county agricultural organization to demonstrate the importance of agriculture to the community. OSU Extension is responsible for organizing the event. Monthly appearances on local television and radio programs twice a week as well as a weekly column in the local newspaper have provided many opportunities to improve the community's understanding of agriculture.

Responses from Farm-City Day surveys have demonstrated how individuals have learned more agriculture. Participants in the Ag Breakfast have indicated through a survey the value of how the breakfast has improved their understanding of agriculture.

Excellence in 4-H Programming

AGRICULTURE REALITY STORE

Grimes, J. F.¹, Cropper R.J.,² Dugan, D.A.,³ Eyre, N.S.,⁴ Scott, F.S.,⁵

¹ Extension Educator, Ohio State University Extension- Highland County, Hillsboro, OH 45133

² Extension Educator, Ohio State University Extension- Brown County, Georgetown, OH 45121

³ Extension Educator, Ohio State University Extension- Brown County, Georgetown, OH 45121

⁴ Extension Educator, Ohio State University Extension- Highland County, Hillsboro, OH 45133

⁵ Farm Loan Manager, USDA Farm Service Agency- Brown County, Georgetown, OH 45121

The Agriculture Reality Store is an educational program designed to expose high school juniors to an experiential learning activity relating to agriculture. One hundred and eighty-one students from seven vocational agricultural education programs in Adams, Brown, and Highland Counties participated in four separate programs in 2005 through 2008. The primary educational objectives were to increase the participant's awareness of economic principles involved in operating a farm and to develop an appreciation for careers in agriculture. A simulation activity was conducted where students were assigned a 300 acre farm to manage and were awarded start up capital to manage their farm and show a profit. Students interacted with representatives from local businesses to help them evaluate production costs utilizing current prices for inputs such as livestock, equipment, land, and chemicals and to make decisions about what type of farming activities were to be a part of their 300 acre farm. Evaluations indicated a favorable response to the program. Results indicated that 96% of the respondents increased their knowledge of accepted business practices involved with production agriculture. Ninety-three percent of the respondents felt they increased their knowledge relating to agricultural careers and 75% of the respondents felt they would be involved in agricultural production in the future based on their experience in the Agriculture Reality Store.

National Finalists:

GREEN COUNTY 4-H HEIFER CHAIN PROGRAM

Newman, B.S.¹

¹County Extension Agent- Agriculture & Natural Resources, University of Kentucky Extension- Green County, Greensburg, KY 42743

The Green County Heifer Chain Program is dedicated to involving youth in traditional agriculture. With the aid of a \$36560 grant from the Kentucky Agriculture Development Board, 18 different youth have been provided a high quality registered heifer and have been able to participate in over 32 different classes, field days, workshops, and county fair events. Youth have been able to gain experience not only in production agriculture, but also in the challenges and responsibilities that life brings. One hundred percent of the evaluations being taken from both the participants and their parents have stated that this was a broadening experience for the youth, 67% stated that because of the heifer chain, the youth was now involved in the day to day operations of the farm, and 27% revealed that the youth were profiting by now having their own cattle.

RAISING AGRICULTURE AND NATURAL RESOURCE AWARENESS THROUGH 4-H SPONSORED EVENTS AT THE LANGLEY BELL 4-H CAMP IN ESCAMBIA COUNTY

Johnson, * L.¹, Bolles, E.R.¹, Allen, P.H.¹, Elliott, R.M.¹, Diller, A.P.¹, Stevenson, C.T.¹, Brown, K.D.¹, Lee, D.¹, Christenberry, L.T.¹, Verlinde, C.²

¹ Extension Agent, UF IFAS Extension, Escambia County, Cantonment, Florida 32533

² Extension Agent, UF IFAS Extension, Santa Rosa County, Milton, Florida 32570

Escambia County, located in the extreme Northwestern corner of Florida, has a population currently estimated at 296,709, with less than 15,000 considered to be "farm" shares. The Escambia County School District has 43,000 students enrolled in pre-K through 12th grade, and most of the students are from urban/suburban Pensacola. Over 50% of the student populations are on free or reduced lunch. Because most of our youth was not raised on a farm or in a more rural setting, there is a great lack of agricultural and natural resource awareness. In 2007, Escambia County Extension staff decided to plan two agriculture awareness events at the Langley Bell 4-H Center to address these needs. The first would be a series of agriculture and natural resource summer day camps, and the second would be a week long event, 4-H Fall Harvest Days. There were five components/workshops

offered at the day camps and 4-H Fall Harvest Days: traditional agriculture, livestock production, forestry, aquatic ecosystems, and nutrition. Lessons centered on experiential learning were developed in each area along with eight additional lessons that teachers could take back to their classroom. Students who attended 4-H Fall Harvest Days were asked to complete pre and post tests. Tests were scored by Extension personnel, and it was determined that students increased their overall knowledge by 30%. The greatest increase of knowledge was evident in the questions that concerned agriculture and livestock.

ECO-VENTURES AT THE COOPERATIVE EXTENSION EARTH CENTER

*Hlubik, W. T.¹, Bovitz, L.², Weidman R.³, Kesely A.⁴, Smela, D.⁵, Bickerton, M.⁶, Baculis, J.⁶, Ochoa-Alvarez, J.⁶

¹Agricultural Agent, ²4-H Agent, ³Program Associate, Agriculture, ⁴4-H Program Assistant, ⁵Public Information Assistant ⁶Rutgers School of Environmental and Biological Sciences Undergraduate Student Assistants, New Jersey Agricultural Experiment Station, Cooperative Extension, 42 Riva Ave., EARTH Center, North Brunswick, New Jersey 08902

Eco-Ventures at the Cooperative Extension Earth Center is a 3 day summer hands-on educational program for youth entering grades 5 through 7. This program provides a unique opportunity for youth to progress from environmental awareness to environmental action. Participants learned the following: how to start and maintain a compost pile, how to use compost in the yard and garden, how to start vermicomposting, how to identify invasive and native plants, how to recycle and re-use containers to reduce landfill trash, how to reduce contamination to ponds, lakes and streams by reducing excessive use of pesticides and fertilizers, and how to identify and determine the health of pond and forest ecosystems. The program was created by designed by Extension Staff in cooperation with Rutgers University School of Environmental and Biological Sciences students. Additional assistance was provided by the Middlesex County Department of Solid Waste Management and the Middlesex County Parks Department. Twenty youth participated in the 2007 program, the maximum allowable due to space limitations. End of program evaluations indicated 95% of participants planned to share knowledge gained, and 90% of participants were

interested in learning more about the topics covered. Pre to post survey scores increased an average of 49%. The three month follow-up survey indicated that 89% of youth changed their attitudes and behaviors toward the environment, and 89% had a positive influence on the environmental behavior of others.

COMMUNICATIONS AWARD **PROGRAM - 2008**

2008 ABSTRACTS OF THE NATIONAL WINNERS AND FINALIST COMMUNICATIONS AWARDS CONTEST

Radio Program

National Winner

BIOLOGY AND CONTROL OF TICKS ON HUMANS AND PETS

Coccaro, J.C.¹

¹ Extension County Director, Mississippi State University Extension Service, Warren County, Mississippi 39183

Ticks can be both a nuisance and a health hazard for people and pets in Warren County, Mississippi. The objective of producing a radio program on ticks was to inform the public listening audience about ticks in the environment including their biology and control on both humans and pets. The radio program produced was designed to be timely in accordance when ticks were likely to cause problems within the regional area of the radio broadcast. The program also included important details of possible interactions between people and ticks. While one cannot accurately calculate the number of listeners to that particular program, the agent did receive approximately 10-12 follow-up e-mails about the subject in the two weeks that followed the radio program. This particular program aired on July 7, 2007, both locally and throughout the world on-line. The entry was prepared in a commercial radio studio recorded professionally by station personnel.

National Finalist

EDUCATING AND ENTERTAINING LISTENERS ON YOUR DAY RADIO

Polomski, Robert F.¹

¹ Extension Associate/Consumer Horticulture Information Coordinator, Department of Horticulture, P. O. Box 340319, Clemson University, Clemson, SC 29634-0319

Your Day airs from noon to 1:00 pm, Monday through Thursday, on the South Carolina ETV Radio network, which has eight transmitters that cover the entire state and cross over into Georgia and North Carolina. This radio show is a public service program of Clemson University Radio Productions that reaches 20,000 radio listeners daily. Every program is webcast and archived on the internet (yourday.clemson.edu). On Tuesdays the topic is gardening when listeners drive the discussion by calling in from across the broadcast area to ask questions about lawns, gardens, and landscapes. The host (entrant) is often joined by a guest in the studio at The Madren Center on the Clemson University campus. In addition to answering questions, the host maintains the tempo of the program and guides the discussion. The enclosed entry is a sample of two broadcasts that aired on June 19 and October 23, 2007. The host strives to provide callers and listeners with adequate, research-based information that will help them understand the situation and make appropriate, practical, environmentally sound decisions. In addition, the synergy that develops between host and guest imparts an entertaining tone to the show. This successful format has been well-received by the public and has allowed Your Day to enjoy continued support from listeners.

LAWN AND GARDEN UPDATE - A WEEKLY RADIO PROGRAM ON KRGI RADIO, GRAND ISLAND, NEBRASKA

Hruskoci*, J.D.¹

¹ Extension Educator, University of Nebraska, College Park, Hall County, Grand Island, NE 68803, U.S.A.

This entry is one selected from one of my weekly radio programs that I do each week, year round, that is aired at 8:15 AM every Friday morning on 1430 AM-KRGI radio station, Grand Island, Nebraska. I have been recording the program since September of 2003. The weekly show is approximately 10 minutes in length, including an introduction, a 1 minute commercial in the middle, and a closing segment. I am the host of the show and I am free to do a monolog or bring in guests to interview. I can promote UNL-Extension Workshops, 4-H programs, or simply provide Extension information. For some programs, I feature a 'Questions from the Mailbag' segment and answer questions that listeners have emailed me through the Website that I mention on the show. The show is taped during the week at the

KRGI studio, then aired each Friday morning, however I act as though I am doing the show live in the radio studio. This particular program featured information about lawn weed management. This radio program aired April 13, 2007. As far as effectiveness of the program - at least weekly I receive comments from at least someone who caught that week's program and I have found that many listeners actively tune in to the broadcast each week. I get at least 1 or 2 questions per week through my email, which I make a point of answering over the air. I believe this helps to keep the listeners more involved and stay interested in listening each week. I believe a valuable benefit of the radio program is being able to promote our Extension workshops and seminars at essentially no cost. I will have at least 5 to 10 percent of workshop attendees indicate they had heard about the workshop through the Lawn and Garden Update radio program.

KSL RADIO GREENHOUSE SHOW

Sagers*, L.A.¹

¹ Extension Horticulture Specialist, Utah State University Cooperative Extension, Thanksgiving Point Office, Lehi, Utah, 84043-3506

The KSL Radio Greenhouse Show is America's longest-running gardening show. Sagers has now hosted his radio program longer than any similar program in the country. For three to four hours each Saturday morning for the past 25 years, he has answered more than 58,000 garden questions. This CD contains an introduction to one of the more than 160 hours of radio programs during the past year. It is a live, unscripted show recorded on air on March 8, 2008. The format is a live call-in show with Sagers providing answers to any and all listeners' questions. Each hour, he presents a short, seasonal topic. KSL is a 50,000 watt clear-channel station reaching and receiving calls or letters from listeners in the eleven western states, South Dakota and Canada. Through internet streaming it extends throughout the world with questions from Turkey, Germany and Brazil. He has broadcast the show on location from Italy, England, three Canadian Provinces and more than fifteen states. Subject matter depends on questions and the season. The listeners access the show via one of 10 phone lines, e-mail, or fax. Arbitron ratings rank the show as the most listened-to weekend radio program in Utah and the most popular garden program between Denver and the West Coast. It was voted Utah's most entertaining radio program by the Utah Broadcaster's Association.

Regional Finalist

ESTATE PLANNING CONFERNECE IN MITCHELL

Gessner*, H.M.¹

¹ Extension Educator, South Dakota Cooperative Extension Service, P.O. Box 130, 130 West Essex, Salem, South Dakota, 57058

A series of Estate Planning/Farm Transitions programs were held around South Dakota during January, February and March 2008. In order to advertise the program held in Mitchell, SD February 25-26 and March 25-26, 2008. This phone interview with KMIT 105.9 FM radio out of Mitchell was done via phone conversation from my office with Farm and News Director Doug Cunningham. The interview was aired on KMIT Farm News Report Monday February 11 over the noon hour. Family communication, asset transfer, long-term care insurance, life insurance, trust and estate planning basics were the main topics covered at the two sessions. 38 participants attended the first session in February. Evaluations from this first meeting indicated that there were many communication issues involved in the Estate Plan and that many of the participants were going to utilize the tools we gave them to start/increase the communication about Estate Planning with their family members. As the families attend the final session the end of March, and have more time to utilize the information from both the first and second session, I hope there will be more to report on at a later date.

FARMING IN THE 21ST CENTURY...MY FIELD IS FULL OF WATER AND WILL NOT DRAIN...WHAT IS THE SOIL AND WATER CONSERVATION DISTRICT AND WHY ARE THEY IMPORTANT!

Johnson, * J.T.¹, Isaacs, C.²

—¹ Extension Agent, AgNR, The Ohio State University Extension, Clark County, Springfield, Ohio 45502.

² Drainage Coordinator, Clark County Soil & Water Conservation District, Springfield, Ohio 45502.

Drainage can be defined as the natural or artificial removal of surface and sub-surface water from a given area (Wikipedia 2008). Knowing how to identify a drainage problem and what to do once a problem is identified can be a challenge all on its own. The Clark

Soil & Water Conservation District (SWCD) was commissioned in 1942 at the request of the citizens interested in soil and water conservation, land use planning, and flood prevention. The Clark SWCD was the second district chartered in Ohio. Today, there are nearly 3000 conservation districts—one in almost every county. Now expanded to serve all the conservation needs of our nation, districts educate and help local citizens conserve land, water, forests, wildlife and other natural resources. This 15 minute radio program spoke about what the SWCD does for Clark County citizens, the importance of the Clark County SWCD, conservation projects the district designs and employs, and the synergistic relationship between the Natural Resource Conservation Service (NRCS) and the Clark County SWCD. This segment hosted by Jonah T. Johnson, with guest Craig Isaac aired on WEEC 100.7 F.M. radio program “Farming in the 21st Century” on Saturday evening at 5:30 to 5:45 P.M. on June 9th, 2007. The program is broadcast in a 50 mile radius of Springfield, Ohio to over 50,000 listeners.

COMBINING SEASONAL GARDENING TIPS WITHIN A LIVE TALK RADIO FORMAT IN CHATTANOOGA, TENNESSEE

Nash, R.T.³, Payne, M.¹, Stebbins, * T.C.², Williams, M.A.³

¹. Master Gardener, University of Tennessee Extension, Hamilton County, Chattanooga, TN 37416

². Extension Agent, University of Tennessee Extension, Hamilton County, Chattanooga, TN 37416

³. Radio Personalities, WGOW-102.3FM Radio, Live and Local, Chattanooga, TN 37401

We combined the popularity of talk radio with extension educational outreach. This is a one hour gardening segment as part of the WGOW-102.3 FM talk radio show called Live and Local. It reaches greater Chattanooga and North Georgia areas. It airs on the last Friday afternoon of the month. The show has several objectives: 1) to help new gardeners adapt to Chattanooga area soil and plants; 2) to encourage listeners to use the best environmental practices; 3) to create awareness of Extension programs and publications. Several times during the show, listeners are directed to their County Extension office for more specific information. A few seasonal topics are preselected for conversations with the station hosts. This inspires questions from callers. The format is a live, call-in show. This show was recorded on February 22, 2008. A local Master Gardener was a guest during

this show. This program served to inform the public about the beginner/newcomer gardening class. It also emphasized proper tree planting and transplanting ideas. About ten phone calls and questions were answered during the hour. These questions illuminate the real concerns of listeners and provide direct feedback to the authors for future programming.

BEEF CATTLE WINTER FEEDING PROGRAM, HAY TESTING IS THE FIRST STEP

Cantalupo, N.M.¹

¹. Extension Agent, Montana State University, Fallon and Carter County, Baker, Montana 59313

Hay, testing is the first step to designing a winter-feeding program. Hay is your bulk package to deliver energy, protein, minerals and vitamins and can help you decide how much supplement, if any they might need. Each hay lot should be sampled separately. A lot is defined as; same field, same cut and harvested and stored under the same conditions. The best samples are obtained by using a hay probe, which can be borrowed from the extension office. Round bales should be sampled on the round end and drilled in at least eighteen inches with a minimum of 20 core samples taken at random heights in the stack. Small squares should be sampled near the center and at the ends. With either size bale, every effort should be taken to insure a representative sample has been taken from each lot. Once the analysis is back, a ration can be balanced for the level of animal productivity desired for example, post calving or replacement heifers or if you are back grounding some calves.

WANB EXTENSION REPORT—GARDENING FAQs

Young, * L.J.¹

¹. County Extension Director and Commercial Horticulture Extension Educator, Penn State Cooperative Extension, Washington County, 100 West Beau St., Washington, PA 15301

The Extension Educator works with a team of three others to contribute taped radio segments, called *The Extension Report*, for a local radio station. *The Extension Report* airs each weekday at 7:30 a.m., and the Educator typically records around thirty sessions per year. Topics range from home gardening, commercial horticulture, natural resources, farmers

markets and local foods, invasive species and other timely topics. The radio show also provides an opportunity to publicize upcoming Extension programs. The broadcast area includes Greene County, with a population of approximately 40,000, as well as parts of southern Washington County, and western Fayette County in Pennsylvania, and northern Monongalia County in West Virginia. For this group of five tapings, the Educator covered four frequently asked questions that come in to the Extension office from home gardeners. The fifth promotes several newly-established farmers markets in the area. Source materials included Penn State publications as well as the Educator's experiences. The objectives of the radio program are 1) to inform listeners about recommended gardening practices; and 2) to raise the awareness about the variety of information available through their local Cooperative Extension office.

Published Photo & Caption

National Winner

NACAA COMMUNICATIONS AWARDS PROGRAM- PUBLISHED PHOTO

Marrison,* D.¹

¹ Agriculture and Natural Resources Educator, Ohio State University Extension, Ashtabula County, 39 Wall Street, Jefferson, Ohio 44047

Four photos were used as part of the Agricultural Page in the Jefferson Gazette on Wednesday, July 11, 2007. The photos and cut-line were submitted electronically to support the educator's weekly agriculture column on the 4th of July crop update. Three of the four photos were taken by the Educator and the fourth picture was taken by his wife, Jaime Marrison. The Educator received countless comments about the pictures by community members. Many remarked how the pictures made them stop and read the educator's news column. The photos were taken on a Nikon Coolpix 3100 digital camera using a fine resolution at 2,048 * 1,536 pixels. The Educator's weekly column is used in conjunction with news releases submitted from the various Ashtabula County agricultural organizations. Additionally, the educator has been requested to submit one-two photos each week for this page. During the past year, the educator has had 52 personal columns, 22 photos, and 81 special news releases published in the Jefferson Gazette.

National Finalist

GREAT PUMPKINS

Swackhamer, E.¹

¹ Horticulture Extension Educator, Lehigh and Northampton Counties, Penn State Cooperative Extension, 4184 Dorney Park Road, Room 104, Allentown, PA 18104

Pennsylvania consistently ranks within the top five pumpkin producing states in the nation. The Lehigh Valley in eastern Pennsylvania is rapidly developing and many suburban families enjoy an annual fall visit to a farm to pick out their jack-o'-lantern pumpkins. This photograph was taken to accompany the article which was written to give guidelines to consumers for purchasing good quality pumpkins that are appropriate for using as jack-o'-lanterns. The article also promotes purchasing pumpkins at local farm markets, by offering a local market guide map, produced by the regional marketing Extension Educator. This photograph was taken in September by the author, using a digital Nikon Cool Pix 4500 camera. It was sent electronically to the newspaper, along with the file of the article. The photograph and article appeared in early October in all seven editions of the local Press newspapers which have a combined circulation of about 30,000. Several residents called the office to request the free copy of the map after the article was published.

COMMUNICATION AWARDS PROGRAM- PUBLISHED PHOTO

Billingsley*, E.D.¹

¹ County Extension Director, University Illinois Extension-Williamson County, Marion, Illinois 62959

The intent of this photo was to create awareness within the county that this insect was now present and should be looked for. The photo shows fall webworm defoliating a tree. The caption warns of their ability to destroy a small tree quickly and gives readers some alternatives to control the insects. The photo was shot with a digital camera and the caption was submitted by the director with it. This photo was published by a local, bi-weekly newspaper with 10,000 copy circulation. The photo was featured by the paper as a black and white photo with caption near the weekly Extension column. The photo was also used on the county Extension website.

**PUBLISHED PHOTOGRAPH AND CAPTION FOR
“LIGHTS, CAMERA: YOU NEED TO BE READY
WHEN THE PRESS COMES CALLING AFTER A
PRODUCE-BORNE ILLNESS OUTBREAK”**

Hlubik, * W.T.¹

¹ Agricultural and Resource Management Agent, Rutgers Cooperative Extension of Middlesex County, 42 Riva Avenue, Davidson Mill Pond Park, EARTH Center, North Brunswick, NJ 08902.

The attached photograph and caption was published in the May 2007 issues of the American Fruit Grower and the American Vegetable Grower magazines. The photograph and caption was used for the article titled “Lights, Camera: You Need to Be Ready When the Press Comes Calling after a Produce-Borne Illness Outbreak.” The photograph and caption appeared on page 30 of the May American Fruit Grower Magazine. The picture shows one of our Middlesex County fruit and vegetable growers, Jim Giamarese, being interviewed by Mary Murphy from CW11 news from New York City regarding the produce-borne E-coli illness outbreak in 2007. I was interviewed for the article and provided tips for farmers talking to media during a crisis. This article and photograph was part of a special feature series on food safety. The circulation of the American Fruit Grower is 34,000 readers and circulation for the American Vegetable Grower is 27,000 readers. Readers of these publications include farmers and agricultural industry professionals across the United States and abroad. The picture was taken with a Canon Digital Rebel EOS Camera and the caption and picture were sent to the publisher via internet.

Regional Finalist

PUBLISHED PHOTO AND CAPTION

Buxton*, S.A.¹

¹ Extension Resource Educator, Cornell Cooperative Extension, 415 Lower Main Street, Hudson Falls, New York 12839

Photos are a popular feature in the *Agricultural News*, a regional publication coordinated by staff in four counties. Photos are often included with articles to highlight additional points that seem to need to be stressed. A powerful tool for enhancing information in an article, one photo was used to show a cheesemaker

at work as well as the handcrafted nature of the product, the other provided an appetizing look at the finished cheese. The audience for this information consists of all members of the farm business community in Eastern New York since the information often varies from reinforcement of something that has been presented to new information. The photos were taken with a Kodak C330 at 4.0 megapixels, using a flash and saved as a .jpg file. Chosen to enhance the article, a Word document, the photos were transmitted via e-mail as a .jpg file to a staff professional who formats it in Dream Weaver. She then prepared a CD with the publication on it that is sent to a professional printing company where 4000 are produced. The publications are then labeled and mailed to subscribers.

ROMANESCO VERONICA F1

Rader, * H.B.¹

¹ Agriculture and Horticulture Agent for the Federally Recognized Tribal Extension Program, Alaska Cooperative Extension, Tanana Chiefs Conference, 122 1st ave., suite 600, Fairbanks, AK 99701

This photo of Romanesco Veronica (F1), a hybrid cauliflower, was submitted to Sustainable Agriculture Research & Education’s photo contest and was the recipient of the grand prize winner for the Western region. Regional Grand Prize winners have been featured on SARE’s opening page of its website for four months now and will also be recognized at the national conference. The sea green, fractal spirals contribute to the vegetable’s visual appeal and uniqueness. In the caption, I pointed out that one of the values of small, local farms is that they are attuned to local markets and preferences in contrast with large corporations which are more cognizant of the bottom dollar and can not easily cater their products to local markets. Another important consideration of locally produced food is that it is less hazardous to transport. Not only is the nutritional value increased, but often the appearance and the quality of the produce because no chemicals were sprayed for the transport.

PUBLISHED PHOTO AND CAPTION

Prunty, R.M.¹

¹ Extension Agent, Virginia Cooperative Extension-King George County, Virginia 22485

The photo was provided with a question in the "Ask the Expert" column of the *Virginia Gardener* magazine. The magazine is published 10 times a year with at least 5,000 subscribers from all across Virginia. The column answers generally six questions from gardeners and includes one to two photos. Hydrangeas are popular garden plants that gardeners often have questions about pruning. The picture was used to show the common bigleaf hydrangea (*Hydrangea macrophylla*) with a caption about pruning.

POULTRY CHAIN CHICKS

Perkins,* J.K.¹

¹ University of Arkansas, Cooperative Extension Service, Lonoke County, Lonoke, AR 72086

With the decreased interest in traditional 4-H livestock clubs, and the reduced availability of livestock to show in otherwise traditional venues, the Lonoke County 4-H sought a way to get youth involved in showing animals. The purpose of this project is to get youth involved who would otherwise not have an opportunity to work with a traditional farm animal and prepare it to show. Lonoke county 4-H conducted a poultry chain where each member receives 25 day old birds for free in return for showing a trio at the county fair. An auction is held at the fair to sell the birds and this money is used to pay for next years birds. Every participant received an award for completing the project. This photo was taken on site at a 4-her's hen house by the Lonoke County agent and was distributed to four newspaper outlets in the county, reaching a readership of approximately 50,000 individuals.

PUBLISHED PHOTO AND CAPTION

Reed, M.S.¹

¹ Powell County Extension Agent for Agriculture and Natural Resources, University of Kentucky Cooperative Extension Service, Powell County Office, 169 Maple Street, Stanton, KY 40380

Theses particular pictures were taken during this year Farm Leader's Tour of Western Kentucky and Cape Girardeau, Missouri. These pictures were taken with a Digital Camera in JPEG format by agent and were placed on agent's PC inside the Extension Office. The photo was transmitted directly to the news editor along with weekly article. This picture was published in the

"Clay City Times" newspaper on July 5, 2007 along with the agent's weekly article.

COMMUNICATION AWARDS PROGRAM – PUBLISHED PHOTO & CAPTION – ELECTRONIC LIVESTOCK IDENTIFICATION TAGS

Nemecek, C.S.¹

¹ County Extension Agent, Agriculture and Natural Resources, K-State Research and Extension, Allen County, P.O. Box 845, Iola, Kansas 66749

With increased publicity on the National Animal Identification system, and in an effort to educate rural Kansans about electronic identification of livestock, Allen County 4-H is participating in a state-wide pilot program for EID. This photo was taken of Allen County 4-H member Lauren Toney, daughter of Larry and Michelle Toney of rural Iola, Kansas. In the photo, you can see her assisting with the tagging of her 4-H steer. Hers was one of the first steers to be tagged, and the photo actually shows the tag being put into the ear backwards, as the button should be facing forward in the left ear. Forty-five steers were tagged in Allen County using the EID. I sent the inset picture of the visual tag and button so readers could more closely see the 15 digit electronic tag. Prior to weigh-in members were asked to apply for and receive a Premise Registration Number, which allows for rapid trace back of livestock in the case of a disease outbreak. During County Fair, an electronic reader and computer program will be utilized to more efficiently check-in livestock for show and sale. Allen County 4-H members enrolled in the Market Beef and Market Lamb projects will be participating in the EID pilot program in 2008. These tags will also be utilized at the Kansas State Fair, Kansas Junior Livestock Show, and many other national shows. I received training from Dave Kehler, Butler County Agriculture & Natural Resources Agent to utilize the tags and equipment. This photo was taken with a Nikon d40x digital camera and submitted electronically to "The Iola Register" which has a 3900 daily subscription.

Computer Generated Graphics

National Winner

WANTED: ASIAN LONGHORNED BEETLE

Hlubik, * W.T.¹, Polanin, N.², Marko, J.³, Smela, D.³, Hamilton, G.⁴, Vodak, M.⁵, Weidman, R.⁶, Kluchinski, D.⁷

1. Agricultural Agent Middlesex County
2. Agricultural Agent Somerset County
3. Program Assistants Middlesex County
4. Extension Specialist in Pest Management
5. Extension Specialist in Forestry
6. Program Associate Middlesex County
7. Chair, Department of Agricultural and Resource Management Agents. Rutgers, New Jersey Agricultural Experiment Station, Cooperative Extension, Martin Hall Room 326, 88 Lipman Drive, New Brunswick, NJ 08901.

The Asian Longhorned Beetle (ALB) ,*Anoplophora glabripennis*, CD-ROM is a comprehensive educational resource describing this serious exotic pest and its impact on thousands of susceptible trees in our urban, suburban and rural landscapes. This CD-ROM is intended for arborists and forester training, plant health and safety programs, and Master Gardener audiences. There were 5,000 copies produced for distribution within the USDA APHIS and Forest Service, Departments of Agriculture, Cooperative Extension, and universities across the country. Over 250 CD-ROMs have been distributed within the last year. This educational training product contains slide presentations with and without video clips. In addition to the slide presentations, there are "Read Me First" instructions for the CD-ROM, separate video clips, ALB images, ALB documents, and evaluations for instructors and students. Mr. Hlubik was the project director, producer and scriptwriter. Mr. Polanin was a technical advisor and assisted Mr. Hlubik in production components. Mr. Kluchinski reviewed the product for language and content. Mr. Weidman assisted as content editor for slide presentations. All presentations were created using PowerPoint®. Video segment and clips (MPEGs) were filmed with a Sony® digital camera and edited on an AVID® digital editing system. Documents were created in Microsoft® and Adobe Acrobat®.

National Finalist

THE PESTICIDE LABEL, READING THE FINE PRINT

Schuster *, C.F.¹

¹ Extension Educator, Maryland Cooperative Extension, 18410 Muncaster Road, Derwood, MD 20855, U.S.A.

Pesticide labels are very important to the pesticide mixer and applicator. These labels contain many useful pieces of information and are classified by the United States Department of Environmental Protection as a legal document. Each person reading the label looks for something different and often overlooks very important information. In some cases, parts of the label that are referenced are not even included with the package and must be obtained by other means. This collateral labeling often confuses the applicator or pesticide license holder. This Microsoft Power Point (ppt) program is designed for the landscape industry as part of annual commercial pesticide recertification and has been used for five workshops. These workshops have had a total attendance of 507 individuals which included thirty non-English speaking individuals. Direct translation was done for this program for non-English speaking individuals. During this program, the labels shown are distributed for use of the participants. While this program was designed initially for the commercial landscape industry, it has also been used for Structural Pest Applicators, and Interiorscape Applicators. This educator conceived of the initial idea, layout design and production of this presentation.

MEDICINE. ENERGY. FOOD

Mullett, * M.A.¹

¹ Extension Educator, The Ohio State University Extension, Coshocton County, Coshocton, Ohio 43845

This presentation was designed to educate a variety of audiences on the growing scope and importance of the agricultural industry. As the nation and state's No. 1 industry, it is important for citizens to know that in addition to providing food and fiber products for the world, agriculture is playing an increasing role in medicine and nutrition, alternative energy, food safety, and product marketing. The presentation also featured some state and national surveys that highlight food

safety concerns and willingness to purchase locally grown foods. The presentation has been given a couple of times to the Ridgewood High School FFA Classes – spoke with approximately 40 FFA students. The presentation sparked many questions and discussion. It was also presented at the Tiverton Institute – spoke at this community event to approximately 30 area farmers. The presentation and script were prepared by Marissa Mullett, Ohio State Extension educator, in Coshocton County. She was responsible for designing and writing both documents.

NATIVE PLANTS OF THE BLUE RIDGE A POWER POINT PRESENTATION

Cummings, *M.P.¹

¹ Extension Agent, UGA Cooperative Extension, Union County, Blairsville, Georgia 30512

Union County has grown 42% in the last 10 years. As a result Cooperative Extension and the Georgia Mountain Research and Education Center have cooperated to form a group of volunteers to develop educational programs relating to horticulture in our area. This group of volunteers conducts 1 program on the last Friday of each month. The author was asked to conduct a program on native plants for the Blue Ridge area. The goals of the program were: (1) to share identification characteristics, (2) show where the plants could be found, (3) share the uses of the plants, (4) discourage illegal digging of the native plants and (5) encourage interest in native plants. When the program was advertised there was so much interest in the program that another time slot for the program was added. Programs were held January 2007 and February 2008. The author researched the plant material information. The author designed the presentation. Finally, the author used his own photographs for the presentation. Approximately 370 people have viewed this presentation since January of 2007. The program generated enough interest to stimulate other native plant endeavors. First, the author was asked to write a magazine article about native plants for the North Georgia Mountains Magazine. Second, the author has been asked to conduct a program on beginning a native plant business. This program will be held in the summer of 2008.

Regional Finalist

KEYS TO SUCCESSFULLY GROWING VEGETABLES, FRUITS & BERRIES IN ALASKA

Rader, * H.B.¹

¹ Agriculture and Horticulture Agent for the Federally Recognized Tribal Extension Program, Alaska Cooperative Extension, Tanana Chiefs Conference, 122 1st Ave., suite 600, Fairbanks, AK 99701

The objective of this presentation was to inspire and impart adequate knowledge to begin or improve subsistence food via gardening. It was designed for both beginning gardeners to grow their first garden as well as seasoned gardeners to improve their current garden. This presentation was given in Fairbanks to a Master Gardener class of 27 students and in Tok to a community group of 20 people. This presentation is also used in the Online Alaska Master Gardener Course which currently has 16 students from all over Alaska including Dillingham, Mcgrath, Nenana, Delta Junction, Two Rivers, Ketchikan, Anchorage, Wasilla, Fairbanks, Dutch Harbor, Ruby, Allakaket, Shageluk, Seward, and Nulato. Powerpoint presentations provide a great way to reach out all over Alaska efficiently and economically where travel around the state can be a considerable cost. In general, the audience liked the presentation and said it was inspiring as well as informative. I hope to continue improvements of this presentation and use it for workshops in villages such as Nikolai, Takotna, Steven's Village, Birch Creek, Fort Yukon, Eagle, Nulato, Ruby, Koyukuk, Arctic Village, Minto, and Huslia.

USING NEW AND OLD EXTENSION TOOLS IN THE NEW MILLENNIUM

Steeby, * J.A.¹

¹ Extension Aquaculture Specialist, Mississippi State University Extension Service, Humphreys County, Mississippi 39038

Extension agents facing a growing problem with serving their clients and keeping their reporting systems and administrators satisfied. Frequently administrators fail to see the power of keeping travel for field visits when faced with tight budgets. Extension not only brings research findings to producers but also should highlight producer innovations where possible. Personal contact is the best means to find producer innovations. Producer innovations need to be described

in newsletters, publications and workshops where possible as these tools are more favored and recognized at annual evaluation time. This talk highlights two producer innovations and one research finding that are important to the farm-raised catfish industry. It serves as an illustration of good extension and good reporting both of which are essential to individual agents and the future of extension. This information was given to a group of 90 aquaculture extension agents at the national conference held in Cincinnati, OH, in May 2007.

COMMUNICATIONS AWARDS PROGRAM: COMPUTER GENERATED PRESENTATION

Coltrain,* David¹

¹Walnut Creek Extension District, (Rush, Ness, Lane counties), Box 70, LaCrosse, KS 67548

Adding colorful flowers to your landscape with spring flowering bulbs is relatively simple since bulbs are well adapted for this area and climate. The weather conditions in western Kansas are great for growing bulbs- they bloom in the springtime are dormant during the hot, dry summer and start growing in the late fall. Everyone with an interest in growing bulbs was invited to attend an educational program "Planting Spring Flowering Bulbs" that was held in five communities in the Walnut Creek Extension District during September and October 2007. These topics were discussed at the programs: Bulb types, Selection, Preparation, Fertilization, Planting, Maintenance, Digging & Storing, and Insects & Diseases. A colorful assortment of major bulbs, including tulips and daffodils, bloom from early spring until late in the season. The smaller, minor bulbs add a variety of colors and shapes. They provide a natural wildflower look and grow easily in mixed settings or borders. Spring bulbs should be planted in October and November so the roots become well established before they send up their flower buds. The powerpoint presentation was prepared using information from Extension publications and personal experience. The presentation included sections of film clips developed by the Ohio State Extension Web Garden located at <http://webgarden.osu.edu/>. The written script for the presentation can be found on the powerpoint file in the normal view location where notes can be added.

SLIDE SET: REDUCING RISKS ON THE HORSE FARM

Greene,* E.A.¹

¹ Extension Equine Specialist, University of Vermont, Burlington, VT 05405

This presentation was made over the Internet as a free "webinar" on February 18, 2008 through My Horse University. Fifty-four people from all over the country and Germany and Saudi Arabia participated in this interactive webinar. The purpose was to educate equine professionals and hobbyists to become more aware of the potential risks in their facilities, and to take steps to change the dangerous situation and/or the behaviors that could result in injury. The recorded presentation is available at: http://www.myhorseuniversity.com/WebPresentation/02-08_Greene.htm. The presentation with "chat-discussion" and question/answer time lasted 1:08, including introductions. One key factor to the success of this presentation was to "test" the participants throughout the presentation, giving slides of real-life barn pictures, and see if they could identify the dangerous issues. Several pictures from various university farms were used, to take away any hesitation due to "attacking" somebody's personal barn. Based upon the interaction (via text box typing below the slides) and positive feedback, the effort was very successful. Audience members contributed multiple answers whenever questions were posed. Because the webinar is one way audio (presenter speaks), I read several of their answers out loud as they typed, to help the audience that may not be used to multi-tasking (listening to me and keeping up with the text box chat). I created and presented 100% of the materials.

RETIREMENT PLANNING FINANCIALLY SPEAKING

Gessner*, H. M.¹

¹ Extension Educator, South Dakota Cooperative Extension Service, P.O. Box 130, 130 West Essex, Salem, South Dakota, 57058-0130

Estate Planning and Farm Transitions for South Dakotans is a 4-day series that provides the participants with information covering topics from communication to life insurance to developing a full blown estate plan. To date there have been 93 participants at the four locations in SD – Brookings, Elk Point, Mitchell and Aberdeen. These sessions have been designed to

discuss personality differences and how that affects the way we communicate with family members, discussions about the 'Needs/Wants/Fears/Expectations' families have about passing on the family operation, goal setting for the operation and families, discussions about the transfer of both titled and non-titled assets, family business meetings, tax implications, life and long term care insurance, trusts, retirement planning, equitable treatment of heirs, and other estate planning topics. This presentation was used to start the discussion about retirement planning and income needs after retirement. The flow of the presentation leads participants through the thought process. It begins by thinking about what expenses and incomes may increase or decrease after retirement. A supplemental handout showing FinBin (from University of Minnesota's FinPack program) family living expenses is used as a guide to discuss the expenses families incur – line item by line item. Additionally, they are led to think about surprise expenses that may occur after retirement (new car, repair the roof) and determine if there is a way to cover these costs by making the purchase now or doing the work yourself. Or maybe developing a savings account for these items to cover the expenses when they occur is the best option for their lifestyle. The presentation ends with a discussion about making their money work better for them. We had conversations about how to move money from low interest accounts to higher interest bearing accounts and other ways their money can grow faster. The goal of the presentation was to get the participants thinking about their current lifestyle and what kind of lifestyle they want after retirement. Then leave them with tools to analyze the amount of income needed to live the way they want and create an Estate Plan that accomplishes their personal goals. While there has not been enough time passed to have long-term impacts reported on this program, the initial feedback has been very promising and many families are analyzing and discussing with their children how retirement income and family harmony can be maintained during the transition. This presentation was created using Microsoft PowerPoint 2003 and then updated to 2007 when that change was made.

WINTER BEEF SERIES PRESENTATION ON ANIMAL BEHAVIOR AND DESIGNING CATTLE HANDLING FACILITIES

Edelson, *B.L.¹, Kephart, C.L.²

¹. Extension Agent, Kentucky Cooperative Extension, Shelby County, Shelbyville, Kentucky 40065

- ². 4-H Livestock Club Judging Coach/Volunteer Leader, Kentucky Cooperative Extension, Shelby County, Shelbyville, Kentucky 40065

Kentucky Extension has been given the responsibility of educating producers participating in the Phase I Master Tobacco Settlement Ag Development Cost-Share Programs. As such we are constantly looking at ways to bring new training opportunities to the table; one of these is in the education/training of producers in designing cattle handling facilities. This presentation was given with a locally developed a hands-on activity to all individuals participating in the 2006, 2007, and 2008 handling facility cost-share program. The presentation was developed by the applicant and delivered by both the applicant and local volunteer leader to 21 producers in late spring of 2007. Of those 21, nineteen have completed facility installation and have commented that the session and hands-on activity greatly aided in their on-farm design. The program was also delivered to two 4-H livestock clubs later in 2007, with 31 4-H attendees and 28 parents participating.

Program Promotional Piece

National Winner

BROCHURE FOR ALABAMA GRAZING SCHOOL

Glover*, B.S.¹

¹. Regional Extension Agent, Alabama Cooperative Extension System, Blackbelt Region, Greensboro, Alabama 36744

This brochure was designed to give producers a general overview of the aspects of the Alabama Grazing School. The best resource available to cattle producers in the Blackbelt region is grass. With the rising cost of feed supplements, it becomes increasingly difficult to squeeze a profit in a livestock enterprise. Thus many producers seek increased efficiency through management. Pastures can provide most of the nutrition for livestock and the costs associated with stored feeds typically are responsible for over half the cost of livestock production. Grazing management is the manipulation of an animal grazing in pursuit of economic gain and/or environmental conservation. The goal of the Alabama Grazing School is to increase the producer's knowledge base of grazing management. The Alabama Grazing School involved instruction and hands on exercises designed to educate participants in grazing management practices. Topics discussed

included the following grazing methods; physiology of forage growth; stocking rates; the economics of hay versus grazing; environmental impacts of grazing, forage response to grazing; nutrient cycling in pastures; fencing and watering technology; animal nutrition on pasture and minimizing hay requirements. The mailing of this brochure explaining the program to be offered resulted in two days of grazing schools with 98 participants from ten counties in the Blackbelt region.

National Finalist

SEMINOLE COUNTY FARM TOUR

Tyson,* R. V.¹

¹ Multi-county Agent, Cooperative Extension, Seminole County, Sanford, Florida 32773

Seminole county is a rapidly urbanizing Florida county. The Board of County Commissioner's Agriculture Advisory Committee recognized the need to conduct farm tours to keep citizens informed about the \$40 million economic impact of agriculture. The objective of the farm tour brochure was to: 1) keep county residents informed by inviting them on a self-guided farm tour, 2) give the times, locations and directions for the tour and 3) recognize the participating tour sponsors and farm tour businesses. The target audience were residents of Seminole County. The tour agenda was set up by the multi-county extension agent through consultations with the advisory committee and field visits with farm owners. The brochure agenda, titles and wording were forwarded to the Seminole County Graphics Division where the style was coordinated with the senior graphics specialist. Black and white brochures (4,500 copies) were printed for bulk mail distribution by the County Print Shop on Wausau 20 lb ivory paper using a Xerox DocuTech 6135 printer. Color brochures (500 copies) were produced on Hammermill 28 lb digital color copy paper using a Xerox 3535 printer. Color brochures were produced for personal mail invitations to county commissioners, advisory committees, local government representatives and for distribution at local libraries. Farm owners conducted tours on their farms. Family members at the Yarborough Ranch cooked lunch on open grills. The lunch tour stop included presentations on county agriculture and a local apiary demonstration on the importance of bees to agriculture. There were 109 citizen tour participants.

MARKETING MEAT GOATS IN NEW JERSEY

Komar,* S.J.¹, Mickel, R.C.², Chamberlain, E.A.³

¹ Extension Agent, Rutgers Cooperative Extension, Sussex County, Newton, New Jersey 07860

² Extension Agent, Rutgers Cooperative Extension, Hunterdon County, Flemington, New Jersey 08822

³ Extension Agent, Rutgers Cooperative Extension, Warren County, Belvidere, New Jersey 07823

New Jersey processes and consumes over thirty-six percent of all meat goats slaughtered domestically. However, very few goats are raised in the state. With this in mind County Agents Komar, Mickel and Chamberlain designed, developed and delivered a state wide Meat Goat Production School to assess the needs of this locally underserved livestock industry. This educational series was conducted at two different sites with two evening educational sessions per site. Topics included "Getting Started", "Production Systems", "Animal Health & Nutrition" and "Marketing Strategies for Meat Goats." The education session was advertised in both local and state newspapers and via a direct mail promotional piece that was distributed to the team's collective mailing list of over 700 potential producers. A total of 163 producers attended the two sessions held in the state. Based upon an exit survey these producers represented over 2,500 acres of agricultural land. Sixty-seven producers representing a total of 738 acres indicated a great interest in raising meat goats based upon the model that the Extension team presented. To meet this interest over 2,000 meat goats would be needed. As a result of this program, a pilot project was initiated in 2007 to investigate the potential of raising meat goats in New Jersey.

SHELBY, HENRY, FRANKLIN COUNTY COOPERATIVE EXTENSION: ANNIE'S PROJECT FOR LOCAL FARM WOMEN

Bishop, K.¹, Edelson,* B.L.², Moore, R.S.³

¹ Extension Agent, Kentucky Cooperative Extension, Franklin County, Frankfort, Kentucky 40601

² Extension Agent, Kentucky Cooperative Extension, Shelby County, Shelbyville, Kentucky 40065

³ Extension Agent, Kentucky Cooperative Extension, Henry County, New Castle, Kentucky 40050

According to the 2002 Ag Census, Shelby County had over 1500 farms on over 200,000 acres of land and 12.3% of those farms had principal operators who were women. As compared to the state, women in our area are taking on larger roles within agriculture. Thus, the Shelby, Henry, and Franklin County Extension Service set out to pilot Annie's Project, a program designed to empower farm women to be better business partners in the ever-changing, dynamic, and complex world of agriculture. The initial offering of this program included 24 attendees from Shelby, Henry, Franklin, Spencer, Jefferson, and Oldham Counties, while the current program has been scaled back to 14 attendees. The program was advertised through distribution of the over 100 brochures placed with local lending institutions, farm agribusinesses, and as a direct mail piece. At the end of the first program the evaluation showed 80% of the participants felt that the program had empowered them to take on a more active role in the farming operation. Fourteen of the 24 had identified opportunities for additional income. Twelve had gone back and made needed changes in their estate plans, and fifteen are currently developing a business plan for their farm. The project has given these women the knowledge and insight on essential elements to success and provides them with both a network of resources and a group of individuals facing similar challenges. The program will continue next year and will offer follow up classes as requested from initial participants. The program brochure was designed locally by the applicant utilizing Microsoft Publisher and produced at the local county offices. The program itself follows the original Annie's Project guidelines but has been tweaked to address the diversified agriculture within Kentucky.

Regional Finalist

UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION ROCKINGHAM COUNTY INVITES YOU TO MEET, STATE COMMISSIONER OF AGRICULTURE LORRAINE MERRILL

Haddad*, N. A.¹

¹ Extension Educator, University of New Hampshire Cooperative Extension, Rockingham County, 113 North Road, Brentwood, New Hampshire 03833

The "University of New Hampshire Cooperative Extension Rockingham County Invites you to meet, State Commissioner of Agriculture Lorraine Merrill" brochure was an invitation mailed to Rockingham

County growers, county legislators, local officials and University administrators to meet the newly appointed State Commissioner of Agriculture. This event was a great opportunity to bring together the community to meet face to face the commissioner and hear her vision about Agriculture as well as give the participants a chance to ask questions, express concerns and share their vision of agriculture in the Granite State. We limited the registration to 100 people, because of room space and budget constraint to the purchase of refreshments, all locally grown and produced. We had almost full house with a little over 80 people. The day after the event several participants contacted me praising the function and requesting that similar gathering be held on annual basis. The design and production of the flyer were done by me on Page Maker 6.5 program. They were reproduced in the office on heavy, white paper. I got the clip arts from my computer software clip art collection. In early January, the brochures were mailed to about 500 people from the Rockingham County community.

WOMEN CONFERENCE: CONFERENCE FOR TODAY'S RURAL WOMEN

Fischer,* L.E.¹

¹ Extension Director, Iowa State University Extension, Benton County, Vinton, Iowa 52349

Overall Women Conference is a conference for today's rural women. It is promoted for women directly involved or connected to agriculture. Attendance has ranged from 150 to 175 participants, with 160 participants this past year. This post card was developed to mail to all past conference participants for the past three conferences. We mailed around 400 in August, 2007 to let participants know the January 2008 date of the conference and encouraged them to mark the date on their calendars. I used our conference logo, developed with committee input and a designer. I added the conference dates on the front and on the back side put the date, location, and a few brief highlights of the upcoming program. The post cards were printed on cardstock paper and just needed a label and postage added to mail to past conference participants.

MICHIGAN SOYBEAN YIELD CONTEST PROGRAM PROMOTION PIECE

Birkey,* N.M.¹

¹. Extension Educator, Michigan State University Extension, Monroe County Extension, 963 South Raisinville Road, Monroe, MI 48161

Soybean yields in Michigan have not kept pace with the increased yields of corn and soft wheat over the past fifteen years. The objectives of the soybean yield contest are to augment the Soybean 2010 project and to focus farmer attention on agronomic and management skills for the purposes of increasing soybean yields and profitability. The soybean yield contest program promotional piece was designed to promote the contest to soybean farmers. The contest provides a fun incentive for Michigan soybean farmers to participate in the Soybean 2010 project because the winners are recognized at a winter results meeting and the contest summary data shared. The yield contest started in 2006, along with the Soybean 2010 project, a five year project. The audience is all Michigan soybean farmers. To date, 400 brochures have been mailed out to Soybean Seed Company representatives in Michigan and about 700 brochures sent to Greenstone Farm Credit Service Centers. The contest has had about 40 entries in each of the two previous years, with more farmers interested, but not submitting entries. The brochure was designed by myself, in house, at the Monroe County Extension office. The brochure was printed professionally as it is in full color.

COMMUNICATION AWARDS PROGRAM – DIRECT MAIL PROMOTIONAL PIECE – CELEBRATE SPRING: CHOOSING THE BEST PLANTS FOR YOUR GARDEN

Nemecek*, C.N.¹

¹. County Extension Agent, Agriculture and Natural Resources, K-State Research & Extension, Allen County, P.O. Box 845, Iola, Kansas, 66749

With so many choices flower and vegetable varieties to choose from, it can often be difficult to make a decision. In Allen County, we have to face heat, drought, flood and humidity, so the choices gardeners make need to be flexible. The Prairie Star collection consists of annual flowers of great vigor and spectacular bloom throughout the entire summer growing season. They are truly the star performers for the soils and climate of

the prairie. To be included in the Prairie Star list an annual flower must perform at the highest level for a minimum of two years in the university bedding plant field research trials conducted by K-State scientist, Dr. Alan Stevens, who presented at the meeting. Annual flowering plants from breeders around the world are on the list. Prairie Star annuals have the vigor to grow like crazy and bloom like crazy under lazy gardener care. Pride of Kansas plants are a Tree, Shrub, and Herbaceous Plant of the Year. This meeting also featured Ted Carey, K-State Horticulture Specialist who discussed new varieties and features in tomatoes and vegetables. In an attempt to attract a larger audience, soup and sandwiches were served and sponsored by Emprise Bank in Iola, KS. To gain exposure for this program, I created and duplicated a promotional piece using Print Shop software and a copy machine. Although the flier was created in color, cost prohibited full distribution in color. The flier was distributed to local interested gardeners, gardening clubs, and Allen County Master Gardeners. Thirty five interested gardeners attended the meeting.

POSTCARD ANNOUNCES NEW WEBSITE, WWW.WOODHEATING.COM, TO RURAL ALASKANS

Gorman,* B.¹, Jordan, J.²

¹. Extension agent and professor, University of Alaska Fairbanks Cooperative Extension, Anchorage, Alaska 99508

². Extension office coordinator, UAF Cooperative Extension, Anchorage, Alaska 99508

The Extension staff had cobbled together a website to increase distance delivery to folks scattered throughout rural Alaska. But a question lingered about how to get the word out. After a staff huddle, a fledgling graphic designer accepted the challenge. He studied the site, communed with his mouse and computer screen for a few days and came up with an incredibly inexpensive mode of communication – a postcard. Since no one knew whether stakeholders had computers or subscribed to the Internet, the card was then sent to more than 2,000 rural residences, based on a frequently updated mailing list. Since then, more than 2,000 more postcards have been handed out at workshops, forums and conventions throughout the state. The valuable information involved alternatives to the escalating cost of fuel oil. Features included an interactive map listing harvestable trees by region, tree-

harvesting safety, home and municipal heating studies, links to manufacturers and, best of all, a heat-energy calculator. This easy-to-use gadget computes heating costs based on home location, square feet, insulation, heat system, type and cost of fuel. Another section offers a tree-species table to determine the amount of heat each type yields. Cottonwood, for instance, logs in at 14,500,000 Btu's per cord, while birch tops the list at 23,600,000 Btu's per cord. Any person can click anywhere on the map and get the cost calculator for a tree species in that area. The information can also be easily accessed via dial-up, DSL or cable.

OGDEN BOTANICAL GARDENS PROMOTIONAL PAMPHLET

Goodspeed,* J. L.¹

¹ Extension Horticulture Agent, Director Ogden Botanical Gardens – Utah State University Extension, Weber County, Ogden, Utah 84404

In the spring of 2007 I compiled a promotional brochure for the Ogden Botanical Gardens in Weber County, Utah. The concept to promote the Gardens throughout Northern Utah was facilitated by distributing this brochure in a variety of locations including county and city buildings, tourist information centers, and other frequented sites. The brochure is also distributed by the Weber County Commissioners and the Tourism Council as one of the promotional items they disperse to prospective visitors, conference planners, and investors. I developed the text which my administrative assist edited, then I provided original photographs to Utah State University's Marketing team, who combined all the elements into a polished promotional tri-fold. The brochure includes a brief description of the various gardens, available resources within the Ogden Botanical Gardens, and a description and promotion of on-going programs and activities. We printed 2,500 copies then developed an insert on specific 2008 programming to be added this year. This promotional material increased the number of visitors to the Ogden Botanical Gardens during the summer of 2007. One large company that recently relocated in our county staged their inaugural welcome lunch and company party in the Gardens. We also hosted many visitors from different states who discovered the Gardens through this brochure. We noticed them carrying our tri-fold with them as they entered the Gardens.

SOUTHERN IDAHO LIVESTOCK JUDGING CAMP

Kinder, C. A.¹

¹ University of Idaho Extension, Camas & Gooding Counties, Gooding, Idaho 83330

The program promotional piece was created to publicize the first annual livestock judging camp. The 2007 camp was the first of its kind in Idaho emphasizing animal evaluation and oral reasons skills. The promotional piece was created and printed by C. A. Kinder using Microsoft Publisher on field office equipment and distributed via email to all county 4-H offices and FFA Chapters across the state. The piece was also sent to State 4-H and FFA Directors in states (6) surrounding Idaho for their distribution. Furthermore, seventy-five copies were created and shared with youth and families at various livestock shows, sales, judging contests and breed association meetings. Kinder created, printed and distributed the final piece 5 months prior to the event. The 2007 camp had 90 youth and adult participants from 5 different states.

Personal Column

National Winner

EDUCATING READERS WITH A LIGHT-HEARTED INFORMATIVE APPROACH

Polomski, Robert F.¹

¹ Extension Associate/Consumer Horticulture Information Coordinator, Department of Horticulture, P. O. Box 340319, Clemson University, Clemson, SC 29634-0319

I address a wide variety of gardening topics in my media efforts, but in these two entries—triweekly "Garden and Home" columns for the Anderson Independent-Mail newspaper (circ. of 40,000), I showcase an informative and entertaining approach to my Extension writing. In "I want my watermelon seeds, please!" (June 29, 2007), I made readers aware of the economic importance of the watermelon industry and offered cultural advice for gardeners interested in growing seedless watermelons at home. In my second entry, "Hi ho, hatchback! It's time to gather those fallen leaves," I discouraged readers from burning fallen leaves during the unseasonably dry summer and fall

seasons and taught them how to convert the leaves into a useable garden and landscape resource by composting. I received a number of favorable comments regarding both columns. Readers enjoyed the humorous angles as well as the helpful “how to” information. I wrote both columns and e-mailed the text to the Lifestyle editor at the newspaper.

National Finalist

“NOW’S THE TIME TO PRUNE JUNIPERS” “USU EXTENSION REACHES OUT TO COMMUNITY”

Sagers, * L. A.¹

¹ Extension Horticulture Specialist, Utah State University Cooperative Extension, Thanksgiving Point Office, Lehi, Utah, 84043-3506

These personal column entries are two of weekly columns published in the *Deseret Morning News*. Junipers are among the best adapted shrubs for Utah soils and growing conditions, but pruning them can be a mystery to the typical homeowner. IN “Now’s the time to prune junipers, the columnist explains the rationale behind pruning these shrubs so that homeowners can make wise decisions in keeping their junipers to an acceptable size. Utah State University Extension has adapted to changing conditions through the 100 years since it was established. In “USU Extension Reaches out to Community,” the author outlines those historical advances and shares some personal experience with the University and his career with the Extension Service. The author prepares the copy and photos submitting it to the daily newspaper electronically. 70,000 copies are distributed throughout the state and the column is included on the newspaper’s website. The objective of the weekly column is to provide current, factual information on all aspects of horticulture to readers throughout the state. It is a major way to advertise workshops and classes.

PERSONAL COLUMN- GROWING THINGS

Richmond,* D.R.¹

¹ Extension Agent, West Virginia University Extension Service-Raleigh and Summers Counties, Beckley, West Virginia 25801

As a means of educating homeowners and agricultural producers in the Southern West Virginia

area a monthly article titled Growing Things is authored during the months of March through October on various agricultural topics. These articles are researched and wrote in order to be timely with the growing season and addresses specific pests or problems as they arise. These articles cover a wide arrange of agricultural topics including horticulture, animal science, plant and soil science, forestry etc. These articles may explain “how to” produce a specific crop or provide information on different management techniques related to agriculture. These articles are written by the extension agent and then forwarded both electronically and via hard copy to the local news media for publication. Each article is written and edited in it’s entirety by the extension agent. The article is distributed to two local papers, The Register Herald in Beckley, WV is a daily paper that has a distribution rate of 32,000 per day and the Hinton Daily News in Hinton, WV is a weekly paper with a distribution rate of 4,000 per week.

NEWSPAPER COLUMNS ADDRESS LOCAL ISSUES

Snell, * R.C.¹

¹ Extension Director, Kansas State Extension, Barton County, Great Bend, Kansas 67530

I write a weekly news column that appears in several local newspapers, one website and two regional farm publications. The newspapers are the three county papers: the Great Bend Tribune, which is a daily, and the Ellinwood Leader and Hoisington Dispatch, which are both weekly. The two regional papers are the Fence Post, out of Nebraska, and the High Plains Journal, out of Dodge City, which covers most of Kansas and parts of other states. The website that posts it weekly is located at www.ellinwood.info. The two columns I am submitting focused on an outbreak of toads we had this summer which brought a lot of questions about farm safety, an ongoing part of our extension program. I teach a tractor and machinery course in the spring each year and try to address safety when the opportunity arises. Sometimes my column addresses current agricultural or horticultural issues. Other times I use it to make clientele aware of events and meetings. On other occasions I may write about personal things and themes that I want to relate to my audience to get them thinking.

Regional Finalist

PERSONAL COLUMN IN LOCK HAVEN'S *THE EXPRESS*

Butzler*, T.M.¹

¹ Extension Educator, Horticulture/Integrated Pest Management, Penn State Cooperative Extension – Clinton County Office, Mill Hall, Pennsylvania 17751

I have a column, in Lock Haven's *The Express*, under the standing line "*Keeping It Green*". Ideas for the column are mostly generated by clientele's questions received at our office throughout the year. With this column, I usually try to educate the general public on an interesting horticultural topic that the homeowner is experiencing or observing in central Pennsylvania. In most instances, the column starts off with a personal anecdote or interesting paragraph to draw their attention to the rest of the article. I always submit several photographs, that I have taken, with the written column to add a visual component to attract the reader to the column. If I don't have photographs of my own to utilize for the column then I'll search for photos that compliment my article (but always giving credit). My articles and photos are submitted via *The Express's* virtual newsroom; therefore, it was not prepared with letterhead. An Olympus C-700 was used for the Christmas tree photographs while I submitted already published pictures (of others) for the ladybug article. The articles were published on November 30, 2007 (Horticulture Get-Rich-Quick Themes-my own photos) and February 8, 2008 (Asian Ladybugs Rear Their Ugly Heads-not my photos but referenced). *The Express* has a daily circulation over 10,000. Numerous phone calls are generated because of the column and are reflected in the interest of horticulture programs offered through our office.

COMMUNICATION AWARDS PROGRAM- PERSONAL COLUMN

Billingsley*, E.D.¹

¹ County Extension Director, University Illinois Extension Williamson County, Marion, Illinois 62959

The county extension council identified the need to market the county extension office through the media. This personal column solely addresses horticulture issues of county residents and helps to promote extension awareness within the county. The column is

submitted weekly to a daily local paper with a 3500 copy distribution. The column addresses topics from inquiries of local county clients. The county director does write these articles and they are emailed to the editor by the staff. This personal column does appear in the regular Thursday edition of the Marion Daily. It is believed to be the first weekly column in the history of this county by Extension. The column has helped meet two of our objectives of increasing extension awareness and addressing the horticultural needs of our county residents. The column is also published on the local county website and receives around 14-15 % of our monthly hits. One direct result of this column is that the county director has been asked to speak at many regional garden events and clubs.

NEWSPAPER COLUMN EXTENDS INFORMATION EFFECTIVELY AND EFFICIENTLY

Smith, V.E.¹

¹ Extension Agent, Cooperative Extension Service, Hawaii County, Kealahou Hawaii, 96750

With fewer Extension agents and more residents as each year passes, this column provides an efficient way to connect with thousands of people with useful information on agricultural topics. In addition, it reaches those people who never call the Cooperative Extension Service (CES) and to those who do not access the internet. New residents are continually moving in to the western side of Hawaii Island (the district for which I am responsible) and purchasing farms or houses with yards. Most of these people have no background in farming and lack basic information on tropical horticulture. Many of the long time farmers may be hesitant to call CES for information. The bi-weekly column provides research based information to new and experienced farmers as well as to home gardeners. In addition, it promotes upcoming educational and association meetings and the Master Gardener Hotline. CES is the face of the University of Hawaii at Manoa throughout the state and the column provides an additional opportunity for outreach. I began writing the column, which has an 800 word limit, on May 6, 1994 and write on topics pertaining to tree crops and general agriculture. The column appears in the two major newspapers on the island, West Hawaii Today (circulation 17,200) published in Kailua-Kona and Hawaii Tribune Herald (circulation 21,650) published in Hilo. The column is published on Sundays in both papers. It is also in the on-line editions of both papers at www.westhawaii.com and www.hawaiitribune.com

herald.com. A footer explains that the information is provided by the University of Hawaii Cooperative Extension Service and gives the phone numbers of the CES offices on the island. Articles are written in Microsoft Word and are emailed to both newspapers the week prior to publication. The column generates many phone calls and improved attendance at workshops and meetings. I am frequently told how helpful a particular article is, and several growers have said they cut out and save all my articles.

1. OVER THE FENCE: DO YOU THINK YOUR HORSE IS OVERWEIGHT?
2. OVER THE FENCE: WHAT'S ALL THIS ABOUT SUGAR IN FEEDS?

Striegel, N.J.¹

¹ Extension Agent, Colorado State University Extension, Boulder County, Longmont, Colorado 80501

The Greeley Publishing Company's weekly periodical, *The Fence Post*, is printed and distributed regionally in a multi-state area. The approximate weekly printing is 31,300 copies for the Rocky Mountain region. Some of the articles are also carried in other smaller regional publications. The primary target for readership is the agricultural community, the agricultural industry, the agriculturally interested population, "small acreage" land-owners, to animal owners, and livestock producers. The editor asks that the articles are from 200 – 1000 words in length and are focused on animal issues, conditions, or concerns. There were no costs to me to have these articles published other than the time spent in writing them. In this state alone the equine industry ranks among the top ten agricultural money makers. Total annual equine spending is estimated at \$300 million; annual equine income from sales and related equine/agricultural activities is about \$130 million. When you add the state's livestock numbers into that, it can be seen that it is an immense industry. Educational information for large industries like livestock & horse can have a huge impact. The main objective of these articles is to provide animal agricultural information and horse education to the interested public. These articles that I submit monthly are written in a unique format. The title of the article is "Over the Fence" and each article has a sub-title for that particular topic. The reader gets to "listen in" on a conversation that I am having with another person as we lean on the top rail, peer over the fence, and ponder a question together. It is an article where a dialog takes place yet an

educational point is being made. Through these articles, livestock producers and horse owners will look at issues with a new perspective so that they can make better decisions for their animals' health.

TIMELY INFORMATION TO SUPPORT PRODUCTION OF QUALITY SUMMER & WINTER FORAGES

Senter,* John R.¹

¹ Extension Agent, Texas AgriLife Extension - Mitchell County, Colorado City, Texas 79512

In an effort to distribute timely production information to Mitchell county forage and livestock producers, this Agent compiled two timely news columns. In support of my 2007 Forage Outcome Plan, these documents were written and composed solely by me and presented timely information that addressed critical production information. Mitchell County producers typically plant 25,000 acres of winter forages and 5,000 acres of summer forages. These entries were published in the Colorado Record, a weekly newspaper reaching just over 10,000 readers per week. In response to the increasing interest in winter forage production and escalating hay costs and demand, coupled with the need to improve both the quality and quantity of winter forages planted. Winter wheat production has come under increasing popularity for both grazing and haying and producers need accurate, timely information to produce quality forage for both stocker cattle and hay production. In addition, with the increased popularity among Brown Mid Rib variety summer forages, increasing questions were surfacing, regarding the complications of prussic acid within this family of summer hybrids. Information contained in these two articles is intended to improve understanding of winter forage growers as well as offset uncertainty among summer forage producers.

CHATTANOOGA EXTENSION AGENT PROMOTES COMMUNITY ACTION AND VOLUNTEERISM THROUGH A WEEKLY PERSONAL COLUMN

Stebbins,* T.C.¹

¹ Extension Agent, University of Tennessee Extension, Hamilton County, Chattanooga, TN 37416

This personal column is called "This Week in the Garden". The column is emailed to the editor and appears each Saturday in the Chattanooga Times Free Press (circ. 70,000). A main objective of most articles is to encourage readers to take action. The column serves as no cost advertising to promote the activities of a dynamic Master Gardener group. The two Master Gardener training courses (60 students total) have been full for the last four years due in part to this column. Other newcomer and beginner gardening classes are also well attended. Phone number and email of the author are always included. Numerous calls to the office start with the comment, "I read your piece in the paper and I want more information". In summary, this column provides an economical, timely means of inspiring people to participate in extension programs. Thousands gain knowledge from the article. This column encourages several hundred people each year to go further. They follow the KASA change model. These citizens take a class, adopt better practices, gain skills and then aspire to take some personal or community action. This has led to solutions to many social, economic, and environmental issues in Chattanooga. About 1200 community service hours are given by new people the first year. Over 6000 hours are given each year by people continuing to help others.

EXAMPLES OF NEWSPAPER COLUMNS WHICH ENGAGE THE READER WHILE IMPARTING USEFUL INFORMATION

Hall, * T.L.¹

¹. Extension Educator – Agronomy, South Dakota State University Cooperative Extension, Central 2 FEU, Sully County, Onida, South Dakota 57564

Newspapers as media for the distribution of Extension science-based research data and tested performance results, has long been accepted by the public. The Educator has written columns on a weekly basis for seven newspapers: the Aberdeen *Farm Forum*, the Onida *Watchman*, the *Potter County News*, the *Hoven Review*, the *Faulk County Record*, the *Highmore Herald*, and the *Pierre Capital Journal*. The combined readership of the seven publications would be conservatively 40,000 people. To gain the attention of this many people, the Educator has striven to not only provide a column on a regular basis but also to engage the reader by writing an interesting story or anecdote to precede the information that is available from Extension. The Educator also tries to engage readers of all ages and both sexes. The Educator writes the

column and then sends it by email to the person or persons mentioned in the column for their approval. The column, once approved, is sent to the editors of the seven newspapers by email before the deadline imposed by each. Readers have often told the Educator either by word of mouth or by email how much they enjoy reading the published columns not only for the interesting stories but also for the knowledge they have gained from the information that it includes.

"THERE'S A NEW BUG IN TOWN – DON'T INVITE IT INTO YOUR HOME" AND "GETTING AN EARLY START: TIPS FOR EARLY TOMATOES"

Hlubik, * W.T.¹

¹. Agricultural and Resource Management Agent, Rutgers Cooperative Extension of Middlesex County, 42 Riva Avenue, Davidson Mill Pond Park, EARTH Center, North Brunswick, NJ 08902.

The HomeNews Tribune and Courier News receive feature garden articles from Rutgers Cooperative Extension of Middlesex County that appear in every Thursday edition. The newspaper editors were hungry for quality gardening articles to peak interest among its readership in central New Jersey which includes Middlesex County. Topics are timely and reflect each season of the year. The type of article may also depend on the number of responses received on a certain topic from residents. The article "There's a New Bug in Town – Don't Invite It into Your Home" discusses an invasive pest, the brown marmorated stink bug, that has been found in the mid-Atlantic region including New Jersey. A few dozen reports were received late fall as the insect sought the shelter of people's homes. The article "Getting an Early Start: Tips for Early Tomatoes" reviews various ways to have early tomatoes including the selection of early-season varieties, use of plastics and covering plants with row covers. Many gardeners want to have an early jump on the season and fresh tomatoes on the table. The articles are written in Microsoft Word® and sent by email with pictures to the editors a few days prior to print. The combined readership of Courier News and HomeNews Tribune is over 100,000.

Feature Story

National Winner

LINESIDES ON THE ROCKS

Covington, C¹

¹ Area Livestock/Forage Agent, Mississippi State University-Claiborne County, Port Gibson, Mississippi 39150

This feature story was published in the April 2007 issue (pages 28, 29, 30, 60 and 61) of Mississippi Game & Fish magazine.

This feature story was intended to introduce sportsmen, both old and young alike, to stripe fishing on the rock dikes along the Mississippi River. It was my intentions to reveal the excitement involved and introduce the sport to those who have never tried it. I explained to the reader what is involved in stripe fishing on the Big River. I included a few photographs to provide a visual description of the content of the story. I received several telephone calls from sportsmen across the state requesting additional information about this exciting sport.

The article and photographs were produced professionally by the Mississippi Game & Fish staff.

National Finalist

BORN TO BE WILD: ORCHIDS THRIVE IN PENN'S WOODLANDS

Swackhamer, E¹

¹ Horticulture Extension Educator, Lehigh and Northampton Counties, Penn State Cooperative Extension, 4184 Dorney Park Road, Room 104, Allentown, PA 18104

The Press newspapers invites the Educator to submit three or four feature gardening stories each year which appear in seven versions of their local papers. The combined circulation of all seven editions is about 30,000. The Lehigh Valley in Pennsylvania includes the most rapidly developing townships in the Commonwealth, and much open space has been lost in recent years. This feature story was written to educate residents about native orchids. Four of the

most common and recognizable native orchids were highlighted in the article, with a verbal description of the plant and the habitat it prefers. A special effort was made to inform the readers about the importance of preserving the wild plants in their natural habitat. The article also promotes awareness of the Master Gardener program, emphasizing their availability to answer gardening questions. The guided wildflower tour that was advertised was led by a Master Gardener; eighteen people attended his tour.

A CHEESEMAKING RENNAISSANCE

Buxton*, S.A¹

¹ Extension Resource Educator, Cornell Cooperative Extension, 415 Lower Main Street, Hudson Falls, New York 12839

The combination of the agriculture industry and consumer opportunities in Washington County have created a unique situation. A growth in cheese maker numbers encouraged them to band together with Cornell Cooperative Extension to organize a free event "The Cheese Tour". As part of the pre-event publicity, each farm was interviewed and several articles were written and published as part of a series to promote the event and attract tour goers of both want-to-be cheese makers and interested consumers. Developed as one of these articles, "A Cheesemaking Renaissance" provided insight into each of the businesses participating in the tour.

The *Small Farm Quarterly* is a statewide publication coordinated by Cornell University's Small Farms Program. Published by Lee Publications, Inc. and distributed by insertion into *Country Folks*, the focus of the publication is to provide information and ideas for improving farmer's sustainability and profitability.

Created as a Word document with .jpg photos, the article is transmitted via e-mail to a staff professional who formats it. The publication is then transmitted Lee Publications, Inc. where more than 27,000 are produced. The publications are then inserted and mailed to subscribers who are producers, employees and agri-service personnel across New England, New York and northern Pennsylvania.

WHY EVERY U.S. CITIZEN SHOULD SUPPORT THE FARM BILL

Semler*, Timothy A.¹

¹ Extension Agent – Farm Business Management, NDSU Extension Service – Bottineau County, 314 West 5th Street, Suite #3, Bottineau, N.D. 58318

The general public has little to no understanding of the need for a U.S. Farm Bill. Yet every five to seven years when a new U.S. Farm Bill is being introduced, debated and voted upon by the U.S. Congress, there seems to be much negative debate in the national press on the subject. Individuals, organized groups and other entities seem to be committed to ending any federal support of U.S. Agriculture. The frequency and intensity of this negative press has been increasing over the past two Farm Bills. This Feature Story was written to educate the general public about the core issues surrounding the need for a U.S. Farm Bill, not only for agricultural producers, but also to demonstrate how a sound Farm Bill will benefit any citizen not directly engaged in agriculture. These issues include, but are not limited only to: 1) a safe and stable food supply, 2) an affordable food supply, 3) assistance to low income citizens, 4) keeping family farmers on the land for good stewardship and conservation and 5) stabilizing farm income in economic hard times so there is a food supply for the U.S. in future years.

This Feature Story was submitted in mid-August 2007, during the August recess for the U.S. Senate and U.S. House of Representatives. At that point in time, the U.S. House version of the new Farm Bill had been passed and after the recess, the U.S. Senate would introduce and complete their version. During these recesses, Senators and Representatives usually return to their states and often have town hall type meeting to discuss issues. This Feature Story was submitted and ran in our county paper, the Courant, with a circulation of 3,000, a regional newspaper, The Minot Daily News, with a circulation of 21,000, two statewide agricultural news publications, the Agweek, with a circulation of 27,000 and the Farm and Ranch Guide, with a circulation of 37,630. In addition, this Feature Story was e-mailed to all agricultural extension agents in North Dakota, with permission to run the article in their local news or newsletters as they saw fit.

Regional Finalist

IMPROPER LAWN CARE WORSE THAN DOING NOTHING

Jarek, * K.J.¹

¹ Outagamie County Crops, Soils, & Horticulture Agent, University of Wisconsin-Extension, 3365 W. Brewster Street, Appleton, WI 54914

Americans love their lawns and are willing to spend large amounts of money each spring on commercial fertilizers, weed control measures, and numerous other products or services designed to help them achieve their desired results. Unfortunately, the average homeowner can spend all the money they wish and still end up with problems in their lawn if they care for it improperly. The objective and purpose of this article was to raise awareness of how maintenance practices, like cutting heights of less than three inches, are actually hurting lawns more than the average homeowner fully understands. Proper lawn care begins in the spring with timing the crabgrass preventer two weeks before the last frost, which for Appleton is usually the third week of April. This can also be identified as the time when the forsythia comes into bloom. Fertilizer should not be put down until Memorial Day. Over fertilization is large problem in lawns as I often see soil test phosphorus (P) and potassium (K) levels that are on average 10 times greater than what we find in farmers' fields in Outagamie County, so I strongly encourage homeowners to get their soils tested. This feature article was a part of the Appleton Post Crescent's Sunday, April 15, 2007 Living Well Home & Garden section that reaches 72,000 people every weekend. The article generated 107 contacts requesting more information on lawn care and maintenance from the Outagamie County UWEX office. A fall lawn care article was done as a follow up.

THE IMPACT OF SOIL STRUCTURE ON CROP CULUTRE

Sundermeier, A.P.¹

¹ Extension Educator, Ohio State University Extension, Wood County, Bowling Green, Ohio 43402

Soil quality management can be difficult on a vegetable farm. Many crops are sensitive to soil compaction and will suffer yield loss or pest problems as a result. The need to harvest crops during a very short period of time

before quality declines, regardless of soil conditions, often results in severe compaction problems on farms. It is often a money-losing situation when farmers try to correct soil structure problems by adding more inputs of fertilizer, pesticides, irrigation to their crop. Traditional vegetable production practices include frequent tillage operations. Tillage destroys soil aggregation, therefore one method to improve soil structure is to use reduced or no-till production. Also, the practice of including cover crops in the rotation will improve soil structure. The roots of a cover crop can alleviate both surface and subsurface soil compaction. Whatever crops are grown, using production practices that promote high quality soils with good soil structure will produce profitable returns from the soil. This article was authored by Sundermeier as a feature story in the 2008 winter issue of the Ohio Produce Growers & Marketers Association (OPGMA). Distribution occurred by the quarterly newsletter, OPGMA TODAY, sent to hundreds of members state-wide. This story was professionally printed by OPGMA.

ROOTED CUTTINGS A CRANBERRY PLANTING INNOVATION

Samulis,* R.J.¹

¹ Extension Agent, Rutgers Cooperative Extension, Burlington County, Westampton, New Jersey 08060

For the entire history of the cranberry industry over the last 150 years, new bogs were produced by planting massive amounts of cuttings which were old prunings. This old system used approximately two tons of cuttings for each planted acre. Through modern plant breeding, new cranberry varieties were developed. Because there are only very limited amounts of cuttings available, new techniques, such as rooted cuttings could help growers propagate new bogs more rapidly. This resulted in being able to plant a new acre with only a few handfuls of vines rather than a few tons of vine cuttings. Information gleaned by Mr. Samulis from many years of working with vegetable growers was translated into cranberry growing with relative ease. This article explains the process to cranberry growers and appeared as a feature article in the April 2007 edition of the Fruit Grower News. It was also used by Ocean Spray Cranberries for distribution to their member growers.

FEATURE STORY

Lifsey,* H.N.¹

¹ Extension Agent, North Carolina Cooperative Extension Service, Northampton County, Jackson, North Carolina, 27845

The feature story was published on the front page of the June 12, 2007 edition of the *Roanoke-Chowan News Herald*. This story was intended to educate the general public about the Hertford-Northampton 4-H Livestock Show and what participation in the show entails. The story profiled Shirley Lee Sruill, focusing on her history with the show and her experiences raising lambs, hogs and steers. I also included a photograph to provide a visual to show what kind of pen was needed for hogs. I received several phone calls requesting more information on the show. The article was written in Microsoft Word and emailed to the *Roanoke Chowan News Herald*. The photograph was taken with a Kodak Easy Share digital camera and also emailed. The article and photographs were produced by the *Roanoke Chowan News Herald* and distributed to over 7,000 subscribers.

FEATURE STORY

Reed, M.S.¹

¹ Powell County Extension Agent for Agriculture and Natural Resources, University of Kentucky Cooperative Extension Service, Powell County Office, 169 Maple Street, Stanton, KY 40380

This feature story was written by the agent for the August 6th, 2007 issue of "The Clay City Times", a local newspaper with a weekly circulation of over 3500 homes and businesses. This particular article was a personal story on how easily any of us can fall prey to accidental poisonings, even the County Agent. This article was written in agent's office on Microsoft Word, and transmitted via e-mail to the editor of the newspaper.

"OREM COUPLE'S GARDEN IS A LABOR OF LOVE"

Sagers,* L. A.¹

¹ Extension Horticulture Specialist, Utah State University Cooperative Extension, Thanksgiving Point Office, Lehi, Utah, 84043-3506

Garden design means everything in creating a beautiful yard, but many homeowners seek inspiration and ideas to solve the mystery of good garden design. One Orem, UT Couple has created a beautiful landscape using the philosophy “divide and conquer.” They, like many others are willing to share the results of their expertise as part of a Hidden Garden tour that will support a local charity for women and children. This news/feature provides the story of this Orem landscape in order to showcase the garden and pique interest throughout the Wasatch Front in the Hidden Garden Tour. Rand Ward, one of the pair, completed the Utah State University Master Gardener Course in 1983 and has been an avid gardener for several decades. The author took the photos and prepared the copy submitting it electronically to the daily *Deseret Morning News*. The daily newspaper circulation is 70,000 copies distributed throughout the state of Utah and surrounding areas.

EXTENSION AGENT FOCUSED ON THE LAND

Martin*, D.L.¹, Macnab, S.W.²

¹ Extension Agent, Oregon State University
Extension, Deschutes County, Redmond, Oregon
97756

² Extension Agent, Oregon State University
Extension, Sherman County, Moro, Oregon 97039

Sandy Macnab has served his neighbors for nearly 30 years as an Oregon State University Extension agent. Located in a rural Eastern Oregon county, Sandy has enjoyed the challenge of his job and the wide range of responsibilities. A typical day may begin with Sandy advising a farmer about growing wheat. After a quick field check, he returns to the office to compile figures for an annual cost production study. Throughout the day, Sandy talks to visitors who need information about the county and his day wraps up after he successfully tracks down a clown to do balloon tricks for the upcoming 4-H youth camp. The objective of this feature article was to show how Extension agents fulfill many roles in their positions to serve the public. As more people migrate to rural environments, it is important to make them aware of Extension, the programs and expertise we provide and our association with the university. This article was published in the May 2007 issue of Ruralite magazine and distributed to 4500 members of Wasco Electric Cooperative, a rural electric cooperative. Sandy was interviewed by Dana Martin who turned his colorful quotes into a feature story and provided photographs which were also published in the magazine.

HORSESENSE: LAMENESS IS NOT A “LAME” ISSUE

Striegel, N.J.¹

¹ Extension Agent, Colorado State University
Extension, Boulder County, Longmont, Colorado
80501

The Boulder County Horse Association’s bi-monthly newsletter called *The Horse’s Mouth* is mailed to 300 households in Boulder County that own horses or have interest in horses. It is also distributed to area businesses that are associated with the equine industry. The editor asks that the articles are from 1000 – 3000 words in length and are educational in nature. There were no costs to me to have these articles published other than the time spent in research, thought, & writing. In 1999, it was estimated that there were 8,800 horses in Boulder County. Among the state’s counties, Boulder County ranks fourth in total horse numbers. On average, a horse in Boulder County is now worth \$3,450, and the total value of horses in Boulder County is estimated at \$30.4 million. There is great interest in horses in this county and in educational materials that address horse issues. The main objective of these articles is to provide up-to-date information and news to the horse owning public. Through these educational pieces, owners will make more informed and judicious decisions regarding their horses. The outcome will be healthier, happier horses. Horse owners benefit from decreased overall costs of owning horses and the positive emotional state of owning a horse with less health problems or better-managed health problems.

Newsletter Individual

National Winner

CHRISTIAN COUNTY HORTICULTURE FOCUS NEWSLETTER

Jackson,* K.R.¹

¹ County Extension Agent for Horticulture, University of Kentucky Cooperative Extension Service -
Christian County, Hopkinsville, KY 42240

The *Christian County Horticulture Focus* newsletter, published monthly, seeks to provide homeowners and green industry professionals research-based horticulture information, national horticultural news, and meeting notices. This newsletter serves as a primary

means of dispersing meeting notices and introducing the public to available opportunities through the University of Kentucky Cooperative Extension Service. Each month, 566 households receive the mailed newsletter which features items related to frequently-asked gardening questions, top performing plant material, pest management, wildlife topics, and other landscape and gardening issues. An additional 230 copies are produced and made available at six local garden centers and the public library. The newsletter is written, edited, and designed by Kelly Jackson, Christian County Cooperative Extension Agent for Horticulture. Newsletter duplication and mailing is completed by the secretarial staff. The newsletter is created in Microsoft Publisher.

National Finalist

PLANTS AND PEST NEWSLETTER FOR HOMEOWNERS, INDIVIDUAL EFFORT

Witkowski,* N.L.¹

1. Purdue Cooperative Extension Educator ANR/HORT, Lake County, 880 East 99th Court, Suite A, Crown Point, Indiana, 46307

The Plants & Pest Newsletter was created to inform the public about current issues or upcoming issues in their landscapes. The public would be homeowners, Master Gardeners, and any other businesses or individuals wishing to receive the mailing in Lake County. The office had previously provided the newsletter, but few issues were produced recently. Nikky restarted it in order to provide research based information to the public that they can use around their homes to solve the problems and answer the questions they might ask. Questions from homeowners come in by phone, email, or walk-ins and the newsletter was a way to help solve their problems. This newsletter now goes out once a month during the growing season and every other month in the off season. The preference is to email the publication as an Adobe file; however, a hardcopy is mailed to those without email. At a minimum, 1,433 people received each issue of the newsletter last year. There were 1,180 copies mailed and 253 copies emailed. It is also available when the Master Gardener Booth is used at events such as the Lake County Fair and it is posted on the Lake County Extension website. To create the newsletter, Nikky gathered information from various Purdue newsletters and websites, wrote small tidbits when needed, and combined them for a concise newsletter that applied to the citizens of Lake County. Nikky used Microsoft

Publisher for formatting and office staff helped with the final product and physical mailing.

GARDENING TIPS FOR ALACHUA COUNTY NEWSLETTER

Wilber,* W.L.¹

1. Extension Agent University of Florida/IFAS Alachua County Extension Service, 32609

Gardening and landscape decisions can be difficult for homeowners in Alachua County. Many residents of Gainesville and surrounding communities are new to the area or new to gardening. The monthly publication Gardening Tips provides timely advice what gardening practices should be done in different areas of the home landscape. This monthly resources stresses homeowner best management practices particularly around the issues of water conservation, appropriate fertilization practices, and pest management.

Sections of the newsletter focus on edible landscaping by giving instruction of fruit and nut tree growing and timely advice on when and what to plant in the vegetable garden. Because the newsletter is reactive I can provide the readership with well timed advice for coping with landscape problems or alerts through the different seasons. Be it drought stress, freeze damage or a new insect problem, Alachua County landscapers and gardeners know that Gardening tips will have the latest, research based information on the subject to help guide them through their landscape decisions. Many readers have said the publication save them time and money, by helping them put the right plant in the right place, and by teaching them proper maintenance techniques and timing. Gardening tips reaches 800 people by mail and 1300 people by list serve. This newsletter is received in all geographic areas of the county; urban and rural populations are reached as well.

Regional Finalist

THE AG BAG — SMITH COUNTY AGRICULTURAL NEWSLETTER

Wick,*Sandra L.¹

1. Smith County Agricultural Agent, K-State Research and Extension, 218 South Grant, Courthouse, Smith Center, KS 66967

The objective of my newsletter is to inform and educate producers of Smith County. The purpose is to provide current, up-to-date information to the producers to allow them to maximize their profits whenever possible. Even though producers have a wide range of farm publications with information, I feel that K-State Research and Extension should and does provide research-based, unbiased information that is vital to the producer. This information is distributed on a timely basis every month to the producer. The content of the newsletter will vary. I try to cover the most timely topics that are pertinent on a particular month. I distribute my monthly newsletter to 660 Smith County producers. Several times during the year, I receive additional questions on information that was printed in the newsletter. I prepare the entire newsletter in our office from a word processor and it is reproduced on a copier.

NAVARRO COUNTY BEEF AND FORAGE NEWSLETTER

Scasta, J.D.¹

¹ County Extension Agent, Agriculture and Natural Resources, Texas AgriLife Extension Service, Texas A&M University, Navarro County, Texas 75110

Navarro County is located in the central blacklands region of Texas and is bordered by the Trinity River to the east. The county receives 38 inches of annual precipitation and has a population of 49,440. Approximately 50% of the annual agricultural income of roughly \$40 million annually is derived from beef and forage enterprises. The county beef cattle herd is estimated to be around 80,000 head and is primarily cow-calf enterprises on improved pasture and rangeland systems. A county level outcome program was developed (under the direction of the Navarro County Livestock Program Area Committee) to focus on beef and forage production issues and education affecting local producers. A bi-monthly newsletter, "The Navarro County Beef and Forage News", was developed in the county extension office (using Microsoft Publisher) to assist beef and forage producers by: increasing knowledge of beef health, nutrition and management; increasing knowledge of forage management and production for both improved pasture and rangeland; and by targeting emerging issues that the industry is facing. Articles for the newsletter are derived from Texas AgriLife Extension Service Publications, result demonstrations, current news and events, etc. Every two months the newsletter was

mailed out to 640 beef and forage producers in Navarro County. Hard copies were made available in the county office to producers not already on the mailing list.

NACAA COMMUNICATIONS AWARD, #7 NEWSLETTER, INDIVIDUAL

Martin,* D.A.¹

¹ Extension Educator, Maryland Cooperative Extension, Baltimore County, Timonium, Maryland 21093

Baltimore County agriculture includes a significant number of diverse operations ranging from commercial equine, direct market vegetable, traditional row crops, hay, cattle, nursery and greenhouse production. The newsletter announces upcoming Extension events and brief, timely topics targeted for the agricultural community. In addition, agricultural business representatives, public officials and public agency personnel are informed of local Extension educational events. The newsletter is prepared five times per year by support staff and the educator and is photocopied in the Extension office and distributed by mail to approximately 400 people. The educator selects, edits and proofs the topics for each newsletter.

RANCH REVIEW: A BAKER & UNION COUNTY FARM AND RANCH NEWSLETTER

Parsons*, C.T.¹

¹ Livestock Extension Agent, Oregon State University Cooperative Extension
Baker County Office, 2610 Grove St., Baker City, OR. 97814

Having a multiple County, as well as a limited State wide responsibility makes it extremely difficult to conduct pertinent and timely educational programs to ones clientele. With this in mind and the goal of providing as much educational information that is both timely and relevant I write, edit and publish a bi-monthly Ranch Review newsletter. This newsletter includes educational programming updates and announcements, pertinent educational information, as well as a personal note from me that I call "Cory's Corner". This newsletter is written and intended for agriculture producers with emphasis on livestock, mostly beef cattle, and irrigated forages. The Ranch Review newsletter includes articles written by myself, as well as others and also abstracts from professional

journals that I feel that producers will benefit from reading. The Ranch Review newsletter is formatted and published in my office by myself, as well as my office managers. The main audience is agriculture producers in Northeastern Oregon. The Ranch Review newsletter is distributed to over 810 addresses each addition, with a total of 4,860 individual Ranch Review newsletters being distributed annually.

GET GROWING; A HORTICULTURAL e-NEWSLETTER FOR THE OGDEN BOTANICAL GARDENS

Goodspeed, * J. L.¹

¹ Extension Horticulture Agent, Director Ogden Botanical Gardens – Utah State University Extension, Weber County, Ogden, Utah 84404

In the spring of 2007 I developed an electronic newsletter to promote horticulture in Weber and the surrounding counties. It offered horticulture-related advice, support programs and activities, and increased awareness and thus visitors to the Ogden Botanical Gardens. The newsletter was promoted to the Gardens visitors, at garden shows, and through other horticultural venues. We switched to an electronic format to reduce postage and paper costs, and increase availability of information to our readers. This format linked readers to our Weber County USU Extension website or fact sheets that provided further detailed information. Our currently readership numbers more than 350, and it continues to increase as more people become acquainted with our newsletter. It is delivered electronically (through a server) from our office every month during the growing season (May – October) and bi-monthly during the winter months. The newsletter is also printed as a hard copy, and available at the Ogden Botanical Gardens Education Building, and at our Weber County USU Extension office on the Fairgrounds. Photographs of the Gardens illustrating article topics stimulate interest and make the newsletter more readable. Additional articles provide timely information, a calendar of seasonal gardening activities, upcoming workshops and other programs offered in the Gardens, and helpful hints. Articles for the newsletter are written by myself and formatted by my administrative assistant who incorporates graphics, edits, and disperses the newsletter through e-mail.

NACAA COMMUNICATIONS AWARDS PROGRAM – NEWSLETTER -INDIVIDUAL

Marrison, D.¹

¹ Agriculture and Natural Resources Educator, Ohio State University Extension, Ashtabula County, 39 Wall Street, Jefferson, Ohio 44047

Agri-Culture is published five times per year for Ashtabula County farmers and for others interested in the industry of agriculture. Until the spring of 2005, the Educator published individual newsletters for agronomy, beef, dairy, grape, horticulture, and agricultural law. Due to budget and time constraints, the Educator made the decision to melt all of these newsletters into one issue. The Agri-Culture newsletter focuses on local Extension programs, current updates in each commodity area, and management issues which affect the broad spectrum of agriculture enjoyed in Ashtabula County. Each commodity group still receives direct mailings on Extension programs specific to their commodity and state electronic newsletters are forward via email to requesting producers. Our staff expected to receive negative feedback from the individual commodity groups but have not. Most of the committees have stated that they are interested in learning what the other commodity groups are doing and appreciate the focus on management issues that reach across all disciplines. The agricultural extension staff publishes the newsletter completely “in-house.” The newsletter is currently mailed to nearly 500 local individuals and businesses. Each newsletter is also emailed to 150 email subscribers. A copy of the current year newsletters are posted to the county’s web site as an Adobe PDF file <http://ashtabula.osu.edu/ag/>.

CLIPPINGS: A JOURNAL OF THE MASTER GARDENERS OF GLOUCESTER COUNTY

Cummings, * M.¹

¹ Program Associate, Rutgers, NJAES Cooperative Extension, Gloucester County, Clayton, NJ 08312

Clippings: A Journal of the Master Gardeners of Gloucester County is a monthly newsletter written, compiled and edited by Program Associate Cummings. Master Gardeners are encouraged to submit information to be included in the newsletter. The monthly journal is mailed to over 150 Active Master Gardener volunteers and trainees involved in the Gloucester County, NJ

program. The journal offers a variety of information related to horticultural issues and also keeps members up to date on various programs and activities the group is involved with. The layout of the publication is done in MS Publisher and the publication is copied in house on our office equipment.

AGRONOMY NOTES - NEWSLETTER , INDIVIDUAL

Fretts*, D.C.¹

¹ County Extension Director, Senior Extension Educator, Agriculture, Penn State Cooperative Extension, 34 West Peter Street, Uniontown, PA 15401

Agronomy Notes is a newsletter that focuses predominantly on agronomic topics relevant to southwestern Pennsylvania farmers. It's purposes are to educate readers about local, and state educational opportunities plus present the latest research results and/or recognized BMP's local farmers can use. It is created and published in the Fayette County Extension office and distributed 6-8 times annually to more than 800 farm families in Fayette, Green and Washington counties in Pennsylvania. Periodically the Extension office purges the mailing lists and asks producers to re-subscribe. Since starting the Agronomy Notes letter, additional farmers have asked to be added to the mailing list. This is proof the letter is viewed as beneficial to those receiving it. Farmers routinely tell me they look forward to "The Humorous Side".

Newsletter Team

National Winner

OREGON SMALL FARMS NEWS NEWSLETTER

Tuck,* B.¹, Stephenson, G.², Kerr, S.³, Lucas, C.⁴,
Fery, M.⁵, Mathewson, M.⁶, Andrews, N.⁷, Angima, S.⁸

¹ Oregon State University Extension Service-Wasco County, 400 E. Scenic Drive, Suite 2.278, The Dalles, OR 97058

² Oregon State University Extension Service-Benton County, 1849 NW 9th St., Corvallis, OR 97330

³ Washington State University Cooperative Extension-Klickitat County, 228 W. Main St.,

MS-CH-12, Goldendale, WA 98620

⁴ Oregon State University Extension Service-Benton County, 1849 NW 9th St., Corvallis, OR 97330

⁵ Oregon State University Extension Service-Benton County, 1849 NW 9th St., Corvallis, OR 97330

⁶ Oregon State University Extension Service-Jackson County, 569 Hanley Road, Central Point, OR 97502

⁷ North Willamette Research & Extension Center, 15210 NE Miley Road, Aurora, OR 97002

⁸ Oregon State University Extension Service-Lincoln County, 29 SE 2nd St., Newport, OR 97365

Many residents moving into Oregon purchase small acreages, yet are unfamiliar with agricultural issues and small farm management. To address the needs of this growing audience, a team of Oregon State University Extension Faculty in the fall of 2006 developed a newsletter called the Oregon Small Farm News. The purpose of the newsletter is to provide research-based information about livestock and horticultural production, marketing, noxious weed control, irrigation, small farm management and other issues pertinent to small farmers and rural landowners. Livestock, horticulture, forestry and agronomy agents contribute to this quarterly effort; additional articles are written by resource personnel such as weed control coordinators, NRCS and conservation district employees and other Extension educators. The newsletter is available without charge electronically at <http://smallfarms.oregonstate.edu/newsletter/>. In the spring of 2007, the successful Mid-Columbia Oregon/Washington Small Farm Newsletter merged with the Oregon Small Farms Newsletter to better serve the small farms of Oregon. The result has been a very successful small farms resource for Oregon and parts of Southern Washington. The success of the Oregon Small Farms News is demonstrated by the number of hits on the Oregon Small Farms website where the newsletter is hosted. In 2007, the total number of hits reached 585,000 with 183,000 page views. Electronic circulation of the quarterly issues reached 6,000 in 2007.

National Finalist

TIPTON COUNTY SPOTLIGHT ON EXTENSION

Leigh,* B.T.¹, Eddins, P. G.², Hicks, T. C.³, Jacobs D.⁴

1. Booker T. Leigh Extension Leader ,Tipton County Tennessee
2. Priscilla Gilliam –Eddins Extension Agent FCS ,Tipton County Tennessee
3. Timothy C. Hicks 4-H Youth Agent ,Tipton County Tennessee
4. Daniel Jacobs Agriculture Extension Agent, Tipton County Tennessee

The Tipton County Spotlight on extension is published quarterly. This Publication serves the primary function of informing office stakeholders on Tipton County extension programs. Spotlight is a four page news letter that informs on programs in agriculture, consumer horticulture, family and consumer sciences, and 4H youth programs. This newsletter provides quick informative information that highlights program needs and achievements. Past articles have focused on program successes that included diverse audiences from master gardener to at risk youth. The spotlight reaches out to inform on programs and activities. The Spotlight newsletter provides vital statistical information on Tipton County agricultural programs. 4H success in photography has helped highlight this publication by providing extensive photography resources. Successful reactions to this publication have included attention and increased stakeholder involvement in additional program areas. This publication continues to energize staff and stakeholders in becoming involved in promoting programs that strongly help develop additional community resources. Spotlight's success can be shared by a team of extension educators and staff. Connie Dyson, Tipton County Master Gardener volunteer, greatly contributes to the newsletters graphic design and layout.

NORTHERN KENTUCKY HORSE NETWORK NEWSLETTER

Allen, D.T.¹, Brown*, J.D.², Sorrell, D.³

1. Extension Agent for Agriculture and Natural Resources, Kenton County Cooperative Extension Service, Covington, Kentucky 41015
2. Extension Agent for Agriculture and Natural Resources, Boone County Cooperative Extension Service, Burlington, Kentucky 41005
3. Extension Agent for Agriculture and Natural Resources, Campbell County Cooperative Extension Service, Highland Heights, Kentucky 41076

The Northern Kentucky Horse Network Newsletter is written especially for the horse owners of Northern Kentucky, consisting of Boone, Kenton, Campbell and surrounding counties. Northern Kentucky is located across the Ohio River from Cincinnati, Ohio, in an area of rapid population growth. Many people have moved to Northern Kentucky because there are many small farms that are ideal for horses. The Northern Kentucky Horse Network was formed just last year with the purpose of addressing issues of horse ownership through educational programs. The 1080 newsletters are mailed, posted on a website and e-mailed to notify horse owners about activities of the network. Newsletters are also distributed at several agribusiness locations and at other horse activities. Articles for the Newsletter are written by the Agriculture Agents and several members of the organization. Then it is formatted by an Extension Service secretary, and is printed in the local Extension Office. The newsletter is written on a quarterly schedule. As a result, in the first year of existence, the Northern Kentucky Horse Network has over 200 members and is offering well attended monthly programs and activities.

TEAM NEWSLETTER K-STATE RESEARCH AND EXTENSION, JOHNSON COUNTY

Miller, Rick¹, Patton, Dennis², Lekie, Dan³, Wasem, Chelsey⁴,

1. Extension Director, K-State Research and Extension, Johnson County, Olathe, KS
2. Extension Agent Horticulture, K-State Research and Extension, Johnson County, Olathe, KS
3. Extension Agent Agriculture, K-State Research and Extension, Johnson County, Olathe, KS
4. Extension Agent Horticulture, K-State Research and Extension, Johnson County, Olathe, KS

The Johnson County Extension “Knowledge for Life” newsletter is the primary marketing and outreach tool used by staff. Our goal for the newsletter is to create awareness for our programs and services and to give opportunity for individuals to take action or participate. Because users often know only individual program areas, the newsletter helps customers become aware of the breath of our educational offerings. All customers who attend classes, call our office, or touch our services in one way or another are added to our mailing list. We publish the newsletter on a quarterly basis and make it available in both print and electronic version. The

print version is currently mailed to approximately 17,000 customers and small quantities dropped off at libraries, chamber offices and other specialty events. The electronic version is posted to our web site at www.johnson/ksu.edu. The newsletter is produced in-office but printed and mailed by a commercial vendor.

Regional Finalist

NORTHWEST ARIZONA CLIMATE & RANGE NEWSLETTER

Grumbles,* R. L.¹, Crimmins, M.², Mc Bee Alan³

1. Extension Agent, University of Arizona Cooperative Extension, Mohave County, Kingman, Arizona 86401
2. Extension Specialist, Climate Science, University of Arizona, Cooperative Extension, Tucson, Arizona 85721
3. District Conservationist, NRCS, USDA, Kingman, Arizona 86401

The introduction of a climate program and team at the University of Arizona and development of research information and ecological site inventory, range and soils information from NRCS, there was a need to disseminate information to clientele for use in decision making in managing natural resources, livestock and wildlife along with forward planning. Timely tips are provided helping managers with decisions, information on livestock, wildlife and range management planning. Northwest Arizona needed focused information that was more specific to this region, including Mohave and Coconino Counties (20,000+ sq mi.), also the border areas of California, Nevada and Utah and the fact that this region had been in severe drought for the past seven years along with spotty rain patterns. Included has been new technology introduced by County government and Bureau of Land Management. The audience has been focused on area ranchers, land managers, and agency personnel that work in the management of natural resources. The newsletter is organized, edited to final draft, then sent to local printer for weather and climate graphics clarity, and then comes back to the Extension for mailing. Grumbles is team leader; selects lead-in topics, contacts writers, organizes final product, arranges printer, keeps timeline and controls size, length and authors in key areas. Crimmins evaluates data available, organizes regional weather and climate maps, information and regional data. McBee submits plant and ecological information. Printing cost has been shared between private sources, Extension and NRCS.

Mailing is done through Extension. Distribution has increased from 500 to 700.

THE WASHINGTON ANIMAL AGRICULTURE TEAM'S "WSU LIVESTOCK ROUND-UP" NEWSLETTER

Kerr,* S.R.¹, Hudson, T.D.², Smith, J.³, Ferguson, H.⁴, Hendrix, W.F.⁵, Fouts, J.⁶, Kugler, J.⁷, Smith, S.M.⁸, Fransen, S.⁹, Moberg, D.¹⁰, Neibergs, S.¹¹, Suverly, N.¹², Petersen, P.¹³

1. County Extension Director, Washington State University Extension, Klickitat County, Goldendale, Washington 98620
2. Livestock and Range Management Specialist, Washington State University Extension, Kittitas County, Ellensburg, Washington 98926
3. Area Livestock Extension Educator, Washington State University Extension, Benton-Franklin County, Kennewick, Washington 99336-1387
4. Extension IPM Coordinator Specialist, Washington State University Extension, Prosser, Washington 99350
5. Extension Animal Science Specialist, Washington State University Extension, Yakima County, Yakima, Washington 98901-2631
6. Extension Educator, Washington State University Extension, Walla Walla County, Walla Walla, Washington 99362
7. Extension Forage Specialist, Washington State University Extension, Grant-Adams Area, Ephrata, Washington 98823
8. Area Extension Animal Science Specialist, Washington State University Extension, Grant-Adams Area, Ephrata, Washington 98823
9. State Extension Specialist/Forage Research and Extension Agronomist, Prosser, Washington 99350-8694
10. County Extension Director, Washington State University Extension, Walla Walla County, Walla Walla, Washington 99362
11. State Livestock Economics Extension Specialist, Washington State University, Pullman, Washington 99164-6210

¹². County Extension Director, Washington State University Extension, Okanogan County, Okanogan, Washington 98840-0391

¹³. Area Extension Faculty, Agronomy and Farming Systems, Washington State University Extension, Benton-Franklin Counties, Pasco, Washington 99301-3706

The Washington Animal Agriculture Team was created in 1997 to develop and deliver programs to meet the educational needs of livestock producers. Team membership has grown from an initial four to the current 13 members. The team has received \$7,200 from Washington State University Extension since 1998 to fund activities and has generated more than \$2,700 in revenue through cost-recovery measures. Team activities have included sponsorship of numerous educational workshops and field days, development of a web site, creation of fact sheets and publication of a brochure to inform producers about the team. Team members meet at least quarterly to discuss relevant issues in the area and plan educational outreach programs. In 2006, the team decided to create a quarterly electronic newsletter to increase outreach to time-constrained, new and small-acreage livestock producers in Washington State who find it difficult to attend educational workshops. Each newsletter contains livestock production and management articles appropriate for a specific time of year. Editorship of each issue alternates among team members. Each issue is posted on the team's web site at www.animalag.wsu.edu/newsletters. Notice of the release of each new issue is made using various e-mail listservs. Eight issues have been produced to date and each issue continues to be accessed monthly; the first issue has been accessed 1168 times. Future plans include incorporating research updates from WSU Animal Science departmental faculty.

ACRES TODAY

BAMKA, * W.J.¹, Komar, S.², Mickel, R.³, Nitzsche, P.⁴

¹. Extension Agent, Rutgers Cooperative Extension, Burlington County, Westampton, New Jersey 08060

². Extension Agent, Rutgers Cooperative Extension, Sussex County, Newton, New Jersey 07860

³. Extension Agent, Rutgers Cooperative Extension, Hunterdon County, Flemington, New Jersey 08822

⁴. Extension Agent, Rutgers Cooperative Extension, Morris County, Morristown, New Jersey 07963

Acres Today is a quarterly newsletter dedicated to the small and beginning farmer. The intent of the newsletter is to provide practical research based information and educate clientele about various production, environmental, economic, and marketing issues related to small farms. The Acres Today newsletter is a collaborative effort of Rutgers Cooperative Extension Agents representing diverse expertise in animal production, field crop production, horticultural production, marketing opportunities and related research based information. The newsletter is written and edited by the agents. A graphic artist is responsible for newsletter layout using Adobe software. Currently, 500 copies of the newsletter are distributed on a statewide basis. Clientele and extension colleagues have indicated the newsletter is an effective tool for small farm enthusiasts to learn about farming.

AGRONOMY NOTES-TEAM NEWSLETTER

Rowehl, * J.E.¹, Graybill, J.S.², Craig, P.H.³, Voight, D.G.⁴

¹. Extension Educator, Penn State Cooperative Extension, York County, Pennsylvania 17402

². Extension Educator, Penn State Cooperative Extension, Lancaster County, Pennsylvania 17601

³. Extension Educator, Penn State Cooperative Extension, Dauphin County, Pennsylvania 17018

⁴. Extension Educator, Penn State Cooperative Extension, Lebanon County, Pennsylvania 17042

The primary objectives of the newsletter is to provide articles about issues in crops and soils that are timed in anticipation of informational needs and decisions that will be at hand in the month it is issued. Other objectives are to inform readers of upcoming Extension programs and events and to provide a frequent and regular source of contact between Extension and the clientele. The team conducts programs in a nine (9) county area. The Educators, specialized in their program responsibilities, write articles relevant to their area of expertise. A USDA Crop Insurance representative contributes an article each month. Funds that cover the cost of printing the newsletter are recovered from USDA in exchange for space in the newsletter. The primary audience to which the Agronomy Notes newsletter is directed to is farmers that grow agronomic crops including corn, soybeans, small grains as well as corn silage and hay crop forages. Another group receiving the newsletter includes independent crop consultants and advisors, seed, fertilizer and chemical sales representatives and agricultural bankers. Numerous other Extension

Educators in surrounding counties and adjoining states receive the newsletter and often use some of the articles for their own newsletter. The newsletter is sent monthly to two thousand three hundred thirty people (2330) by U.S. Mail and another five hundred twenty five (525) by e-mail. The header and sidebar design are consistent with that which is being used by Cooperative Extension statewide, serving to help establish the "trade mark" of Penn State Cooperative Extension and Outreach.

COMMUNICATIONS AWARD, TEAM NEWSLETTER

Schuster *, C.F.¹, Tregoning, D.W.², Gordon, D.G.³

¹. Extension Educator, Commercial Horticulture, Maryland Cooperative Extension, Montgomery County, 18410 Muncaster Road, Derwood, MD 20855, U.S.A.

². Extension Educator, County Extension Director, Maryland Cooperative Extension, Montgomery County, 18410 Muncaster Road, Derwood, MD 20855, U.S.A.

³. Extension Educator, Animal Science Adult and 4H, Maryland Cooperative Extension, Montgomery County, 18410 Muncaster Road, Derwood, MD 20855, U.S.A.

The **Back 40 Newsletter** is a Quarterly newsletter written and produced for interested Montgomery County residents. This newsletter is sent to 560 members of the agricultural community to provide timely information on topics related to Montgomery County and regional agriculture. Each member of the team writes articles for the newsletter and team members work with administrative support staff to proof, duplicate, assemble and mail newsletter using bulk mail.

THE HOME AND GARDEN NEWSLETTER

Watt, * Marshall P. Jr.¹, Sudduth, Terry Q.¹

¹. Anderson County Extension Office, 313 South Towers St, Anderson, South Carolina 29624

The Home and Garden Newsletter is a quarterly newsletter written for the clients of Anderson County. The information is available to anyone with a paid subscription, and/or a email address. The need for the latest information on ornamental horticulture, gardening and household tips never ends. The newsletter is full of

timely topics that are based on the most frequent questions we receive from clients each month. We receive a numerous amount of questions via e-mail and web site; however, the phone never stops ringing in the Extension office. A copy of the newsletter may be received through email or downloaded off the Anderson County Extension Web Page as a pdf file.

CENTRAL WISCONSIN AGRICULTURAL SPECIALIZATION EXTENSION REPORT

Williams,* K.R.¹, Genrich, D.², Saxe, C.³, Hargrave, C.⁴, VanderVelde, K.⁵, Schroeder, K.⁶, Lippert, M.⁷

¹. Extension Agent, University of Wisconsin-Extension, Waushara County, Waushara, Wisconsin 54982

². Extension Agent, University of Wisconsin-Extension, Adams County, Adams, Wisconsin 53910

³. Extension Agent, University of Wisconsin-Extension, Juneau County, Mauston, Wisconsin 53948

⁴. Extension Agent, University of Wisconsin-Extension, Green Lake County, Green Lake, Wisconsin 53941

⁵. Extension Agent, University of Wisconsin-Extension, Marquette County, Montello, Wisconsin 53949

⁶. Extension Agent, University of Wisconsin-Extension, Portage County, Stevens Point, Wisconsin 54481

⁷. Extension Agent, University of Wisconsin-Extension, Wood County, Wisconsin Rapids, Wisconsin 54495

The Central Wisconsin Agriculture Specialization (CWAS) Team is a group of seven county based agriculture agents who work together by having specific areas of specialization for each member. The members work collaboratively across county lines in their areas of specialization to provide programming that is more specific than would otherwise be provided. The CWAS is a specialized arrangement between the counties of Adams, Juneau, Green Lake, Marquette, Portage, Waushara and Wood. The center part of Wisconsin in which these counties are located is predominately agriculture based but there are some larger cities, Stevens Point 24,000, Marshfield 20,000 and Wisconsin Rapids 19,000. The agriculture in the seven county area consists of irrigated sand vegetable production, dairy, cranberry production, potato production plus an assortment of small scale producers producing product for direct fresh market sales. Individual articles are

submitted to the Portage County Extension Office where local staff members compile the individual articles and put them together into newsletter form. Each county then sends the newsletter out using local mailing lists of agricultural producers. Throughout the seven county area the newsletter reaches around 3,500 agricultural producers.

NACAA COMMUNICATIONS AWARDS PROGRAM-NEWSLETTER-TEAM

Kleinschmidt,* A.¹, Bruynis, C.², Marrison, D.³, Breece, D.³, Ward, B.⁴, Shoemaker, D.⁵, Zoller, C.⁶, Woodruff, J.⁸, Gastier, M.⁹, Wilson, G.¹⁰, Arnold, G.¹¹, Siegrist, H.¹²

¹. Agriculture and Natural Resources Educator, Ohio State University Extension, Van Wert County, 1055 S. Washington Street, Van Wert, Ohio 45891

². Agriculture and Natural Resources Educator, Ohio State University Extension, Wyandot County, 109 S Sandusky Ave-Room16, Upper Sandusky, Ohio 43351

³. Agriculture and Natural Resources Educator, Ohio State University Extension, Ashtabula County, 39 Wall Street, Jefferson, Ohio 44047

⁴. Extension Specialist, ANR/Economics Farm Management, Lima Extension Center at Findlay 1219 West Main Cross St. (SR 12) Suite 202, Findlay, Ohio 45840-0702

⁵. Leader, Production Business Management, OSU Extension Department of Agricultural, Environmental and Development Economics, 2120 Fyffe Road, Columbus, Ohio 43210

⁶. Extension Dairy Specialist, OSU Extension Center at Wooster, OARDC Administration Building, 1680 Madison Avenue, Wooster, Ohio 44691

⁷. Agriculture and Natural Resources Educator, Ohio State University Extension, Tuscarawas County, 419 16th Street SW, New Philadelphia, Ohio 44663

⁸. Agriculture and Natural Resources Educator, Ohio State University Extension, Ashland County, 804 US Route 250 East, Ashland, Ohio 44805

⁹. Agriculture and Natural Resources Educator, Ohio State University Extension, Huron County, 180 Milan Avenue, Norwalk, Ohio 44857

¹⁰. Agriculture and Natural Resources Educator, Ohio State University Extension, Hancock County, 7868 CR 140, Suite B, Findlay, Ohio 45840

¹¹. Agriculture and Natural Resources Educator, Ohio State University Extension, Putnam County, 219 Oak Street, PO Box 189, Ottawa, Ohio 45875

¹². Agriculture and Natural Resources Educator, Ohio State University Extension, Licking County, 771 East Main Street, Suite 103, Newark, Ohio 43055

NACAA COMMUNICATIONS AWARDS PROGRAM-NEWSLETTER-TEAM OHIO AG MANAGER TEAM

Driven by budget reductions, OSU Extension Farm Management Specialist positions were reduced to one in 2004. Recognizing a critical need to maintain extension farm and agribusiness management programming, the Ohio Ag Manager (OAM) Team was established. "The Ohio Ag Manager Newsletter" delivers information relevant to the management of profitable, sustainable agricultural businesses. Critical issues are identified during a monthly team conference call. Team members are assigned responsibilities for writing or soliciting articles, editing and posting the newsletter. The newsletter provides managers with abstracts of seven to ten articles. Each abstract is linked to the complete article at the OAM website. This design allows readers to retrieve details on topics most important to their business. The newsletter is emailed to 535 individuals who personally subscribed to the electronic list serve and Ohio's 88 County Educators. Twelve issues published in 2007 featured 100 management topics. Server data indicates the web site was accessed by 44,209 users in 2007. Articles were also utilized by County Educators, Ohio Farm Bureau, Ohio Farmers Union, and the Ohio Farmer Magazine in their publications. A survey conducted in January 2008 indicated that Ohio farmers saved an average of \$2,400 in 2007 using this newsletter as a farm management resource tool. The \$2,400 average savings was through tax savings, finding ways to cut costs, or through improved marketing. Consultants responding to the survey indicated that their clients saved an average of \$1,500. The newsletter can be accessed at <http://ohioagmanager.osu.edu>.

Video Tape/Television

National Winner

COUNTY LIVESTOCK SHOW ANIMALS PART 1 AND 2

Scott,* R.J.¹

¹. Extension Agent, Texas Cooperative Extension, Lubbock County, Lubbock Texas 79408

The purposes of COUNTY LIVESTOCK SHOW ANIMALS PART 1 AND 2 are to demonstrate the importance of agriculture and make the public aware

of the role livestock plays in our 4-H program. Ag Lifestyles is a weekly show on RFD- TV. RFD- TV serves over 28 million U.S. homes, with another 19 million homes in Brazil. The TV Show aired as COUNTY LIVESTOCK SHOW ANIMALS PART 1 AND 2. In Part One of the series, I discussed the Texas Junior Livestock Validation program. In Part Two, Segment One, I discussed the purpose of livestock programs and the benefits to youth. In Part Two, Segment Two, I discussed showmanship. The segment you will be watching is Part Two, Segment One "The purpose of livestock programs and the benefits to youth." Results- The 4-H members shown in the video are residents from Foster's Home for Children in Stephenville, Texas. Since the youth and house parents have limited funds, I worked diligently to get lambs and goats donated for them to exhibit at the county show. With the airing of the RFD TV show, several breeders and others have called inquiring about the 4-H show program. These persons have offered to help these 4-H members through donating animals or by providing financial contributions. Ag Lifestyles Editor LZ worked out an agreement with Showmaster Feeds (Cargill) and RFD-TV to air COUNTY LIVESTOCK SHOW ANIMALS PART 1 AND 2 through the spring and summer at no charge to Cargill, in return Cargill provided all the feed for the foster home animals for the show season.

National Finalist

IMPROVING SKIDDER SAFETY AND EFFICIENCY

K. Jason Fisher¹, Daniel L. Goerlich², Bryan Wagner³, J.J. Lemire⁴, Scott Barrett⁵

¹ Extension Agent/ANR Forestry and Natural Resources, Central District, P.O. Box 757, Halifax, Virginia 24558

² Program Leader, Central District, 150B Slayton Avenue, Suite 112D, Danville, Virginia 24540

³ Trainer, Forestry Mutual Insurance Company, 261 Old Blacksmith Rd. Bracey, Virginia 23919

⁴ Director of Loss Control, Forestry Mutual Insurance Company, P.O. Box 19467 Raleigh, NC 27619

⁵ Director, VA SHARP Logger Program, 232 Cheatham Hall, Blacksburg, VA 24061

Loggers participating in past trainings offered by Virginia Cooperative Extension and the Sustainable Timber Harvesting and Resource Professional (SHARP) Logger program have repeatedly expressed a need for in-woods skidder safety training on course

evaluations. Skidder operators account for four out of every ten logging related injuries. Funding in the amount of \$25,765.00 was acquired in support of this project effort which ultimately included the production of a professionally produced and edited training DVD to be used by logging crews in Virginia, and throughout the Mid-Atlantic states. As a result of this project, loggers will improve their implementation of appropriate safety routines, maintenance measures and overall efficiency. The Extension Forester for Central District served as project coordinator for both the training and DVD production and used Microsoft Publisher to produce an accompanying Leaders Guide. The DVD video was recorded using a Sony 600 Beta SP and edited using Avid (uncompressed), Photo Shop, After Effects, and Motion software. DVD authorizing was done on DVD Studio Pro and Audio Sound Forger. Over 700 copies of the DVD and accompanying Leaders Guide will be distributed through VA Cooperative Extension at: <http://www.ext.vt.edu/resources/anrpublications.html> entitled "Skidder Safety and Efficiency" at no cost to loggers.

DELMARVA GARDENS BY GINNY ROSENKRANZ, TRI-COUNTY HORTICULTURIST

Rosenkranz, V.L.¹

¹ Extension Educator, University of Maryland Extension, Wicomico County, Salisbury, MD 21802

Delmarva Gardens by Ginny Rosenkranz, Tri-County Horticulturist, is a taped, thirty-minute local cable show on Public Access Channel 14 that reaches thirty thousand household cable subscribers in Wicomico County. PAC 14 is a Public, Educational and Government Access Television that serves the county and is non-profit. To create Delmarva Gardens, the educator goes inside greenhouses, outdoors into flower gardens or in landscapes throughout the year to catch the pertinent up-to-the-minute gardening information on film. Delmarva Gardens is currently in its seventh year of production and can be viewed on PAC 14 and the University of Maryland's Web site (<http://extension.umd.edu/gardening/DelmarvaGardens>). Each month Delmarva Gardens is shown many times each week. It is an excellent opportunity to bring Integrated Pest Management, Best Management Practices and practical gardening tips to the residents of Wicomico County. As of 2007 Delmarva Gardens is also available on the Public Access Channels in Prince George's County and Montgomery County, Maryland. Public Access Channel 14 does all of the filming, editing and production, and all of the program ideas and

implementations are by the author. In the September video Delmarva Gardens presented a step by step demonstration on how to re-seed a lawn with cool season perennial grass seed. The steps included measuring the area to be re-seeded, a demonstration on the safe use of a de-thatcher, a demonstration on the safe use of a drop spreader to apply lime and fertilizer and the use of a cyclone spreader to apply the grass seed. Humor is added by speeding up the video during many of the applications.

WANTED: ASIAN LONGHORNED BEETLE

Hlubik, W.T.¹, Polanin, N.², Marko, J.³, Smela, D.³, Hamilton, G.⁴, Vodak, M.⁵, Weidman, R.⁶, Kluchinski, D.⁷

1. Agricultural Agent Middlesex County
2. Agricultural Agent Somerset County
3. Program Assistants Middlesex County
4. Extension Specialist in Pest Management
5. Extension Specialist in Forestry
6. Program Associate Middlesex County
7. Chair, Department of Agricultural and Resource Management Agents, Rutgers, New Jersey Agricultural Experiment Station, Cooperative Extension, Martin Hall Room 326, 88 Lipman Drive, New Brunswick, NJ 08901.

The Asian Longhorned Beetle (ALB) ,*Anoplophora glabripennis*, DVD is a comprehensive educational resource describing this serious exotic pest and its impact on thousands of susceptible trees in our urban, suburban and rural landscapes. The DVD can be used alone or in combination with existing ALB PowerPoint® presentations when training arborists, foresters, plant health professionals and Master Gardener audiences. There were 5,000 copies produced for distribution within the USDA APHIS and Forest Service, Departments of Agriculture, Cooperative Extension, and universities across the country. Over 250 DVDs have been distributed within the last year. This educational training product is comprised of a 27-minute 45-second stand alone video, extra video clips (MPEGs), and a "Play Me First" video introduction. It is an invaluable tool for insect identification and recognizing symptoms found on plants. The ALB DVD has been shown to climbers hired to examine trees inside and outside the designated quarantine zones in New Jersey and New York. The video content combined the expertise of many individuals including: Rutgers, New Jersey Agricultural Experiment Station faculty and staff, USDA APHIS ALB director and staff, USDA Forest Service technical team, and USDA researchers. Mr. Hlubik was the project director, producer and scriptwriter. Mr. Polanin was a

technical advisor and assisted Mr. Hlubik in production components. Mr. Kluchinski reviewed the product for language and content. Mr. Weidman assisted as content editor for slide presentations. Video segment and clips (MPEGs) were filmed with a Sony® digital camera and edited on an AVID® digital editing system.

Regional Finalist

BIOLOGICAL RISK MANAGEMENT – ASSESSMENT OF RISK, ROUTES OF POTENTIAL DISEASE TRANSMISSION AND PRACTICAL MANAGEMENT PRACTICES TO REDUCE THE LEVEL OF RISK

Janssen, T.L.¹, Grigg, A.², Schneider, C.³, Heronemus, C.⁴, Avis, D.⁵

1. Extension Director, Iowa State University Extension, O'Brien County, Primghar, Iowa 51245
2. Extension Director, Iowa State University Extension, Osceola and Lyon County, Sibley, Iowa 51249
3. Extension Director, Iowa State University Extension, Plymouth County, Le Mars, Iowa 51031
4. Extension Director, Iowa State University Extension, Sioux County, Orange City, Iowa 51041
5. Extension Director, Iowa State University Extension, Cherokee County, Cherokee, Iowa 51012

Biological Risk Management (BRM) is critical to agriculture and the overall economy in the six NW Iowa counties of Lyon, Osceola, Sioux, O'Brien, Plymouth and Cherokee. 10% of the total value of all agriculture production in Iowa comes from the sale of cattle and hogs in these six counties. Livestock there is valued at \$1,176,800,000. The Six Northwest Iowa County Extension Education Directors partnered with local County Emergency Managers to provide biological risk management training and resources to rural residents. The partners realized that local producers and community leaders had been left out of the biological risk management planning that had been done on both the federal and state levels. One of the projects this past year was the development of a Bio-security instructional DVD. Two County Directors met with AdVance multi-media on professionally producing the video and another County Director secured the livestock producers and provided the introductory narration. Over 30 DVD's were produced and given to Emergency Managers, Extension Offices, FFA Chapters and other agencies. It was also used with local 4-H'ers in the Food Safety and Quality Assurance training in the counties. Best biological risk management practices

were highlighted. Support was received from the Center for Food Security and Public Health at Iowa State University. The team has received very positive feedback from livestock producers, veterinarians, boards of supervisors and others. As a result of the work in this area, the program will expand beyond the six counties to at least 7 other Iowa counties.

OHIO SOIL HEALTH CARD VIDEO

Sundermeier,* A.P.¹

¹ Extension Educator, Ohio State University
Extension, Wood County, Bowling Green, Ohio 43402

The Ohio Soil Health Card Video is an educational aid to evaluating a soil's health or quality as a function of soil, water, plant, and other biological properties. The Card is a tool to help farmers, Extension Educators, consultants, and Natural Resource Conservation Service staff to help monitor and improve soil health based on parameters recorded. Regular use will record long-term changes in soil health and compare effects of different soil management practices. The video instructs how one uses indicators that assess each soil's ability to function within its capabilities and site limitations. The video was recorded by field staff with professional video equipment and edited by field staff. The recording was taken on August 28, 2007 at the Soil Quality Workshop held at Bowling Green, Ohio. The video is a podcast available to the public at <http://wood.osu.edu> then click on AgNR link. The video is also part of a CD created from the Soil Quality Workshop. Distribution of the video is by Extension newsletters and media releases.

OVERVIEW OF INEXPENSIVE AND EXCELLENT RETROFITTED MILKING PARLORS AND THERE OPERATION

Haugen,* V.J.¹

¹ Extension Agent, University of Wisconsin
Cooperative Extension Service, Crawford
County, Prairie du Chien, Wisconsin, 53821

Lack of understanding of the actual costs and capabilities of retrofitted milking parlors have impeded the adoption of this technology for the 13,000 herds in our state that are under 500 cows. Four low cost inexpensive and excellent retrofitted milking parlors representing herds sizes of 40 to 170 were used as

case studies to accurately allow farmers to visually assess this technologies ability as compared to industry standards. An entire milking was video taped then edited to highlight the most important aspects of the both the milking procedure and the low cost stall work equipment capability. The narrative on the video segments complemented the natural actions taking place during this typical milking and also addressed key concerns that were identified from surveys of farmers for their rational for slow adoption of this technology.

POSITIVE EFFECTS OF NO-TILL ON SOIL QUALITY – A TEACHING TOOL FOR SCIENCE TEACHERS

Rowehl,* J.E.¹

¹ Extension Educator, Penn State Cooperative
Extension, York County, Pennsylvania 17402

Teachers in Pennsylvania schools incorporate agricultural literacy into science class curriculum. The extension educator was asked to lecture about soils and soil conservation. Video footage that had been taken for use in farmer meetings was edited to address a seventh grade science class audience. The goal was to make the connection between the principles learned in the classroom unit and practical application on a farm. Segments were selected that introduce the concept of no-till, benefits in soil erosion control, energy conservation and farm profitability. Excerpts from interviews with three farmers were chosen to give the message that no-till practices also helps maintain soil health and productivity. The videography, editing, script and narration were all done by the agent submitting this entry. The video was supplemented with a slide show on soil properties and a slake test demonstration using soil clods from a tilled and no-tilled field; showing how no-till enhances soil structure. One hundred fifty five (155) students received instruction. Copies of the video were made on DVD and sent to two vocational agriculture teachers to use in their classes. They also plan to introduce it to science teachers in their schools.

VIDEO TAPE / TELEVISION 2008

Blue,* L.G.¹

¹ Agricultural Extension Agent - Urban Horticulture,
North Carolina Cooperative Extension, Buncombe
County Center, Asheville, NC 28801

As the population of Buncombe County has grown to over 218,000, the demand for horticultural information appropriate to the area has increased accordingly. And as the population increases, so does the potential for environmental impacts of inappropriate gardening practices. Mass media outlets such as TV offer a means for providing environmentally sound information to the largest number of people. Almanac Gardener is a North Carolina Cooperative Extension program which has been produced by public television, UNC-TV, for 25 years. The half hour show airs weekly from April through August. Audience is estimated at 75,000 viewers in North Carolina and surrounding states. This 5 minute segment was filmed by the UNC-TV film crew in a home garden in Asheville. It was filmed in 2006 and aired April 7, 2007. The intent of the video was to encourage viewers to participate in vegetable gardening and to help assure their success with knowledge of correct planting.

Fact Sheet

National Winner

PLANTING FOR THE FUTURE

Bost.* T.D.¹

¹ Extension Agent, North Carolina Cooperative Extension, Forsyth County, Winston-Salem, North Carolina 27105

North Carolina ranks number one in the United States in urbanization, and farmland is being lost at an unprecedented rate. In order to accommodate the predicted 40% increase in the state's population by 2025, construction of subdivisions, industries and shopping areas are accelerating in suburbia. In the wake of increased development both forestland and green space in Forsyth County, N.C is in peril. Landscape architects and local planners are concerned about the alarming number of acres lost both in land and urban forest trees. Subsequently, residents of our major city (Winston-Salem) have lost significant numbers of trees to violent storms in the past decade. Replacement trees in established landscapes and new plantings on construction sites often lack important canopy trees that will provide future residents with the urban forest cover that the county needs so desperately to abate noise and air pollution, and preserve our soil/ water quality.

National Finalist

DROUGHT SURVIVAL FOR LANDSCAPES FACT SHEET

Jackson.* K.R.¹

¹ County Extension Agent for Horticulture, University of Kentucky Cooperative Extension Service - Christian County, Hopkinsville, KY 42240

The *Drought Survival for Landscapes* fact sheet was produced at the height of the 2007 Kentucky drought. Its purpose was to relay information on using water wisely in the landscape. It also encouraged individuals to consider planting drought-tolerant trees and shrubs during the fall season. The Hopkinsville Water Environment Authority provided details about county water restrictions and Tom Priddy, University of Kentucky Agriculture Weather Center provided the drought records. Dr. William Fountain, University of Kentucky Horticulture Department, provided information on drought stress to plants. The fact sheet was mailed to 566 households and portions of the document were utilized by the Hopkinsville Water Environment Authority in newspaper and radio advertisements to encourage residents to curb water use. The fact sheet was compiled, edited, and designed by Kelly Jackson, Christian County Cooperative Extension Agent for Horticulture. Fact sheet duplication and mailing was completed by the secretarial staff. The fact sheet was created in Microsoft Publisher and mailed in full color.

DRIP IRRIGATION- THE BASICS

Daily, K.¹, Call.* R.E.²

¹ Program Coordinator, Arizona Cooperative Extension, Cochise County, Sierra Vista, AZ 85635

² Extension Agent, Arizona Cooperative Extension, Cochise County, Willcox, AZ 85643

Drip irrigation- also known as low-flow, micro, and trickle irrigation- is the slow, measured application of water through devices called emitters. Drip irrigation was invented in the early 1960's as an efficient way to water agricultural crops. Now, a wide variety of quality products has been developed to make drip irrigation reliable and easy to use for almost any landscape situation. This pamphlet describes the components for a basic drip irrigation system. Suggestions are made for designing a system and conversion of a sprinkler system to a drip irrigation system. This

publication targets clientele who are new to the arid Southwest. The purpose of this pamphlet is to educate people about the basic components of drip irrigation systems. There were 10,000 color copies printed. Publication funding was partially defrayed by the U.S. Army, Fort Huachuca.

BILINGUAL PROTOCOL CARD ASSURES CONSISTENT CALF RESPIRATORY EXAMS

Kohlman*, T.L.¹

¹ Extension Agent, University of Wisconsin Extension-Sheboygan County, 650 Forest Avenue, Sheboygan Falls, WI, 53085

Raising dairy replacements, the second highest expenditure on the farm behind feed costs, has become more challenging as dairy farms expand or modernize facilities. Adapting to the changing conditions of the operation requires hiring employees who can complete the necessary tasks, specifically skills related to calf management. Those hired may have little or no training and may speak another language (predominately Spanish). In response to this need, this agent developed several protocol fact sheets as part of the Dairy Workers' Training Module III-Calf Management Skills. This specific protocol card "Respiratory Exam" was developed for use as a reference and training tool to help calf workers to properly observe and make decisions in regards to treatment of sick animals, consistently, day in and day out, regardless of who performed the task. The fully illustrated, barn-friendly, laminated, English/Spanish protocol card outlines a step-by-step approach for examining a calf for respiratory disease. As part of the Dairy Workers' Training Calf Management Skills bilingual trainings, this protocol card, along with 17 others have been utilized at six pilot trainings for nearly 100 dairy workers. To date, over 330 protocol card sets have been sold or distributed to individuals in the Midwest and seven countries to be use as training tools. In addition to those protocol cards distributed at pilot trainings countless copies have been distributed by agents in other counties for their trainings. The respiratory exam scoring method featured in the protocol card was developed by UW-School of Veterinary Medicine Professor Shelia McGuirk. This agent designed and developed the laminated score card using Microsoft Publisher, printed with an HP DeskJet 960C printer and laminated with a GBC HeatSeal™ H300 laminator.

Regional Finalist

NACAA COMMUNICATIONS AWARDS PROGRAM-FACTSHEET

Marrison, David L.¹, Goerig, D.²

¹ Agriculture and Natural Resources Educator, Ohio State University Extension, Ashtabula County, 39 Wall Street, Jefferson, Ohio 44047

² Agriculture and Natural Resources Educator, Ohio State University Extension, Mahoning County, 490 South Broad Street, Canfield, Ohio 44406

This fact sheet was written in response to the increased media attention the federal noxious weed Giant Hogweed after its discovery in Ohio in 2004. This led to an explosion of questions about this plant across the state. The Educators worked to develop a fact sheet that would help residents learn how to identify the plant, learn about its danger and the control measures available. The intended audience is any resident in Ohio. This fact sheet can also be accessed by anyone who has an internet connection. The fact sheet can be accessed at: <http://ohioline.osu.edu/anr-fact/pdf/hogweed.pdf>. The draft version of this fact sheet was posted on the Ashtabula County web site during 2006-2007 received over 17,000 hits for information. The official fact sheet was posted on Ohioline on June 6, 2007 and received 1,140 hits in 2007.

THINGS YOU SHOULD KNOW ABOUT WEIGHTS AND MEASURES...

Buxton*, S.A.¹,

¹ Extension Resource Educator, Cornell Cooperative Extension, 415 Lower Main Street, Hudson Falls, New York 12839

Inspired by a discussion with a new Weights and Measures official, this 2-page fact sheet was created by researching some of the key issues and questions agricultural producers face when investigating regulation requirements. Often an afterthought for producers when they are opening a retail business, ignorance of these regulations has the ability to close their business and generate substantial fines. The goal was to provide both regulations as well as information about legal scale brands and contact information. Created in Microsoft Word then imported to Publisher, the document was then converted into a .pdf file using Acrobat Distiller in order to minimize the amount of

memory required when transmitting the final version electronically. The fact sheet was distributed via a series of e-mail lists to people in Saratoga and Washington Counties and at several meetings. It was also transmitted to local extension offices across New York State, posted on Extension web sites, the Local Development Corporation and Washington County's official web page to facilitate usage. More than 1000 fact sheets are helping remind maple, berry and vegetable producers of the rules that affect them as they move into the production season.

RAIN GARDENS - CAPTURE THE FLOW AND WATCH IT GROW!

Teague, K.A.¹

¹ Extension Agent, Arkansas Cooperative Extension Service, Washington County, Fayetteville, Arkansas 72704

Rain gardens are depressions landscaped with native plants, shrubs and trees that are irrigated through the collection of stormwater runoff. By capturing and allowing rainfall to slowly percolate into the soil, rain gardens reduce urban runoff and recharge groundwater supplies while beautifying yards and neighborhoods and attracting local wildlife. During 2007, a \$12,000 U.S. Forest Service grant through the Arkansas Forestry Commission's Urban Forestry Program supported the installation and promotion of demonstration rain gardens in Fayetteville, Arkansas. This project was a collaborative effort among the University of Arkansas Cooperative Extension Service, the Washington County Master Gardeners, Beaver Water District, the University of Arkansas Landscape Architecture department, the City of Fayetteville, Fayetteville Public Schools, the Illinois River Watershed Partnership, the Botanical Garden of the Ozarks and Seven Hills Supportive Housing. To enhance rain garden awareness and education, a fact sheet was developed to describe the function, benefits, ease and beauty of establishing rain gardens in Northwest Arkansas. Along with a companion list of potential native plants suitable for area rain gardens, 7,500 copies of the "Rain Gardens - Capture the Flow and Watch it Grow!" fact sheets were printed with more than 3,000 copies distributed in conjunction with civic presentations, school programs and educational displays during 2007. The fact sheets, extensive press coverage and public garden locations at elementary schools, city parks and a homeless transitional housing facility have sparked tremendous public interest and rain gardens are now being created

at additional homes, churches, schools and city facilities throughout the region.

NATIVE PLANTS OF ALASKA: A GUIDE FOR PRODUCING AND CULTIVATING

Gorman, B.¹, Roller, J.²

¹ Extension Agent and Professor, University of Alaska Fairbanks, Anchorage, Alaska 99508

² Extension Program Assistant, UAF, Sitka, Alaska 99835

Indigenous plants are valuable to cultivate because they adapt to the local environment, are less prone to disease and pests than imported plants, and provide food and cultural wellness for rural Alaskans. With those details in mind, researchers compiled a list of 10 culturally and/or commercially viable native plant species centered on several concerns: Native elders finding or collecting culturally relevant wild plants; challenges to grow plants in a climate with short growing seasons and wet weather conditions; lack of reliable research about propagating, cultivating and using native plants for rural Alaskans; and land managers urging use of native plants when replacing any ground disturbances such as rest areas or road construction. Researchers next tested specific propagation techniques in Sitka, Alaska's challenging environment. They hoped to find methods that required limited resources so home gardeners could grow plants using such simple structures as hot beds with bottom heat, cold frames or small indoor greenhouses. The data was then compiled into 10 fact sheets, which are available in print and online. And some of those plants were used to landscape the Starrigavan Campground entrance, the Sitka National Historic Park and the Thimbleberry/Heart Lake Trail. Unfortunately, there weren't enough plants to fulfill all the requests, but that detail alone signals the project's success and the potential market for native plants. The native plant researchers are also supplying the U.S. Forest Service with native plants for restoration or landscaping projects. Side projects include: demonstrations of basic methods to propagate wild plants, incorporating native plant propagation techniques into state Master Gardener programs and assisting gardeners and cottage industry start up businesses. The results from three field seasons can be viewed at www.uaf.edu/ces/ruraldevelopment/index.html.

WINDING DOWN FOR WINTER – UNIVERSITY FACT SHEET

Gunnell*, J.¹

¹Horticulture Agent, Utah State University Extension, P.O. Box 618, Farmington, Utah 84025, jaydee.gunnell@usu.edu

The Utah State University fact sheet, Winding Down for Winter, was produced by the USU – Davis County Horticulture Agent in order to provide home owners with tips on preparing their yards for winter. The fact sheet was written as a response to multiple public inquiries regarding activities associated with end of the growing season. The fact sheet expounds on different tasks such as digging and dividing perennials with special instruction on storing winter-sensitive perennials, cleaning up the vegetable garden, utilizing fall refuse for composting, winterizing equipment, protecting trees and shrubs from frost damage, lawn care, weed control options, and sprinkler maintenance. The fact sheet was peer-reviewed by Utah State University and is made available to the public on the Utah State University Extension website located at: (<http://extension.usu.edu/publications>).

COMMUNICATION AWARDS PROGRAM- FACT SHEET

Billingsley*, E.D.¹

¹ County Extension Director, University Illinois Extension-Williamson County, Marion, Illinois 62959

Clients have been coming to the county office seeking information about trail cameras. It was apparent that no information was available through Illinois Extension. The county director decided to address the need and provide information. The fact sheet was compiled and edited by the director and it was produced by the county staff. It was felt that residents and non resident hunters alike could use the information. The purpose of the fact sheet was to help individuals make informed decisions about the use and purchase of a trail camera. A press release was submitted to the media and request immediately for the fact sheet began to come in. A local TV station also did a news spot with the county director. The fact sheet has been requested or retrieved off the county extension web site by an average of over 50 individuals monthly to date. It was also shared with 27 other Extension counties to be shared with their clients

and recently requested by a major hunting site to soon be released.

REASONS TO BUY LOCAL PRODUCE

Hunsberger, L.K.¹, Dill, S.P.²

¹ Extension Educator, Agriculture and Natural Resources, Worcester County, P.O. Box 219, Snow Hill, MD 21863

² Extension Educator, Agriculture and Natural Resources, Talbot County, P.O. Box 519, Easton, MD 21601

This Fact Sheet was developed to outline the reasons and importance of buying local farm products to the nonagricultural or consumer audience. Most fresh fruits and vegetables produced in the U.S. are shipped from California, Florida, and Washington and travel an average of 1,300 miles from farm to table. Produce sold in supermarkets is chosen for its ability to withstand industrial harvesting equipment and extended travel. Travel time from farm to supermarket can range between seven to fourteen days. This is just one of the many reasons local consumers should be educated about agriculture and learn more about their food supply. This fact sheet has been distributed to over 120 consumers in hopes that they may change their buying habits and increase their purchase of local farm products. This fact sheet has also been distributed to educators interested in buy local campaigns in their area.

DAIRY REPRODUCTION CALENDAR

Goodling, *R.C. Jr.¹

¹ Dairy Extension Educator, Penn State Cooperative Extension in Lebanon County, Lebanon, PA 17042

Reproductive management on dairy operations has become increasingly important to the financial success of a dairy operation. Advanced techniques and protocols related to dairy reproduction can sometimes be confusing and frustrating. Dairy operations may decide to adopt these techniques, specifically synchronization protocols, for various reasons in developing and maintaining successful dairy reproduction management. In an effort to simplify explanation to clientele, including the Anabaptist community, the reproduction calendar was developed to demonstrate how a simple calendar can be used to track different synchronization protocols. Developed

by the field educator and produced on field equipment, the factsheet was devised to be simple and direct in explaining some of the more popular synchronization programs. Over two dozen various dairy producers have received the calendar to date. Producers that have used the factsheet have shown greater compliance to synchronization protocols and improved reproductive rates. The factsheet has become a staple handout for any reproductive dairy assessments in Lebanon County, PA and the rest of the Capital Region.

Publication

National Winner

PLANTS POISONOUS OR HARMFUL TO HORSES IN THE NORTH CENTRAL UNITED STATES

MARTINSON, K. L.¹

¹ Extension Educator, University of Minnesota Extension, Andover Regional Office, Andover MN 55304

Each year numerous horses are injured or die as a result of accidentally ingesting poisonous plants. Recent wide-spread drought has exacerbated the problem, and many horse owners are simply unaware of the potential injury from poisonous plants. Few resources exist that aid horse owners in identification of poisonous plants. *Plants Poisonous or Harmful to Horses in the North Central United States* aids horse owners in plant identification by presenting numerous color photographs for eighteen plants commonly responsible for poisoning in the North Central United States. The peer-reviewed publication also discusses, in lay-person terminology, the toxin(s) responsible, when the plant is toxic, signs of toxicosis, and equine treatment options. It was published in November 2007 by the University of Minnesota Extension after receiving a grant from the Minnesota Racing Commission. Since November 2007, almost 2,000 copies have been sold or distributed to horse owners and University faculty in more than twenty-five states and Canada, Horse councils, Equine Practitioner Associations, State and National Pony Clubs, breed organizations, 4-H leaders and members, and has been used in equine Extension programming in Minnesota and elsewhere. My role as co-author included securing and managing grant dollars; hiring and managing a graphic designer and printer; determining content; writing information pertaining to weed identification and control; over-seeing

the peer-review process; marketing and distributing the publication; and using the publication in Extension programming. Co-authors Hovda and Murphy (non-members) assisted with securing grant dollars, determining content, and writing information pertaining to toxicology and equine treatment options.

National Finalist

QUICKBOOKS PRO® FOR DAIRY BUSINESSES PUBLICATION

Goodling, *R.C. Jr.¹

¹ Dairy Extension Educator, Penn State Cooperative Extension in Lebanon County, Lebanon, PA 17042

Financial software packages follow the same trends as other technologies, continually evolving and shifting. With the increase in availability of home computers, more dairy producers are using financial software packages (such as QuickBooks Pro®) to do basic record keeping, but also to assist in the management of the dairy operation. The objective of this publication was to provide users with simple screenshots and steps to the various uses of such software, from the basic account setup thru some of the simple reports and graphs available. The publication was developed and reproduced by field educator and equipment, and was used to supplement a three session workshop that included computer lab usage for teaching and practicing software techniques. This publication has not only been used for participants in the workshop series, but was also made available to producers that could not attend the workshop. Most publication users have found it very useful as a reminder to what was covered in the class, or as a resource to the basic options available in seemingly complex financial software packages.

REVISING AND PRINTING THE 'SMALL PASTURE MANAGEMENT GUIDE'

Barnhill*, J.V.¹, McKendrick, S.S.²

¹ Agriculture Agent, Utah State University Extension, 1181 North Fairgrounds Dr., Ogden, UT 84404, jamesb@ext.usu.edu

² Small Acreage Program Coordinator, Utah State University Extension, ECOB 116, Logan, UT 84322, scott.mckendrick@usu.edu

The 'Small Pasture Management Guide for Utah' was instigated by a group of Extension, Natural Resource

Conservation Service, and Farm Service Agency personnel who met to evaluate the agricultural needs of the area. A rapid increase in small acreage lots was taking place with small pastures replacing farm land. James Barnhill coordinated this effort, taking pictures, acquiring permission to use parts of other publications, verifying accuracy, and condensing the information that others provided. The basic layout of the guide was completed at the Extension Office, and then a commercial designer was employed to get it set up for printing. The initial printing of 11,000 copies took place in 1999. The guide was used by Extension Agents in Utah and several surrounding states. In 2007 James Barnhill and Scott McKendrick received funding to make a significant revision of the guide and reprint it. University of Wyoming Extension joined as a partner in the revision and contributed money towards its printing. Information was updated, dryland pasture information added, new pictures added, and references to Utah removed. A Wyoming Extension Agent participated in the review process. The final publication was reviewed through the USU Extension review system and in January of 2008 16,000 copies of the 'Small Pasture Management Guide' were printed.

BOYD COUNTY MASTER GARDENERS 2008 CALENDAR

Bowling,* L.B.¹

¹ Extension Agent, University of Kentucky Cooperative Extension, Boyd County, Catlettsburg, Kentucky 41129

The Boyd County Master Gardeners realized that there was need for a basic gardening calendar for homeowners. They decided that it should be geared mainly towards the production of fruits and vegetables. With this in mind, they set out to develop a calendar geared towards the proper planting dates for our area of northeastern Kentucky. As the horticulture agent for Boyd County I worked with them on the layout and obtaining the proper information for the calendar. I also created a photo contest to correlate with this publication and asked the Master Gardeners to submit photos in several categories with the winners to be featured in the calendar. The calendar has been given out at Master Gardener meetings and distributed to approximately 100 individuals who have attended various gardening seminars. With the use of this calendar I hope that there will be more homeowners who will have a productive garden with less disease and insect problems. The calendar will be published annually and

distributed via meetings and gardening classes. The overall response to this publication has been very positive and we have new ideas being listed for next year's calendar. The calendar is prepared in Microsoft Publisher format and then copied and bound by office personnel using office equipment.

Regional Finalist

RURAL DEVELOPMENT PROJECTS: SERVING PEOPLE AND COMMUNITIES IN THE LOWER YUKON-KUSKOKWIM RIVERS, THE COPPER RIVER VALLEY AND SOUTHEAST ALASKA

Gorman,* R.¹, Bybee S.², Dudick, M.²

¹ Extension Agent, University of Alaska Fairbanks, Anchorage, Alaska 99508

² Extension Administrative Assistant and Graphic Designer, UAF, Anchorage, Alaska 99508

³ Extension Media Services Editorial Assistant, UAF, Anchorage, Alaska 99508

This annual easy-to-read publication shares and updates such research and accomplishments by the Rural Development Program as water quality, landfills and recycling, biomass as an energy source, youth education, economic feasibility studies, Native plants and teacher in-service training. The audience of more than 1,000 readers includes researchers, intellectuals, community and business leaders, local and national government officials and, especially, Alaskans who will use this information to enhance their day-to-day lifestyles. In return, the magazine creates an ongoing dialog between the readers and the RDP staff to help determine future projects and needs. As far as creating the 24-page glossy report, Bob Gorman acted as publisher, Mark Dudick as writer and editor, and Susan Bybee as page designer. The end result arrived from the printer in early February, 2008, and was then mass-mailed, e-mailed and posted on the RDP website, www.uaf.edu/ces/ruraldevelopment.html.

ASIAN SOYBEAN RUST IN ALABAMA

Sikora,* E. J.¹, Delaney, D. P.¹, Delaney, M. A.¹, Mullen, J.¹

¹ Extension Specialists, Alabama Cooperative Extension System, 153 ALFA Agricultural Services Building, 961 South Donahue Drive, Auburn University, Alabama 36849-5624

Asian soybean rust (ASR) is caused by the fungus *Phakopsora pachyrhizi*. The disease can cause 100% yield loss to soybeans when not managed correctly. ASR was first detected in the continental United States in 2004. In 2007, ASR was found in 19 states and in over 300 counties in the U.S. This publication was developed for use by farmers, agricultural professionals and extension educators in the Southeast to better understand the disease. The publication highlights the symptoms, biology and management of the pathogen and includes 13 colored images to assist in identification of the disease. Over 1,000 copies have been distributed through county offices and during soybean production meetings this year. The publication was recently disseminated at the National Soybean Rust Symposium in December, 2007. The publication is also available on the Web at the following link: <http://www.aces.edu/pubs/docs/A/ANR-1310/ANR-1310.pdf>. The development and writing of the publication was completed by extension educators affiliated with the Alabama Cooperative Extension System (ACES). The publication was produced by members of the ACES Publication division.

PAPAYA RINGSPOT VIRUS DISEASE FOUND ON LANAI “A PICTORIAL GUIDE ON DISEASED SAMPLES FROM LANAI”

Nagata, * N.M.¹

¹ Assistant Extension Agent, Maui County Cooperative Extension Service, University of Hawaii, College of Tropical Agriculture & Human Resources, 310 Kaahumanu Avenue, Bldg. 214, Kahului, Hawaii 96732

The papaya (*Carica papaya*) fruit is a delicacy and is commonly grown by many people throughout Hawaii. This plant is relatively easy to grow with few serious pests and diseases. However, one of the most serious diseases on papaya trees is caused by the papaya ringspot virus (PRV), which is spread by aphids. Once established, the disease will eventually become an epidemic and make control measures impractical or ineffective. PRV control can be successful if implemented soon after an outbreak through an intensive educational and roguing program. This publication is the first report of PRV on the island of Lanai. This disease is now on four of the six major Hawaiian islands (Oahu, Hawaii, Maui, Lanai), with Kauai and Molokai being uninfested. In January 2007, PRV was discovered on several papaya trees in a commercial orchard on Lanai. Due to this new disease

outbreak, a PowerPoint publication was quickly produced and electronically disseminated through email to more than 270 residents of Lanai and throughout the state. The local newspaper on Lanai also received a copy to help spread this information. This color pictorial publication has created an awareness on this disease, provided a diagnostic guide for PRV and notified Lanaians on who to contact with questions about this disease. Another purpose of this informational campaign was to determine if the residents and the Hawaii Department of Agriculture (HDOA) were interested in developing a disease eradication or containment program for Lanai. This publication was the sole effort by the author.

NACAA COMMUNICATIONS AWARDS PROGRAM, PUBLICATION SECTION AQUACULTURE SITUATION AND OUTLOOK REPORT 2007: NEW JERSEY

Flimlin,* G. E.¹, Myers, J. J.²

¹ Marine Extension Agent, County Extension Department Head, Rutgers Cooperative Extension of Ocean County, Toms River, New Jersey 08755

² Aquaculture Development Specialist, NJ Department of Agriculture, Fish and Seafood Division, Trenton, NJ 08625

The USDA Northeastern Regional Aquaculture Center (NRAC) has an on going Regional Extension Program that works exceptionally well. Agents and Specialists participate mainly for the good of the aquaculture industry and to assist others extension professionals with information of specific and general interest. Each state's extension personnel decided to participate along with other State aquaculture professionals to document the level of aquaculture in each respective state. In the past, this Situation and Outlook report was granted to one institution in the region, but NRAC was going through some leadership changes and it was decided that the Regional Extension Project would do individual reports instead of a large all encompassing one. This allowed for a faster response and more flexibility in the future for each state's publication. In New Jersey, the agent worked with a representative from NJ Department of Agriculture to produce the NJ Situation and Outlook Report in 2007. Both have extensive knowledge of the particulars of aquaculture in the state from long-term experience and from the information shared from the NJDA Aquaculture License data bank. The publication was written by both authors and edited and formatted by a colleague in Connecticut who is the PI of the

Regional Extension Project so that all the reports looked similar. Each state can print as many copies as necessary for their own use. This report is on the NRAC website (http://www.nrac.umd.edu/files/Factsheets/NRAC-107-2007_New%20Jersey.pdf) and has been distributed already at three meetings so far since publication in late 2007 to inform the meeting participants about the level of aquaculture in the state (75 distributed). It will also be linked through the Rutgers New Jersey Agricultural Experiment Station website for Extension Publications. It will be used for the foreseeable future at most aquaculture meetings to inform the public and the industry alike about the level of aquaculture, the types of culturing, the ongoing research and a listing of the people in the state who are involved in aquaculture in research, education, extension, industry, state agencies and testing. It serves to help the aquaculture extension personnel to be able to access culturing information and contact information for each of the states within the region, a great help when trying to assist a potential grower. The best part of this publication is that it can be easily updated so that the information is kept current. It will also be a part of the agent's basic package that is sent out to prospective aquaculturists.

2007 LEASING ARRANGEMENTS SURVEY RESULTS—A PUBLICATION FOR SMITH COUNTY CITIZENS FOR RENTING/CASH LEASE INFORMATION

Wick, *S.L.¹

¹ Smith County Agricultural Agent, K-State Research and Extension, 218 S. Grant, Courthouse Smith Center, KS 66967

The purpose of this handout is to provide supplemental information on results of the Smith County leasing arrangements survey. I helped to develop the surveys for each of the different categories with the help of our NW Area Extension Agricultural Economist. The survey was randomly sent out to 75 producers with a 40% return rate. This information was provided to producers at several winter educational events including the Coffee Shop meetings and Women Focusing in on the Family Farm Workshop along with producers or landowners stopping by the Extension Office. Producers in attendance, at these events, were able to pick up the information and ask questions of myself. The 75 producers in attendance at the meetings increased their knowledge of lease

development along with 85 additional clientele who stopped by the Smith County Extension Office for a total of 160 distributed. I developed and compiled the information that appears in the publication. Word processing, digital camera and a color copier were used for duplication.

PUBLICATION – FORAGE DROUGHT MANAGEMENT

Held, *N.E.¹

¹ Extension Educator, Purdue Cooperative Extension Service, Dearborn County, Aurora, Indiana, 47001

A drought during the summer of 2007 presented Dearborn County livestock producers with some serious forage supply challenges. To address these challenges faced by producers, a publication entitled "Forage Drought Management" was developed. The target audience for this publication was local livestock producers, both large and small, who faced poor pasture conditions and low hay supplies. The publication addressed tips for finding sources of hay, alternative grazing and feeding strategies to stretch forage supplies, including species-specific recommendations, and steps to take to help pastures, hay fields, and hay supplies recover the following year. Web links to additional resources were included at the end of each section. The publication was developed by the educator in Microsoft Word format using a Purdue Extension publication template. The publication was printed at the Dearborn County Extension Office and was mailed to 107 producers on the Dearborn County livestock producer mailing list. An electronic version, in Adobe PDF format with clickable web links, was developed and posted on the Dearborn County Extension website. The electronic version was distributed via email to local agribusinesses and other local agricultural agencies, as well as to all 92 Extension Offices in Indiana. The publication was also utilized by the Purdue Extension Forage Specialist and other Purdue Extension Educators in responding to the drought and short forage situation. Livestock producers expressed appreciation of the publication and indicated the information provided to them was helpful in dealing with the short forage situation.

WEB PAGE

National Winner

THE “eXtension” HORSEQUEST COMMUNITY OF PRACTICE WEBSITE: WWW.EXTENSION.ORG/HORSES

Greene, *E.A.¹

¹ Extension Equine Specialist, University of Vermont, Burlington, VT 05405

eXtension is the national extension website that was officially launched in February 2008. As the first “Community of Practice” (CoP) or area of expertise to publicly launch content on this site (September 2006), HorseQuest has over 45 equine experts from 29 states contributing to the peer-reviewed content. The site is user friendly, and clientele can “rate” the information and provide comments/feedback. The areas include: 1. Frequently Asked Questions (FAQs), 2. Ask the Expert, 3. Learning Lessons, 4. Basic Information, 5. News Feeds and Calendars, 6. Articles from extension personnel, and 7. Quarterly Web Chats with Extension Experts. Links are located both across a menu bar on the top and along the right menu. Site usage statistics have increased significantly ($P < 0.001$) in the 17-month period. There have been highly significant increases over time in unique visitor traffic (5,325-40,573 visitors/month), the number of times that users visited the site (7,592-54,553 visits/month), and page hits over time (255,922-1,640,069 hits/month). The highly significant increase in visitors and pages visited shows that the audience is recognizing the value of this new resource. The effectiveness and a key strength of HorseQuest and eXtension overall is the ability for Cooperative Extension to provide a place to find trusted, peer-reviewed information in one spot on the Internet. My roles include: HorseQuest CoP chair (since 2007), organizing contributors, content contributor, reviewer, FAQ expert, and author of multiple national presentations on HorseQuest.

National Finalist

“WEED OF THE MONTH” WEB PAGE

Van Vleet, Stephen M.¹

¹ Extension Educator, Agriculture and Natural Resources, Washington State University, Whitman County, Colfax, Washington 99111

The “Weed of the Month” web page was created to provide web page visitors with accurate, relevant, understandable and useful information about problematic weeds, particularly invasive weeds of eastern Washington and northern Idaho. By visiting the web page, laypersons having a weed problem can correctly identify the problem weed using photos and detailed descriptions that often include distinguishing characteristics. Guests of the web page are often most interested in control methods, which are discussed in detail for each weed and generally include mechanical, chemical and biological control measures. A web page tracking system records the number of visitors. The web page had over 4,700 visitors in 2006 and over 11,000 visitors in 2007. The web page consists of a gallery of weeds, one for each month, dating back to January 2006, at which time Steve Van Vleet created its design. Once a month, he selects, researches and writes about a noxious weed to include on the web page. He then adds photos of the weed and any effective bioagents (insects) to the written material, and provides all of the information to a staff member, who then adds the weed to the web page according to the predetermined design. The “Weed of the Month” web page is accessible from the Whitman County Extension homepage, and is often referenced in extension newsletters. Web Page: <http://whitman.wsu.edu/weeds>

MASTER YOUR GARDEN BLOG – WEB PAGE ENTRY

Turner,* D.A.¹, Mathews, T.S.²

¹ Extension Agent, North Carolina Cooperative Extension, Henderson County Center, 740 Glover Street, Hendersonville, NC 28792

² Extension Agent, North Carolina Cooperative Extension, Haywood County Center, 589 Raccoon Rd, Suite 118, Waynesville, NC 28786

The population of Western North Carolina continues to be the quickest growing area of the state. Two extension agents decided to develop a blog to help proactively educate the computer literate homeowners in the Western Counties of North Carolina. The Master Your Garden Blog was created to fill the void in homeowner information being disseminated on a local level. This website shares information with residents about pertinent gardening chores, upcoming events, and updated pest management information. Since the website was initiated in April 2007, we have added 49 individuals to the mailing list to receive an update each

time a new post is added. The website has been viewed by over 2,500 people in the last year. Recipients of this valuable horticulture information range from home gardeners to horticulture industry employees. The content on the Master Your Garden Blog is prepared, managed, and edited by both Diane Turner and Tim Mathews. Website address: <http://www.masteryourgarden.blogspot.com>

FRESH FROM THE WORLD... WHERE YOUR FOOD COMES FROM

Higgins, * R.H.¹

¹ IPM Educator, Agriculture, University of Illinois Extension

The Fresh From The World... Where "Your Food Comes From" website took over two years to complete from its initial inception until its release on the University of Illinois Schools Online homepage. The concept behind the page was to provide schools and home school audiences an educational web site that would provide information on the history and science behind their favorite foods. The intent of the site content was to make our audience aware of the vast agriculture network and the complex wholesale and retail web that exists that allows individuals to get almost any food almost any time during the year. The web site was developed by the creative team which included Russ Higgins, Greg Stack and Jane Scherer. Upon development of content the web site was completed in-house with campus graphic artists and Allesandro Bellina, web applications specialist. The web site was released in early February of 2008 and received over 36,000 hits in its first thirty days. <http://www.urbanext.uiuc.edu/food>

Regional Finalist

SHEBOYGAN COUNTY EXTENSION DAIRY WEBPAGE

Kohlman, *T.L.¹

¹ Extension Dairy & Livestock Agent, UW-Extension, Sheboygan County, Sheboygan Falls, Wisconsin 53085

The UW-Extension Sheboygan County dairy web page (<http://sheboygan.uwex.edu/ag/dairy>) was created to provide clientele access to local UW-Extension programs and resources via the internet. The web page was developed Winter 2007-2008 and is a work in

progress. The main page highlights upcoming events as well as provide links to brochures describing the programs. Major programming for this agent includes: Dairy Heifer Management, Milk Quality, Herd Health and Biosecurity, Dairy Modernization, Dairy Workers' Skills Training and Youth Livestock. Dairy Heifer Management and Youth Livestock Pages were designed to be more "local" providing timely information of meetings, forms and resources. Links have been developed for the milk quality and dairy modernization programs to help promote a state-wide effort in these areas. This web page was designed, developed and maintained by this agent and support staff member using Microsoft Contribute Software. The web page server is provided by University of Wisconsin-Extension.

DESIGNING AND MAINTAINING A QUALITY COUNTY EXTENSION WEBSITE

Majumdar, * A.¹, Gunkel, L.¹, Berdal, K.¹, K. Kroeplin¹

¹ Cooperative Extension Service, North Dakota State University, Finley, North Dakota 58230

A recent Integrated Pest Management survey in North Dakota has indicated that about 7 to 21% (average = 17%) crop producers use the Internet to locate agricultural information. Steele County Extension Service had four basic web pages until August of 2007. The website was completely redesigned in September 2007 to make it more user-friendly, and it currently has 52 web pages providing access to over 45 county Extension publications. At present, program areas that are reported digitally to clientele include cropping systems, horticulture, 4-H, youth development, and family nutrition. This website also provides access to the weekly Extension radio show conducted by team of educators and also to numerous PowerPoint presentations developed by this team. Steele County Extension website is interlinked with town and community newspaper websites to direct traffic. Four-H farm families and crop producers were provided training in navigating the new website via workshops, radio programs, and print publications. According to the 2008 NDSU Internet Usage report, the number of visitors on the website has increased 480% since the new website was launched. The number of visit before the launch of the website was 44 per month but the current rate of visitations is over 2,000 per month. The website is not only a powerful channel for rapid information transfer but also a means for digitally archiving Extension projects. Increasing number of farm families in Steele and adjacent counties, university and industry

collaborators are using the county Extension website as a community resource. URL: www.ag.ndsu.edu/county/steele/.

THE ALABAMA COOPERATIVE EXTENSION SYSTEM ANIMAL SCIENCE AND FORAGES TEAM WEBSITE

Kelley, * W.K¹

¹. Regional Extension Agent, Alabama Cooperative Extension System Southwest Alabama Region, Mobile, Alabama 36608

Technology plays an integral role in modern society. The World Wide Web and instant messaging capabilities have enabled mass transactions of knowledge to be commonplace. The Alabama Cooperative Extension System Animal Science and Forages Team created the Alabama Cooperative Extension System Animal Science and Forages Website with the vision of utilizing this widespread and easily accessible media to make University Researchbased data available to a much broader spectrum of the population than has ever been possible using conventional extension programming protocol. These conventional extension protocols have included such procedures as standard hardcopy mailings and producer meetings. The website allows the Animal Science and Forages team to disseminate timely information regarding upcoming meetings, educational opportunities, and current happenings. The website contains links to major programs within Extension. The website contains links to research based information regarding all the major classes of livestock grown in Alabama. The website also includes an interactive map of Alabama which breaks down the assignments of the Regional Extension Agents that serve the Animal Science and Forage producers of Alabama. Each Regional Extension Agent's name on the map links the producer to contact information regarding the Regional Extension Agent. This website allows the Animal Science and Forages Team to be able to reach out far beyond the boundaries of their region, the state of Alabama, and even outside the boundaries of the United States.

RHEA COUNTY AG DAY WEBSITE

Lamb, * J.D.¹, Grant, K.D.²

¹. Extension Agent, UT Extension, Rhea County, Dayton, Tennessee 37321

². Administrative Support Assistant, UT Extension, Rhea County, Dayton, Tennessee 37321

The Rhea County Ag Day website was created to help promote the Ag Day program. In 2001, Rhea County government purchased sixteen acres in Evensville to develop a fairgrounds, however a fair is a large undertaking and requires infrastructure. The Extension office was appointed to oversee the development, and as a result has worked with volunteers to build a livestock show barn, picnic area, gazebo and walking trail. Ag Day was developed as a precursor to the county fair. Its primary purpose is to celebrate rural life and agriculture in Rhea County. The day includes our county 4-H beef and sheep show, antique tractor show, youth exhibits and other educational exhibits. The website includes history of the site, schedule of events, activities, forms and contact information. The site is linked to the UT Extension office and the Dayton Chamber of Commerce. The site can be found at www.rheacountyagday.com.

OREGON SMALL FARMS WEBSITE: A VALUABLE EDUCATIONAL TOOL FOR STATEWIDE CLIENTELE

Andrews, N.¹, Angima, S.D.², Fery, * M.A.³—, Lucas, C.M.⁴, Matthewson, M.⁵, Stephenson, G.O.⁶

¹. Extension Faculty, Oregon State University Extension Service, Clackamas County, Canby, Oregon 97013

². Extension Faculty, Oregon State University Extension Service, Lincoln County, Newport, Oregon 97365

³. Extension Faculty, Oregon State University Extension Service, Benton County, Corvallis, Oregon 97330

⁴. Extension Program Assistant, Oregon State University Extension Service, Benton County, Corvallis, Oregon 97330

⁵. Extension Faculty, Oregon State University Extension Service, Jackson County, Central Point, Oregon 97502

⁶. Extension Faculty, Oregon State University Extension Service, Department of Crop & Soil Science, Corvallis, Oregon 97331

The Oregon State University Extension Small Farms program team created and maintains an educational website valuable to the clients they serve. Containing original extension materials, such as quarterly e-newsletters, farmers market technical reports and the organic fertilizer calculator, a calendar of events, and reviewed links to other web-based material, Oregon Small Farms website is easily navigated to find useful information. Created in 1998 and periodically updated,

the website appearance and content were thoroughly updated and reorganized in 2007. Also added was a content management system that allows faculty to easily maintain web segments. Usage data for 2007 show that there were 63,389 Discrete Sessions, 183,000 Page views, and 585,000 hits. Total bytes transferred during 2007 were 19.4 GB averaging 54.4 MB per day. The Oregon Small Farms homepage is located at <http://smallfarms.oregonstate.edu>.

EASY-TO-ACCESS WEBSITE CALCULATES COST TO WOOD-HEAT RURAL ALASKA HOMES

Gorman, * B.¹, Elder, L.², Veach, H.³, Petersen, K.⁴, Knight, A.⁵

¹ Extension Agent and Professor, University of Alaska Fairbanks Cooperative Extension, Anchorage, Alaska 99508

² Extension Natural-Resource Economist, UAF Cooperative Extension, Anchorage, Alaska 99508

³ Extension program assistant, UAF Cooperative Extension, Glennallen, Alaska 99588

⁴ Extension program assistant, UAF Cooperative Extension, Prince of Wales Island, Alaska 99919

⁵ Extension media technician, UAF Cooperative Extension, Anchorage, Alaska 99508

The Extension staff is forever wrestling with reaching folks scattered throughout rural Alaska, especially about alternatives to the escalating cost of fuel oil. One solution to “increasing distance delivery” came in the guise of a wood-burning website, www.alaskawoodheating.com. This site details information to lessen the dependence on dwindling oil supplies through the state’s renewable resources—mainly trees. Features include an interactive map listing harvestable trees by region, tree-harvesting safety, home and municipal heating studies, links to manufacturers and, best of all, a heat-energy calculator. This easy-to-use gadget computes heating costs based on home location, square feet, insulation, heat system, type and cost of fuel. Another section offers a tree-species table to determine the amount of heat each type yields. Cottonwood, for instance, logs in at 14,500,000 Btu’s per cord, while birch tops the list at 23,600,000 Btu’s per cord. Any person can click anywhere on the map and get the cost calculator for a tree species in that area. The information can also be easily accessed via dial-up, DSL or cable. Finding the data and the right people with the right information took nearly a year. The efforts resulted applications for any Northern environment. A recent visitor to the site from Vermont commented: “The information is extensive and

helpful, especially the conversion table. I found the map helpful, too, in knowing where the sources of wood are. Downloading is really fast and the pictures are timely and colorful.” Indeed, the site offers a community intranet where people all over the state (and the world) can interact and share information.

Find the website at www.alaskawoodheating.com.

RUTGERS COOPERATIVE EXTENSION OF GLOUCESTER COUNTY AGRICULTURE AND RESOURCE MANAGEMENT WEB PAGE

Infante-Casella*, M.L.¹, Frecon, J.L.², Cummings, M.³

¹ Agricultural Agent, Rutgers NJAES Cooperative Extension, Gloucester County, Clayton, NJ 08312

² Agricultural Agent, Rutgers NJAES Cooperative Extension, Gloucester County, Clayton, NJ 08312

³ Program Associate, Rutgers NJAES Cooperative Extension, Gloucester County, Clayton, NJ 08312

Over the past decade more extension clientele have become accustomed to receiving information via the web. In 1997, the Rutgers Cooperative Extension, Agriculture and Resource Management Agents in Gloucester County embraced the idea of posting information for the public on a web site. Now, in 2008 the web site has evolved to include a diversity of information related to agriculture, horticulture, and natural resources. Along with information created by the two agents and a program associate in the county, links to related issues are posted. Regularly published newsletters from the extension office, the county board of agriculture newsletters, web blogs, forms for regulatory programs that the extension office provides assistance for, research reports, and other pertinent information is posted on this site. One important aspect of the site is the calendar of events that regularly includes extension program information and registration forms. New in 2008, power point presentations from extension educational events are being added. In 2007, there were 588,590 hits to this web site as recorded by our Rutgers NJAES, Cooperative Extension web master. <http://gloucester.njaes.rutgers.edu/ag>

NATURAL GAS EXPLORATION AND LEASING WIKI

Balliet, K. L.¹

¹ Multicounty Extension Educator and CED, Penn State Cooperative Extension, Central Susquehanna Counties, Middleburg, Pa 17842

Advances in computer imaging and drilling technology, and the economic need for new sources of energy, have driven dramatic increases in natural gas exploration in Pennsylvania. Tens of thousands of landowners continue to be contacted by energy companies, landmen, and speculators seeking to purchase or lease oil and gas rights. The combination of unfamiliar terminology, very complicated leases, and high pressure leasing strategies reduces the chances of landowners making good decisions based on accurate facts and well thought out ownership goals. Developing a program to help landowners understand the process of gas exploration and the impacts of natural gas leases presented unique challenges to the Extension team¹. First there was a lack of expertise within the University to address the issues, second, any outreach had to be agile, and be able to reach clientele anywhere in the state on very short time frames. One element of that program is a collaborative networked learning wiki that provides: 1) a clearinghouse for electronic publications, web-sites, and reference materials deemed relevant by the community, 2) a place for landowners to ask questions of experts from inside and outside extension, and 3) provide an open forum for the exchange of any ideas and issues which the community may identify. The wiki was first published in March of 2007, with the author creating and developing the majority of pages using a free wiki provider. However, by definition, this website is the product of the community of stakeholders which includes: landowners, energy companies, consultants, extension and attorneys. A free forum page was later linked to the wiki to provide better "question and answer" functionality for clients. In a one month period, one year since its inception, the site had 3,337 unique IP address visits. In addition over 1,004 RSS feeds were recorded as well as 11,632 image/attachment views. While registration is not required to access or contribute to the site, over 50 registered users maintain and collaborate on the pages. Recent additions include a virtual classroom featuring flash based educational programs and video links to YouTube.com. Go to <http://naturalgaslease.pbwiki.com>

Learning Module/Notebook

National Winner

PASTURED POULTRY PRODUCTION: A VIABLE ALTERNATIVE

Burbaugh, B.J.¹, Toro, E.M.²

¹ Extension Agent, Florida Extension Service, Duval County, Jacksonville, Florida

² Extension Agent, Florida Extension Service, Columbia County, Lake City, Florida

Pastured poultry production offers real opportunities to increase farm income in ways that are environmentally sustainable. However, there is little information available on alternative poultry production and farmers are forced to spend valuable time and resources climbing the learning curve. In order to facilitate diversification of farm income a learning module was developed. The topics include: poultry system options, materials and equipment needed, production basics, strategies to maximize foraging, marketing opportunities and understanding federal and state regulations. The module proved to be a valuable asset to potential and current pastured poultry producers. It gave them the tools to overcome challenges in marketing and processing their poultry. 60 producers and 49 extension agents have received a copy of the notebook during Pastured Poultry Production Workshops and professional conferences. 162 CDs have been distributed during educational events. The Pastured Poultry Exhibit has been visited over one thousand times. As a result of this educational effort the agents received a Program Development and Enhancement Grant from the Dean of Extension in the amount of \$4500.00 to develop a Virtual Field Day and related materials on Pastured Poultry Production. Six producers have started operations after attending the programs. Furthermore, by providing interpretation of USDA and State regulations 23 current pastured poultry producers are now operating in full compliance with the laws.

National Finalist

4-H WORKING RANCH HORSE PROGRAM TRAINING GUIDE

Keyes, *J.D.¹

¹ Natural Resources/Agricultural Agent, Utah State University Extension, PO Box 549, Monticello, Utah 84353, jim.keyes@usu.edu

The 4-H Working Ranch Horse Program is a new curriculum that is being developed as a means of adding a new dimension to the traditional 4-H horse program. In the past youth participants in 4-H equine riding programs have been primarily limited to horseshow

activities and some limited trail riding. The Working Ranch Horse Program is targeted towards youth who are interested in learning about how horses are utilized in the ranching world. Participants learn about horse safety, equipment, equine health and anatomy, and participate in hands on activities using their horses to move, sort, and even rope cattle under conditions patterned after genuine ranch work. ***An additional benefit hoped for with this program is the retention of older youth in the 4-H Horse Program, especially males*** who may find the traditional 4-H horse activities no longer exciting. There have been over 100 copies of the 4-H Working Ranch Horse Training Guide distributed to participants in three separate one-day training clinics held in the State of Utah. The training guide was prepared using Microsoft Word and copies for clinic participants have been printed at the local office supply store. In the future, the training guide will be published at USU and also included on the web page of USU 4-H Equine Programs.

BEEF BASICS HOME STUDY COURSES – BEEF BASICS-PLUS, BEEF BASICS V, BEEF BASICS VI, BEEF BASICS VII

Bauer, D.E.¹, Hay, P.C.², Howard,* L.F.³, Mues, N.L.⁴, Pritchard, S.M.⁵, Walz, T.M.⁶

¹. Extension Educator, University of Nebraska – Lincoln, Brown, Rock, Keya Paha Counties, Ainsworth, NE 69210

². Extension Educator, University of Nebraska – Lincoln, Gage County, Beatrice, NE 68310

³. Extension Educator, University of Nebraska – Lincoln, Cuming County, West Point, NE 68788

⁴. Extension Educator, University of Nebraska – Lincoln, Furnas County, Beaver City, NE 68926

⁵. Extension Educator, University of Nebraska – Lincoln, Boone, Nance Counties, NE 68620

⁶. Extension Educator, University of Nebraska – Lincoln, Custer County, Broken Bow, NE 68822

The beef industry needs good research-based information to manage their beef operations effectively and efficiently as possible to stay profitable. Time and expense of traveling to workshops and tours are big limitations to many producers. Members of the Beef Basics Home Study Team initiated the beef home study series in 1993, in a home study format, so producers can study at their own pace and at a time that is convenient to their own work schedule. Since 1998,

four new courses have been developed: 1. Beef Cow Basics-Plus – cutting edge information on nutrition, forages, supplements and economics; 2. Beef Basics V – nutritional strategies for the beef cow herd; 3. Beef Basics VI – optimizing beef cattle production on rangelands; 4. Beef Basics VII – using corn co-products in the beef cow herd. Demand for these courses has been excellent with over 600 enrollments from more than 20 states and several foreign countries. Participants estimate savings of \$16 per head, thanks to the knowledge gained and the management skills learned from taking these courses. Based on evaluations from course participants, this translates into an economic benefit to the beef cattle industry of over 2.1 million dollars annually. The Beef Home Study Team has overall supervision for the organization, coordination and direction of course materials. This includes writing, reviewing, editing, and grading quizzes. Input from the beef industry is utilized in the development of the research-based course curricula. These course materials are printed and distributed by University of Nebraska – Lincoln Extension support staff.

COMMUNICATION AWARDS PROGRAM – LEARNING MODULE/NOTEBOOK

ENHANCING COMMUNITY SUPPORT AND KNOWLEDGE OF LOCAL AGRICULTURAL ISSUES ON MARYLAND'S LOWER EASTERN SHORE

Hunsberger, L.K.¹, Dill, S.P.²

¹. Extension Educator, Agriculture and Natural Resources, Worcester County, P.O. Box 219, Snow Hill, MD 21863

². Extension Educator, Agriculture and Natural Resources, Talbot County, P.O. Box 519, Easton, MD 21601

This learning module was developed to illustrate various buy-local campaigns and provide tools for creating a campaign and/or an educational program on agriculture production and buying locally. It has been presented and utilized by educators and farmers with an interest in educating the public about their food supply. Most produce grown in the U.S. travels an average of 1,300 miles from farm to table. Produce sold in supermarkets is chosen for its ability to withstand industrial harvesting equipment and extended transportation. This is one of the many reasons local consumers and the community should be educated

about agriculture and their food supply. The purpose of this module is to help farms and educators learn about starting promotional programs locally including success stories, start up, program design, public relations, target marketing and grant funding. This module has a PowerPoint, fact sheets, activity and worksheets. Each of these outreach methods assist in the development of ideas and provide substantial information about local agriculture. The activity and worksheets are demonstrated during the session to engage the audience and provide an example. This program has been presented to over 95 participants including extension educators, direct farm marketers and community non-profits. Results and impacts from this module were very positive. There was a consensus that the public needed to learn more about the food supply and buying local. Participants also report that any tools to facilitate or enhance education would be worthwhile. Those implemented were the increased use of media and the Green Thumb Garden.

Regional Finalist

WHEAT SCOUTING FILE

Flint, * E.H.¹

¹ Area Agent – Agronomic Crops, Mississippi State University Extension Service, Kosciusko, MS 39090

Soft red winter wheat (*Triticum aestivum*) is not a new crop for Mississippi; however management practices have not been on par with other wheat growing areas in the U.S. The crop has been grown in the past as a “crop of opportunity” when prices have been attractive, or when producers plan to perform land improvement operations during the summer months, with limited attention to aggressive management by producers. Growers in the area I serve had expressed a need for a comprehensive source of information about wheat management practices, beginning with stand establishment and including fertilization, integrated pest management, and determination of growth stage. The Wheat Information File was prepared for this purpose, and has met with good acceptance among area growers. The title denotes that this document is intended to evolve with wheat production in this area, with additions to allow it to remain current and accurate relative to current thinking on the subjects included. This will provide an opportunity to add new pests and diseases, along with scouting information pertinent to their management. Pesticide product lists may be edited, new products added, and old products deleted

as needed. Rather than a permanent document, the Wheat Information File is a “living document” meant to be kept current. This I hope to continue, and that others will contribute information as well.

DEVELOPING A PLAN FOR THIRD-PARTY AUDITS

Kline, * Wesley L.¹

¹ Agricultural Agent, Rutgers Cooperative Extension of Cumberland County, 291 Morton Ave., Millville, New Jersey 09332

Food safety and third party audit requirements continue to increase for produce growers. There were 63 foodborne illness outbreaks with 8,040 illnesses reported related to produce from 1996 to 2005. The Food and Drug Administration (FDA) estimates that for every illness reported approximately 40 go unreported which translates into 321,600 illnesses. Five commodity groups make up 76% of produce related outbreaks (lettuce/leafy greens – 30%, tomato – 17%, cantaloupe – 13%, herbs – 11% and green onions – 5%). All these commodities are grown in New Jersey. In September 2006, an E. coli 0157:H7 outbreak in spinach grown in California affected the whole produce industry when the FDA stopped sales of spinach in the United States. New Jersey growers lost over \$500,000. The objective of this manual was to provide a proactive resource to help producers develop their own food safety plan and to prepare for and pass a third-party audit review. The manual consists of 10 concise information sections on preparing for the audit, informational websites, equipment, testing laboratories and examples of national programs. The manual has been used to train 359 growers and produce buyers in New Jersey over the last year. This has resulted in 34 operations passing their United States Department of Agriculture third party audit with others scheduled for this year. The 300 notebooks and accompanying CDs were duplicated and distributed through the extension office.

PSU DAIRY DATA ANALYSIS TOOLS: EXTENSION EDUCATOR'S MANUAL

Goodling, *R.C. Jr.¹

¹ Dairy Extension Educator, Penn State Cooperative Extension in Lebanon County, Lebanon, PA 17042

Records (production, reproduction, financial, etc.) all play a part in troubleshooting and identifying limitations to the profitability of a dairy operation. Four separate automated spreadsheets were developed to aid in data interpretation by dairy producers, consultants, and extension educators. The objectives of this module were to instruct participants on creating the data files, loading data into the analysis tools, interpreting results of each tool, and access to analysis tools that aid in examining and interpreting dairy production records. The module consists of three materials to supplement the four spreadsheet tools. All items were developed and replicated by the field educator. The auto-run CD contains the four spreadsheets, a pdf version of the manual, and instructional videos for creating the data reports and loading them into the spreadsheets. The manual was used to supplement the day long hands-on workshop that utilized computer labs to demonstrate the analysis tools. To date, 101 extension educators, dairy producers, and industry professionals have been instructed on the use and interpretation of at least one of the four analysis tools. Based on the trained participants, 68% expressed they would increase (either some or a lot) their use of dairy records to further increase on-farm troubleshooting, and 66% expressed an increase (either some or a lot) in their intended use of the analysis tools for assisting in examining and interpreting dairy production records. The successes of the tools and trainings have been expressed by the educators, consultants, and producers who used and benefited from them.

SOIL QUALITY WORKSHOP NOTEBOOK & CD

Sundermeier,* A.P.¹, Clevenger, B.², Islam, K.R.³

¹. Extension Educator, Ohio State University Extension, Wood County, Bowling Green, Ohio 43402

². Extension Educator, Ohio State University Extension, Wood County, Bowling Green, Ohio 43402

³. Extension Specialist, Ohio State University Extension, South Centers, Piketon, Ohio 45661

The Soil Quality Workshop Notebook & CD is a learning module for Extension programs in production agriculture and master gardener education. The objective of this module is to teach the benefits of achieving healthy soils and equip participants with tools to determine the quality of their own soils. The notebook contains printed copies of power point presentations, factsheets, journal articles, management guides, and evaluation instruments used at the Soil Quality Workshops on August 28 and September 27, 2007.

Each workshop had capacity attendance of over 50 participants. The CD was created from presentations given at the workshops and is now available as a teaching module on soil quality. The CD contains speaker power point presentations that include audio. Field demonstrations of testing soil quality are recorded as video. The soil quality test kit instructions are available as video and still photos with audio. A resources section contains printable power point presentations and web links to factsheets and journal articles on soil quality. The notebook cover was designed by Ohio State University Communication and Technology staff. Contents of the notebook and CD were created by field staff. The CD was edited by field staff. Distribution of the CD is through University Communication and Technology publication sales.

OPPORTUNITIES IN AGRITOURISM: INFORMATION RESOURCE FOR COUNTY EXTENSION AGENTS, OCTOBER 2004, REVISED 2008

Osborne,*J.S.¹, Coles J.²

¹. Extension Agent, Kentucky Cooperative Extension, Allen County, Scottsville, Kentucky 42164

². Extension Agent, Kentucky Cooperative Extension, Warren County, Bowling Green, Kentucky 42101

Agritourism enterprises continue to develop as an integral segment of the agricultural economy in Kentucky and other states. These producers turn to the Cooperative Extension Service as a source of information used to establish and expand these enterprises. However, at first, Kentucky Extension agents did not have a resource to access that provided needed tips and discussions addressing many of the questions posed by clientele. To address these needs, the Western Regional Agritourism Issue Committee completed "Opportunities in Agritourism: Information and Resource Guide for County Extension Agents" in October 2004. The resource guide included information covered in the following chapters: What is Agritourism?, Resource Assessment, Risk Management, Business Planning, Legal Considerations and Marketing. Over the ensuing four years many changes (Kentucky Revised Statutes, etc.) have occurred in Kentucky that have impacted the relevance of some of the information and required additions to the guide to address these changes. To maintain the relevance and usefulness of the resource guide, "Opportunities in Agritourism" was revised in January 2008 by the two submitting agents. Examples of the revision was 1) adapting the logos,

etc. to comply with state recognized material, 2) updating the Marketing section to include new signage opportunities, 3) inclusion of Kentucky Revised Statutes recently enacted that concern agritourism issues, and review and updating recommended links and websites that concern agritourism. These changes have been made to the University of Kentucky's web based copy of the resource guide available to all agents for use with clientele within their county.

EXTENSION SERVICE DISTRICT ELECTION RESOURCE MATERIALS

Tuck, * B.V.¹

¹. Oregon State University Extension Service-Wasco County, 400 E. Scenic Drive, Suite 2.278, The Dalles, Oregon 97058

In Oregon, extension offices receive a significant portion of their total operating funds from county government general fund budgets. Over the last several years many county general fund budgets have been strained by significantly increased personnel, materials and services operating costs, while at the same time facing stagnant tax revenues. This has resulted in budget crisis for a number of counties particularly Wasco County. This crisis resulted in a decision by the OSU Wasco County Extension Office Faculty to go before the voters of Wasco County in 2006 to establish a service district and a permanent tax base. The November 2006 election was successful with a 59% voter approval rating. The result is that the Wasco County Extension Office now has secure long-term funding. With the success of Wasco County and the huge effort involved in a service district election bid (two years), I decided to develop a resource manual and conduct statewide workshops on the steps required to establish a service district. I compiled and authored many of the pieces in the resource manual which was presented in both hardcopy and electronic formats. The electronic manual, which is hosted on the Oregon Extension Service Administration web site, is designed so counties can download and adapt the materials to meet individual county needs. Currently I have conducted two statewide and three county extension office service district workshops. The first statewide three-hour workshop was videotaped and is also available on the Extension Administration website as an additional resource. Currently there are three Oregon Counties going before the voters in 2008 May and November requesting the establishment of service districts and permanent tax bases.

Bound Book

National Winner

SOUTH CAROLINA MASTER GARDENER TRAINING MANUAL: A TRAINING AND LEARNING RESOURCE

Polomski, R.F.¹

¹. Consumer Horticulture Information Coordinator/ Extension Associate, Department of Horticulture, P. O. Box 340319, Clemson University, Clemson, SC 29634-0319

The *South Carolina Master Gardener Training Manual* (EC 678) is a training resource and reference book that was also created for gardeners and newcomers to South Carolina. It was also envisioned as an introductory reference book for green industry professionals. Clemson University Public Service Publishing printed 5,000 copies. The *Manual* has 20 chapters that represent a collaborative effort of Clemson Extension specialists, county agents, and Master Gardeners with contributions from Extension and University specialists from Maryland, North Carolina, Georgia, Alabama, Florida, and California. The entrant created the format and list of chapters, authored/co-authored 16 chapters, and edited every chapter. The entrant consulted with co-authors regarding the text, photographs, and illustrations. The entrant also worked closely with the graphic designer to produce an affordable, attractive book. This *Training Manual* has been well-received by agents involved in training Master Gardeners, Master Gardeners-in-training, and certified Master Gardeners. Sections of the *Manual* are being converted into fact sheets for inclusion on the Clemson Extension Home & Garden Information Center web site (hgic.clemson.edu).

National Finalist

BUILDING A SUSTAINABLE FUTURE: ECOLOGICALLY BASED FARMING SYSTEMS

Mutch, * D. R.¹

¹. Extension Specialist, Michigan State University, Kellogg Biological Station, Kalamazoo County, Hickory Corners, Michigan 49060

In 2003, a group of farmers, educators and researchers assembled to discuss the creation of an ecological farming publication that would reach a broad agricultural audience with information about incorporating ecology into agricultural practices to engender the use of sustainable systems that benefit the environment and rural communities. The book was also intended to promote and highlight ground-breaking research being conducted at Michigan State University focused on building a scientific foundation for a holistic approach to farming. Fifty authors from several disciplines contributed to this book which was aimed at offering practical and realistic approaches to a diversity of farming systems. Chapters focus on community-based food systems, agricultural landscapes and the IPM benefits of managing field borders and other non-crop vegetation, holistic approaches for field crops, potatoes, tart cherries and managed intensive grazing. The final chapter features two Michigan organic farms and the families that operate them. Project manager Dale Mutch was responsible for obtaining grant funds to support production of the book, which totaled more than \$40,000. He coordinated the publication calendar and worked closely with the interdisciplinary author teams and the graphic artist. Mutch used his expertise as a weed scientist in writing two chapters. He recruited eight editors and three reviewers to ensure that the book was audience appropriate and grammatically correct. More than one third of the 3,000 copies of "Building a Sustainable Future: Ecologically based Farming Systems" (E-2983) that were printed have been sold.

OKLAHOMA BASIC MEAT GOAT MANUAL

Jones, J.E.¹, Freking, B.M.², Kessee, J.A.³,
McDaniels, J.T.⁴, Montague, M.R.⁵, Parker, L.G.⁶,
Pugh, B.C.⁷, Rice, C.K.⁸, Rogers, J.D.⁹, Skinner, B.¹⁰,
Smith, T.W.¹¹, Sparks, D.G.¹², Stephens, H.L.¹³,
Wallace J.D.¹⁴

¹. Area Agricultural Economics Specialist, Oklahoma Cooperative Extension Service, Southeast District, Ada, Oklahoma 74820

². Extension Educator, Oklahoma Cooperative Extension Service, LeFlore County, Poteau, Oklahoma, 74953

³. Extension Educator, Oklahoma Cooperative Extension Service, Hughes County, Holdenville, Oklahoma, 74848

⁴. Extension Educator, Oklahoma Cooperative Extension Service, Pontotoc County, Ada, Oklahoma, 74820

⁵. Extension Educator, Oklahoma Cooperative Extension Service, Choctaw County, Hugo, Oklahoma, 74743

⁶. Area Food Animal Quality and Health Specialist, Oklahoma Cooperative Extension Service, Southwest and Northwest District, Duncan, Oklahoma 73533

⁷. Extension Educator, Oklahoma Cooperative Extension Service, Haskell County, Stigler, Oklahoma, 74462

⁸. Area Agronomist, Oklahoma Cooperative Extension Service, Southeast District, Ada, Oklahoma, 74820

⁹. Extension Educator, Oklahoma Cooperative Extension Service, Cleveland County, Norman, Oklahoma, 73701

¹⁰. Animal Science Student, Oklahoma State University, Stillwater, Oklahoma, 74074

¹¹. Extension Educator, Oklahoma Cooperative Extension Service, Pushmataha County, Antlers, Oklahoma, 74743

¹². Area Food Animal Quality and Health Specialist, Oklahoma Cooperative Extension Service, Southeast and Northeast District, Muskogee, Oklahoma 74401

¹³. Extension Educator, Oklahoma Cooperative Extension Service, Atoka County, Atoka, Oklahoma, 74525

¹⁴. Area Animal Scientist, Oklahoma Cooperative Extension Service, Southeast District, Ada, Oklahoma, 74820

As meat goat production began to expand it was realized there was a lack of basic research based information centrally located for goat producers. This lack of information caused Extension Educators and Area Specialist of the Southeast District Oklahoma Cooperative Extension Service to come together and create the Oklahoma Basic Meat Goat Manual. Each chapter is based upon research based information from different land grant universities across the U.S. and written by an Extension Educator or Area Specialist. The manual is fifteen chapters that covers basic meat goat production practices. Chapters include: So You Want to Be a Goat Rancher, Breeds of Meat Goats, Fencing, Housing, Corrals, Meat Goat Selection, Bucks and Breeding, Kidding, Goat Nutrition, Forages, Forbes and Browse, Herd Health, Goat Marketing, Predator Control, General Herd Management and Record Keeping. The manual is intended to help meat goat producers' gain the basic knowledge and skills needed to begin and operate a successful meat goat operation. Funding for the first printing of the manual was obtained

through grant funds from the OSU TIPS program. One thousand manuals have been printed with five hundred to be used in Oklahoma Basic Meat Goat Production Workshops and the remainder available from county extension offices in Oklahoma for \$10.

THE HISTORY AND ECONOMICS OF THE NEW HAMPSHIRE DAIRY INDUSTRY

Sciabarrasi,* M.R.¹, Porter, J.C.², Gilman, F.E.³, et al.

¹. Extension Professor/Specialist, Agricultural Business Management, UNH Cooperative Extension, 319 James Hall, Durham, NH 03824

². Extension Professor/Specialist, Dairy, Emeritus, Dairy, UNH Cooperative Extension, 315 Daniel Webster Highway, Boscawen, NH 03303

³. Extension Agricultural Engineer, Emeritus, UNH Cooperative Extension, 245 Milton Road, Rochester, NH 03868

As people in New Hampshire and New England continue to have fewer connections with farms and farming, it becomes increasingly important for Cooperative Extension to provide an understanding of the history of agriculture, as well as, a report on the current conditions of the industry. Dairy farming has long been associated with New Hampshire agriculture and continues to be a major part of the agricultural landscape of the State. This book documents the beginning of the dairy farming industry in New Hampshire to the present day. The thousands of old barns that dot the New Hampshire countryside are a testimony to the dairy industry that was “king” in its day. Today it continues to generate millions of dollars of product value and maintain the open space that makes the State a desirable place to live. This book not only provides an appreciation of what took place on the New Hampshire countryside over the years, but also describes what it means to continue to produce milk on today’s farms. It contains the collective expertise of 10 authors from UNH Cooperative Extension, state agencies and private industry. Consumers and policy makers will find this book a useful guide to understanding dairy farms and farming. Currently, the book is being used by the New England Family Dairy Farms Cooperative (NEFDFO) to support the concept of local branding of milk to try to return more dollars to dairy farmers.

Regional Finalist

NATIVE PLANTS OF NORTH GEORGIA, A PHOTO GUIDE FOR PLANT ENTHUSIASTS

Cummings,* M.P.¹

¹. Extension Agent, UGA Cooperative Extension, Union County, Blairsville, Georgia 30512

In 2005 a group of volunteers was formed called the Community Council. This group was formed to support educational outreach for the Mountain Research and Education Center in Blairsville. The author was asked to chair a committee on adult outreach. The committee scheduled monthly educational meetings relating to horticulture for the public. The author was asked to conduct a meeting concerning native plants in 2005. The author has been asked each year to conduct similar meetings. The author soon discovered there was no quick guide for native plant identification available to the public. As a result of the educational meetings a large demand for a small photo guide was soon created. Therefore, the author spent 1.5 years photographing native plants. The author also researched the historical data and plant identification characteristics. The author organized the plants into an easy to follow pattern of bloom times. The publication was reviewed in the same manner as all UGA publications were reviewed. The author cooperated with the communications department at UGA to publish the document. The document is being issued as a for sale item by UGA Cooperative Extension. The goal of the author was to create a quick photo guide for native plant enthusiasts. The publication is to be officially released at the Southern Appalachian Landscape Seminar in April.

GROWING POINTS: THE WIT AND WISDOM OF THE COLORADO MASTER GARDENERS OF EL PASO COUNTY, COLORADO

Moravec,* C.M.¹

¹. Extension Agent, Colorado State University Extension, El Paso County, Colorado Springs, Colorado, 80910

Gardening in southeastern Colorado can present formidable challenges to homeowners due to erratic weather, limited water availability, and poor soils. Growing Points is a 257-page book designed to answer lawn and garden questions of home gardeners in

southeastern Colorado with research-based information. After many years of writing newspaper columns, newsletter articles, and responses to questions from the public, 36 Colorado Master Gardener volunteers and 3 Extension staff members compiled their work into a single volume. The result is a collection of 141 articles divided into the following chapters: flowers & grasses, trees & shrubs, turf, edibles, diseases, insects, weeds & wildlife, weather, techniques & tools, potpourri, and resources. Short garden tips, photographs, and artwork are interspersed throughout the volume. Self-published in December 2007, 350 copies of the book have been sold in two months. The Extension agent coordinated volunteer efforts, wrote the introduction, composed four articles, edited for technical accuracy, and marketed the book. All proceeds are used to support the Colorado Master Gardener program in El Paso County. To date, profits from the book's sale are \$2,800.

NACAA
Member Presentation
Abstracts

2008 NACAA

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ADMINISTRATIVE SKILLS

IDENTIFYING PROGRAMMATIC OPPORTUNITIES FOR EXTENSION THROUGH FOCUS GROUP INTERVIEWS

Siegrist,*H.J.1, Archer, T. M. (Ph.D.)2

1. Extension Educator, Ohio State University Extension, Licking County, Newark, Ohio 43055
2. Associate Professor, Leader – Program Development and Evaluation, Ohio State University Extension, Franklin County, Columbus, Ohio 43210

The county extension advisory committee and county extension staff in Licking County, Ohio conducted a needs assessment of the county's educational and program needs. The effort was pursued to gain insights on critical issues that should be considered by the county extension program to continue a functional full-service extension office over the next ten years.

Focus group interviews with ninety-two participants were conducted in seven different settings by trained moderators. Questions for discussion and procedures for the focus groups were determined by the authors and the county extension staff. Recordings of all focus group discussions were transcribed. Primary themes and unique responses from each of the four groups were summarized. A compilation of primary & secondary themes was then developed along with a reporting of unique responses.

Primary themes in community change included community growth and land use change, rural-urban interface issues between newer residents and established residents. Employment issues in the community included the growing "bedroom community" concern with employment growth often being in other counties. Home, family, and youth issues identified include: "Barriers to good parenting and changing structure of families." Primary themes of implications and opportunities for extension included creating awareness of opportunities through extension beyond the traditional rural clientele base, more electronic and internet programming, partner more with other community organizations including schools and universities with similar goals and missions, and more programming in underserved communities.

ADMINISTRATIVE SKILLS PRESENTATION

Sagers,* L. A.

Extension Horticulture Specialist, Utah State University Cooperative Extension, Thanksgiving Point Office, Lehi, Utah, 84043-3506

Many smaller communities lack the resources to effectively plant trees, plan and develop parks and beautify their neighborhoods. During Advanced Master Gardener Program "Woody Plant" training many Master Gardeners expressed an interest in improving their communities. In response to this need, the author brought together the resources of the Utah Division of Forestry, Fire and State Lands, the Utah Chapter of the International Society of Arboriculture, Utah State University, the University of Utah, and Thanksgiving Point Gardens. With these resources, participants were trained in how to get involved in the public processes to promote tree planting and park development. They then were able to approach several communities to set up tree boards and beautification committees. Two Advanced Master Gardeners even published a book on trees. Through this, several communities published street tree guides which they distributed to their respective citizens and several of them achieved the honor of TreeCity USA. As a result of this training, many mayors and/or city councils increased tree care budgets, promoted tree care workshops and honored participants in the advanced Master Gardener Training. Other Advanced Master Gardeners received special recognition from the Utah Chapter of the International Society of Arboriculture for their accomplishments.

SREC EXTENSION BOARD AND ADVOCACY TRAINING

Williams, S.1, Zoubek,* G.L.2

1. District Director, University of Nebraska Extension, SREC, Lincoln, Nebraska 68583
2. Extension Educator, University of Nebraska Extension, York County, York, Nebraska 68467

Effective Extension Advisory Boards just do not happen. In an effort to strengthen Extension Boards in the Southeast Research and Extension Center (SREC) which consists of 28 counties in Southeast Nebraska, regional Extension Board Updates were conducted and Extension Board Member materials prepared. The goals of the regional updates were to improve Extension Board Members' understanding of the wide variety of

Extension programs in the SREC, improve their understanding of their roles as board members and to develop advocates for the Extension Program. Four to five regional updates were conducted yearly from 2005 – 2007 with approximately 125 board members and Extension staff attending annually. Over 200 Extension Board Member Note Books were distributed to board members in the SREC. In 2006, board members were trained in the Appreciative Inquiry process, which they used to interview local citizens. Interview summaries were then shared at Extension Board meetings, at the following year's SREC Extension Board Updates. Each year participating board members were surveyed and results indicated that they showed improved knowledge of their roles and responsibilities as board members and the vast scope of contemporary issues addressed by UNL Extension. As a result of our efforts over three years, Extension Board members became more knowledgeable about UNL Extension programs and became better advocates for UNL Extension. This presentation will share information about SREC's Extension Board training efforts, goals, and accomplishments.

AGRICULTURAL ECONOMICS

FARM SUCCESSION AND ESTATE PLANNING WITH PERSONAL COACHING FOR PARTICIPATING FAMILIES

Tuck, * B.¹, Roberts, D.², Kerr, * S.³, Corp, M. ⁴, Mills, R.⁵, Fouts, J. ⁶, Esser, A. ⁷, and Viebrock, M.⁸

1. Oregon State University Extension Service-Wasco County, 400 E. Scenic Drive, Suite 2, 278, The Dalles, OR 97058

2. Washington State University Cooperative Extension-Spokane County, 222 N Havana St., Spokane, WA 99202

3. Washington State University Cooperative Extension-Klickitat County, 228 W. Main St. MS-CH-12, Goldendale, WA 98620

4. Oregon State University Extension Service-Umatilla County, 2411 NW Carden, Umatilla Hall, Pendleton, OR 97801

5. Oregon State University Extension Service-Umatilla County, 2411 NW Carden, Umatilla Hall, Pendleton, OR 97801

6. Washington State University Cooperative Extension-Walla Walla County, 328 W. Poplar Street, Walla Walla, WA 99362

7. Washington State University Cooperative Extension-Adams County, 210 W. Broadway, Ritzville, WA 99169

8. Washington State University Cooperative Extension-Douglas County, 2033 S. Rainier, WA 98858

County faculty from Oregon and Washington Extension initiated a farm succession planning project based on needs assessment of farm families in eastern Washington and Oregon. The project is funded by the Western Center for Risk Management Education and USDA-CSREES. From 2006 to 2008 we held 3 farm succession planning workshops at each of 6 locations across the region. Participation in these workshops greatly exceeded expectations with 40-60 attending at each site. Workshop topics included; reasons for developing a farm succession plan; communicating successfully with all family members involved; identifying appropriate professional input; an overview of relevant state laws; discussion on estate laws and writing wills; conducting successful family meetings; overcoming difficulties encountered in the process; making good use of attorney time; specifying inheritance of treasured personal items; protecting the business in the event of a sudden death; and getting motivated. We recognize that farm succession and estate planning is a challenging process for most families. A unique feature of this project is that the 90 farm families who committed to developing a succession/estate plan received free coaching throughout the project. The coaches were hired initially and trained by WSU to advise farm families who were experiencing financial difficulty. The coaches all had experience in business and/or the banking industry. They contacted the client families on a regular basis by phone or e-mail to encourage them through the steps of the process. If requested, they met in person with the client families to assist with goal-setting or to facilitate family meetings.

MONEY ON THE TABLE

Proposed by: SANDRA BUXTON

Buxton, S. A. * ¹ Kilcer, T.F.² Wickswat, C.S.² Telega, S.W.³

¹ Extension Educator, Cornell Cooperative Extension, Washington County, 415 Lower Main Street, Hudson Falls, NY 12839

². Extension Educator, Cornell Cooperative Extension, Rensselaer County, 61 State Street, Troy, NY 12180

³. Senior Extension Associate, PRO-Dairy, Cornell University, 90 State Street, Suite 600, Albany, NY 12207

One of the challenges facing educators working with dairy farm clients is the ability to present information that is a combination of basic and advanced ideas without offending anyone but convincing the audience to really hear and think about what is being presented. During a meeting in December, educators from Eastern NY presented a program called "Money on the Table: Keeping More of What You Earn". The program began by presenting and de-bunking myths some of the general perceptions that may prevent a farm from trying something new. Another educator provided some info on negotiation skills and guided the audience through a session designed to help them see their negotiation strengths and weaknesses. Time was also provided to interact with two successful farms so they could describe some of the techniques they employ. Several role plays and discussion about the presented skills closed the class. Understanding what type of personality a person is can provide insight into their strengths and style when negotiating. For many farmers, they believe they are strong negotiators when they aren't. The meeting, pre and post-articles and farm visit discussions showed this to be a timely topic with some key ideas to think on and implement.

CROP INSURANCE, HOW BORING! NOT IF YOU DEMO IT RIGHT.

Williams*, J.C.¹

¹Extension Agent, Penn State Cooperative Extension, Tioga County, 118 Main Street, Wellsboro, PA 16901

Innovative educational ways to include Crop Insurance in a crop, grazing or dairy meeting. In 2008, USDA - Risk Management Agency (RMA) provided some unique and new Forage insurance options to selected pilot counties across the USA. 9 Northeastern counties in Pennsylvania were part of this pilot project. I will show and demonstrate some educational techniques; we used to update the farmers on this unique opportunity. I will demonstrate how we used the Vegetative index forage insurance pilot, during Extension meetings. The vegetation index is based on the U.S. Geological Survey's Earth Resources Observation and Science (EROS) normalized difference vegetation index (NDVI)

data derived from satellites observing long-term changes in greenness of vegetation of the earth since 1989.

The United States currently comprises about 588 million acres of pasture and rangeland and 61.5 million acres of hay land. RMA has provided several insurance programs for pasture, rangeland, and forage (PRF) utilize various indexing systems to determine crop condition.

LOUISIANA SWEET POTATO RESEARCH VERIFICATION PROGRAM GOALS, OBJECTIVES AND PRELIMINARY RESULTS

Smith, T. P.¹, Sistrunk, M.,² and, Guidry, K.³

¹ Extension Specialist, LSU Agricultural Center, Sweet Potato Research Station, Chase, LA

² Extension Agent, LSU Agricultural Center Louisiana Cooperative Extension Service, Oak Grove, LA

³ Extension Specialist, LSU Agricultural Center Dept. of Agricultural Economics and Agribusiness

Louisiana is a leader in sweet potato production in the United States. Approximately 16,000 acres of sweet potatoes were planted in Louisiana in 2005-2007 and the estimated total value of the crop in 2007 exceeded \$110 million. Production costs for one acre of sweet potatoes range from \$2,000-\$3000 and producers are faced with many decisions throughout the course of a production year than can affect crop performance and profitability.

A pilot verification program was initiated in 2007 in West Carroll Parish, Louisiana on one producer's farm. The concept of the program is similar to that of the rice and soybean verification programs in Louisiana. A verification program demonstrates to producers the importance of implementing research based recommendations in the production of their commodity, with an overall goal of maximizing production and improving quality.

The sweet potato verification program encompasses many aspects of production and begins with field identification, seed selection, fertilization and plant bed production and management. Several other aspects of production are monitored throughout the course of the production season including but not limited to: plant spacing, insect, disease and weed management, and irrigation. At harvest, yield data are collected and an economic analysis is conducted. The first year of the

study yielded valuable baseline information on production and management costs. Total yields in the verification fields were 23 and 30% higher respectively compared to the 2007 parish average.

The aim of this program is to extend information to producers by evaluating the LSU AgCenter's recommendation practices for sweet potato on farm and to ultimately increase the economic sustainability of Louisiana sweet potato producers.

ECONO-RANGE, AN ANALYSIS TOOL FOR DETERMINING THE ECONOMIC FEASIBILITY OF RANGELAND IMPROVEMENTS

Feuz, B.*

Agricultural Extension Educator/Livestock Marketing Specialist, University of Wyoming Cooperative Extension Service, Uinta County, 228 9th Street, Evanston, WY 82930

Investing in range improvements can often be very beneficial for Wyoming producers. However, many potential range improvements require a significant upfront investment that may take several years to recover. Econo-Range is a web based analysis tool that allows producers to evaluate the economic feasibility of making range improvement investments. Producers are able to customize the model by entering the actual cost of the investment, any associated annual costs, the annual projected improvement in animal unit months, the cost of comparable pasture and the interest, or discount, rate associated with the investment. The model returns a five, ten and fifteen year net present value for the investment, as well as a break-even year. To facilitate the use of the model links to Wyoming custom machinery rates and Natural Resource Conservation Service guidelines for potential range improvements and associated potential benefits are provided for users of the software. Producers in my local area have utilized this model to help them make range improvement decisions. Additionally, extension professionals and NRCS employees, in Wyoming, have utilized this model when working with producers to support the decision making process.

DELIVERING ANNIE'S PROJECT ELECTRONICALLY

Huot, W.*

Extension Agent, North Dakota Cooperative Extension, Grand Forks County, 151 So. 4th St. S-302, Grand Forks ND 58201

Since Annie's Project was launched in North Dakota in January 2006, over 700 women have completed the six week project. It was offered at five locations during the first year of the project. In 2008, it was conducted at 19 sites. The primary reason for this rapid growth is because much of the curriculum is delivered via interactive television. The state coordinator works closely with extension field staff who serve as facilitators, extension specialists who conduct parts of the sessions via interactive television and with the state's Interactive Video Network administrators to plan, schedule and deliver parts of the sessions electronically. In addition, local experts are identified at all locations to conduct presentations that supplement/reinforce the specialist's presentations. All sessions focus on the major categories of agricultural risks. Creating a website, www.ag.ndsu.edu/anniesproject, and developing a detailed facilitators training manual have been vital communication tools for implementing the project in the state. By charging a \$100.00 registration fee and partnering with state wide sponsors, the program is now being delivered without the use grant funds. This delivery method has sharply reduced the costs of the program. Evaluations reveal that nearly 90% of the participants plan to become more engaged in the business decisions of their farm/ranch operations as a result of completing this project. On a scale of 5 (highest) and 1 (lowest), the average ranking of this project across the state during the past three years has been 4.7.

ENHANCING FARM MARKET PROFITABILITY WITH QUALITY CUT-SUNFLOWERS

Carleo*, J.S.¹, Polanin, N.²

¹ Agricultural Agent (Assistant Professor), Rutgers NJAES Cooperative Extension, Cape May County, 4 Moore Rd, Cape May Court House, NJ 08210

² Agricultural Agent (Associate Professor), Rutgers NJAES Cooperative Extension, Somerset County, 310 Milltown Rd, Bridgewater, NJ 08807

Thirteen varieties of sunflower were evaluated for marketing performance at two farm-stands and one community farmers market in Cape May County, NJ. Consumer purchasing choice data revealed a preference for the "traditional" dark center with yellow "petals" (varieties: 'Sunbright', 'Sunny F1 Hybrid', 'Sunrich Lemon', 'Sunrich Orange Summer' and 'Tiffany'). Varied colored types and other less preferred varieties resulted in 33-66% of displays sold (varieties: 'Double Quick', 'Joker', 'Magic Roundabout', 'Moonshadow', 'Peach Passion', 'Prado Red Shades', 'Pro Cut Bicolor', 'Pro Cut Yellow Lite'). Pricing data results yielded higher volumes of sales, regardless of price, when flowers of any variety were bunched rather than sold as single stems. Sales volume data indicated the potential for an increase in income through extending the growing season prior to- and after the traditional tourist season (mid-May through Labor Day). Future sales potential at the end of the season, however, may prove to be more challenging due to the direct pest, the sunflower moth (*Helianthus annuus*).

THE ECONOMICS OF ORGANIC, GRAZING AND CONFINEMENT DAIRY FARMS

Kriegl,* T. S. , Endress, J. G. , Tranel, L. F. , Tigner, R. C. , Heckman, E. H. , Bivens, B. M. , Taylor, P. E. , Rudstrom, M. V. , Rickard, T. R. , Grace, J. W. , Noyes, T. E. , Little, R. C. , Kyle, J. A. , Williams, J.C. , Molenhius, J. R. , Frank, G. G.

Ten Land Grant Universities plus Ontario standardized accounting rules and data collection procedures to gather, pool, summarize and analyze actual farm financial performance from many sustainable, small farming systems which currently lack credible financial data that producers need for decision-making, in a project initially sponsored by USDA IFAFS grant project #00-52501-9708.

This effort compares Wisconsin organic dairy farm data to grazing and confinement data since very little organic dairy data was collected from outside of Wisconsin. However, the Wisconsin data is compared to the limited amount of organic data collected in other parts of North America.

This project has over 70 farm years of Wisconsin organic dairy farm data spanning seven years to help understand the level of economic competitiveness of organic dairy farming.

Insights include:

1. Actual farm financial data from organic dairy farms is still scarce.
2. The financial performance of organic dairy farms looks dramatically different from one part of the country to the other.
3. A number of individual farms are achieving financial success with an organic system.
4. The price premium was very important to the economic competitiveness of organic dairy farms.

The up-to-date conclusions of this project can be accessed at <http://cdp.wisc.edu>.

UTILIZING EXPERIENTIAL LEARNING METHODS TO TEACH PRACTICAL DIRECT MARKETING SKILLS TO SMALL FARM BUSINESSES

Nartea,* T.J.¹, Newsome, A.J.²

¹ Extension Specialist, Virginia Cooperative Extension-Virginia State University, L. Douglas Building, PO Box 9081, Petersburg, VA 23806

² Extension Agent, North Carolina Cooperative Extension-Johnston County, 2736 NC 210 Hwy, Smithfield, NC 27577

Direct to consumer sales have great potential to boost the income of small farm businesses. Essential marketing skills such as promotion (web presence, effective signage), product presentation (attractive market display), and consumer education (point of purchase consumer materials: recipes, knowledge of current food trends) are necessary skills for this target audience to be successful. Traditional agricultural extension educators with production expertise are challenged in training clients on practical direct marketing skills. In order to assist with this educational gap, several experiential learning workshops have been developed and field-tested to meet the need of small farm businesses to learn marketing skills. Extension educators should consider and improve skills in experiential learning methods and results driven teaching in order to increase their reportable educational impacts for small farm audiences who are interested in direct sales. In this seminar, attendees will learn about the following farm marketing workshops developed for limited resource, small farm audiences, utilizing a hands-on approach: 1) How to create an attractive farmers' market display; 2) How to create effective farm market signage; 3) How to advertise your farm business on the web and 4) Taking advantage of direct marketing resources on the web. We will demonstrate these experiential learning methods and share existing

reportable income impacts after county agents have taught these classes to limited resource and small farm clients. Attendees will receive educational and evaluation tools to assist them in the successful planning, conducting and evaluation of these direct marketing trainings.

AGRONOMY & PEST MANAGEMENT

2007 ARKANSAS CORN AND GRAIN SORGHUM RESEARCH VERIFICATION PROGRAM

Lawson, * K.W.¹, Guiling, P.S.², Kelley, J.P.³

1. Corn and Grain Sorghum Verification Coordinator, Arkansas Cooperative Extension, Little Rock, Arkansas 72203
2. Agricultural Economics Associate, Arkansas Cooperative Extension, Keiser, Arkansas 72351
3. Extension Agronomist – Wheat and Feed Grains, Arkansas Cooperative Extension, Little Rock, Arkansas 72203

The Corn and Grain Sorghum Research Verification Program (CGSRVP) was conducted on five corn and three grain sorghum fields in 2007 by the University of Arkansas Cooperative Extension Service. Grain yields ranged from 171 to 218 bushels per acre for corn with an average of 200.39 bushels per acre, and 95 to 128 bushels per acre for grain sorghum with an average of 110.5 bushels per acre. Arkansas farmers harvested 590,000 acres of corn and 215,000 acres of grain sorghum with an average yield of 168 and 94 bushels per acre, respectively. The 2007 state average corn and grain sorghum yields set new state records. Agronomic and economic data for specified operating costs were collected for each CGSRVP field to evaluate the effectiveness and profitability of production recommendations. The economic analysis show total direct expenses ranged from \$304.43 to \$409.83 per acre for corn with an average of \$360.54 per acre, and \$152.77 to \$204.03 per acre for grain sorghum with an average of \$188.51 per acre. The average break-even prices needed to cover total specified operating costs averaged \$1.79 per bushel for corn and \$1.58 per bushel for grain sorghum. Total direct and fixed costs averaged \$441.47 and \$268.35 per acre with a break-even price of \$2.19 and \$2.23 per bushel for corn and grain sorghum, respectively. The CGSRVP was used to demonstrate Extension's research-based recommendations to help corn and grain sorghum growers to produce a profitable, high yielding crop. The

CGSRVP is funded by the Corn and Grain Sorghum Checkoff monies and administered through the Arkansas Corn and Grain Sorghum Promotion Board.

SUPPORTING NUTRIENT MANAGEMENT PRACTICES FOR SMALL FARMS IN THE NEW YORK CITY WATERSHED

Dewing*, D.R. Cornell Cooperative Extension of Delaware County, Walton, NY 13856

Livestock manure is one of the largest potential sources of nutrient enrichment for the reservoirs in the New York City drinking water supply. The Nutrient Management Program of the Watershed Agricultural Program supports implementation of effective NMPs in three specific ways, development of user friendly NMPs, farmer education, and Nutrient Management Credit (NMCredit) incentive program. We have developed a planning protocol and format enabling a NMP that meets all standards and requirements while being quick and easy to interpret. All important information needed to identify manure rate, timing and application restrictions can be viewed on a laminated aerial photo map that can be easily interpreted by farm managers and employees. Targeted workshops presented at convenient times and locations are presented annually to keep farms up to date on current issues related to crop production, crop fertility, soil health and environmental losses of nutrients. The Nutrient Management Credit program encourages heightened stewardship of manure resources by implementing an incentive for farmers to follow their NMP closely on a daily basis. Farmers who follow their NMP earn an annual credit to be used for equipment or services that are part of their nutrient management strategy. The nutrient management program is carried out through partnerships with County Soil and Water Conservation Districts, USDA Natural Resource Conservation Service, and funding by the New York City Department of Environmental Protection.

EVALUATION OF YIELD AND GROWTH RESPONSE OF WHEAT FOLLOWING RICE OR SOYBEAN IN ARKANSAS

Allen,* C.S., Perkins, J.K., Grant, E.W., Kelley, J.P., Sheets, S.C.

University of Arkansas Cooperative Extension Service, Little Rock, AR 72203

Recent research has demonstrated that soft red winter wheat planted following rice in a cropping rotation normally yields less than wheat planted following soybeans. In 2007, there were 830,000 acres of wheat grown in Arkansas. The majority of this wheat is in a rice and soybean rotation. Many of the best wheat varieties today do not vary greatly in yield potential, but instead have specific traits that make them more adaptable to a specific production environment. Historically wheat has struggled when planted following rice due to stand establishment and growth issues related to poor external and internal drainage characteristics of a rice soil. The objective of this study was to evaluate vegetative and yield characteristics of 27 commonly grown winter wheat varieties in a soybean and rice rotation system on different soil types. This three county effort to evaluate a standardized variety trial following different cropping systems was performed in conjunction with the Extension Wheat Specialist. Trials were established in Lonoke, Poinsett and Craighead counties using a Hege 500 small plot drill. Plot size was 5' x 20' and the experimental design was a randomized complete block with four replications. University of Arkansas recommendations for fertility and crop management were utilized in all trials. Data was taken on growth characteristics i.e. (stand, tillering, lodging, disease, yield and test weight). Results of this study will be presented to fellow agents and producers.

2007 IRRIGATED SAFFLOWER VARIETY AND PLANTING RATE TRIAL IN NORTHERN UTAH

Israelsen*, C. E.¹ Pace*, M. G²

¹Utah State University Extension, 179 N Main, Logan, UT 84321, clark.israelsen@usu.edu

²Utah State University Extension, 195 W 1100 S, Brigham City, UT 84302, mike.pace@usu.edu

Safflower (*Carthamus tinctorius*) is becoming an increasingly popular crop in Utah on irrigated and dryland farms. The latest Utah Ag Statistics show Utah as planting over 11,000 acres of safflower and harvesting 10,345,600 lbs valued at \$1,913,936 dollars.

The purpose of this research was to monitor the performance of 16 different varieties and see how they compare to the standard safflower varieties on the market. Replicated plots were planted on April 17, 2007 in a Millville Silt Loam soil at the Greenville Research Farm in North Logan, Utah. 50 units of N and 25 units of P were applied to the plots. Sonalan herbicide was incorporated into the soil, pre-plant. The crop site was fallow in 2006. The plots were sprinkler irrigated in June

applying 3 inches of water. The plots were harvested mid September following above average high temperatures and little or no rainfall during the growing season.

Pounds of dry matter (DM) produced per acre, test weight per bushel, color score, percent oil content and gross income were recorded for all the varieties in the trial. Research showed the top producing variety, Hybrid 9049, produced 2084 lbs of DM/A and the research plots averaged 1495 lbs/A. Nutrasaff was the highest in oil content at 43.9%.

The results of the planting rate trial showed that planting conventional varieties at 25-30 lbs/A yielded the best results with 1982 lbs/A. Hybrid varieties like 9049 yielded best when planted at 15-16 lbs/A on irrigated farmland.

LOUISIANA SWEET POTATO RESEARCH VERIFICATION PROGRAM: GOALS, OBJECTIVES AND PRELIMINARY RESULTS

Smith, T.P.¹, Sistrunk, M.², Guidry, K.³

¹ Extension Specialist, LSU Agricultural Center, Sweet Potato Research Station, Chase, LA,

² Extension Agent, LSU Agricultural Center Louisiana Cooperative Extension Service, Oak Grove, LA,

³ Extension Specialist, LSU Agricultural Center Dept. of Agricultural Economics and Agribusiness,

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MONITORING BIOMASS FOR USE AS BIO-FUELS

Parker*, W. ¹, Hawkins, G.L. ²

¹. Extension Coordinator, Georgia Cooperative Extension, Jenkins County GA, 30442

². Agricultural Pollution Prevention Specialist, University of Georgia, Tifton, GA 31793

Cellulose is seen as the next material or biomass that will be used for the production of alternative fuels, specifically ethanol. However, the removal of biomass from a field may have negative affects on the soil organic matter especially in systems practicing conservation tillage. In the conservation tillage system, a cover crop is planted and that same cover crop is then used as mulch for various positive benefits. As we look for new and different sources for feedstocks for conversion of cellulose to ethanol, one potential source is the commercial crop residue such as cotton and the cover crop planted to form the mulch layer. Therefore, this project was designed to monitor soil organic matter as it is affected by the removal of 0, 50 and 100% of rye cover crop residue from a field using the conservation tillage system. Data will be presented to show how much material can be removed from a typical field and the associated soil organic matter content. The results presented here are initial data from the project, but will explain results and future plans for the project.

ON-FARM TESTING IN TODAY'S ENVIRONMENT TO SOLVE AGRONOMIC AND PEST MANEGMENT PROBLEMS.

Esser,* A.D.¹

¹ Extension Agronomist, Washington State University Extension, Lincoln-Adams Area, Ritzville, Washington 99169

The value of on-farm testing has long been documented within Extension, and it remains an important method to solve today's agronomic and pest management issues. On-farm testing is not research managed small plots on farms, nor is it a single strip or split field comparison. It is a replicated, statistically valid research with field trials established and managed by the growers with field scale equipment. With the incorporation of technology and the need to get bigger, grower's field scale equipment has changed rapidly over the past few years. Guidance systems, variable rate controls, grain yield monitors, semi trucks, and bank-out wagons are just a few examples that have changed the landscape of traditional on-farm testing. Living in today's "information age" has also impacted on-farm testing with the need for more rapid accurate results to keep up in this rapidly changing environment. This presentation will focus the basic steps to successfully implement an on-farm test, but also concentrate on adopting methods for today's modern agriculture of bigger, more technical grower owned and operated field scale equipment.

MICHIGAN SOYBEAN YIELD CONTEST AS A PART OF THE MICHIGAN SOYBEAN 2010 PROJECT

Birkey, N.M.¹, Staton M².

¹ Extension Educator, Michigan State University Extension, Monroe County Extension, 963 South Raisinville Road, Monroe, MI 48161

²Extension Educator, Michigan State University Extension, Van Buren County Extension, 219 East Paw Paw street, Suite 201, Paw Paw, MI 49079-1077

Soybean yields in Michigan have not kept pace with the increased yields of corn and soft wheat over the past fifteen years. Comparing yields from 1990- 1994 to 2000-2004: corn yields have increased over eight percent, wheat yields have increased over 35 percent and soybean yields have declined over eight percent. The goals of the soybean yield contest are to augment

the Soybean 2010 project and to focus farmer attention on agronomic and management skills for the purposes of increasing soybean yields and profitability. The soybean field information on the entry and harvest forms provides the data to help all soybean farmers in Michigan raise higher yields and more profitable soybeans. Data is shared at a December "Results" meeting and is also part of other soybean research projects that are printed in Fact Sheets and new Extension information. The contest provides a fun incentive for Michigan soybean farmers to participate in the Soybean 2010 project because they are recognized for increasing soybean yields. The yield contest started in 2006, along with the Soybean 2010 project, a five year project. To date, there is two years worth of data, which is providing a foundation of information about various agronomic practices of high yielding soybean farmers.

A SIMPLE AND POWERFUL TOOL TO HELP WITH BOOM SPRAYER CALIBRATION CALCULATIONS

Patterson,* R.K.

Extension Agent, Utah State University Extension, Carbon County, 120 E Main, Price, Utah 84501, Ronald.patterson@usu.edu

A properly calibrated boom sprayer can help producers make money. An improperly calibrated boom sprayer will cost money in reduced yields and/or higher chemical costs. For many operators the most tedious part of calibrating spray equipment is doing the calculations needed to assure accurate placement of pest control chemicals. This simple spreadsheet program will help producers determine when to clean or replace sprayer nozzles, as well as calculate time to cover one acre and spray volume per acre. Nozzle spray volume that varies more than ten percent from the average indicates a nozzle should be cleaned or replaced. As nozzles are replaced or cleaned the average volume of all the nozzles changes and requires all the calculation to be repeated. Once the spray volume variation between nozzles has been properly adjusted the gallons-per-acre application rate needs to be determined. The simplest way to adjust application rate is through speed variation. As the speed is adjusted the calculations needs to be repeated until the proper application rate is achieved. These calculations are quickly computed by entering collected data into this simple spreadsheet saving the producer time and effort.

AN ASSESMENT OF SELECTED FUNGICIDES ON DISEASE PROGRESS OF SOYBEAN RUST AND OTHER DISEASES OF SOYBEAN IN LOUISIANA

G.B. Padgett¹, M.A. Purvis¹, A. Hogan², S. Martin³, and C.A. Hollier⁴

¹Northeast Research Station Macon Ridge Branch, LSU AgCenter

²Louisiana Cooperative Extension, LSU AgCenter

³Syngenta Crop Protection USA

⁴Department of Plant Pathology and Crop Physiology, LSU AgCenter

Before 2004, strobilurins and benzamidiazoles were the foundation of fungicide programs in Louisiana. The discovery of soybean rust (SBR) prompted the U.S. soybean community to evaluate the effectiveness of current fungicide programs for managing SBR. During 2006 and 2007, tests were conducted in producer fields in Jefferson Davis Parish and on two LSU AgCenter research stations to evaluate the impact of selected fungicides on SBR and late-season disease progress and soybean yield. Aerial or ground applications of selected fungicides were applied once or twice during the reproductive growth stages (R3 to R5). Disease incidence and severity were assessed several times during the growing season. When possible, soybean plots were harvested to assess treatment effects on yield. Triazole chemistries were more efficacious against SBR than strobilurin chemistries, but differences were noted among the triazoles. The severity of SBR did not appreciably increase in some triazole treatments until 41 days after application, compared to 34 days in strobilurin treatments. Strobilurin products were most efficacious against aerial blight, while thiophanate methyl provided the best protection against *Cercospora* foliar blight. No single fungicide class provided broad spectrum disease control; therefore, tank mixes of several classes will be needed for effective management. Yields from fungicide-treated soybean ranged from 4% to 17% more than non-treated soybean. These results can be used to demonstrate that fungicides are effective for managing soybean diseases in Louisiana, but more research will be needed to determine the impact of application number, application timing, and disease initiation on soybean yield and quality.

SWEET SORGHUM AS A POTENTIAL BIO-ENERGY CROP IN SOUTHWEST LOUISIANA

Hogan*, A¹. , Whatley, J¹. , Harrell, D². , Legendre, B³. , Saska, M³. , Hawkins, G⁴.

¹County Agent, LSU AgCenter

²Rice Research Station, LSU AgCenter

³Audubon Sugar Institute, LSU AgCenter

⁴Ben Hur Research Station, LSU AgCenter

In 2007, three investigations were made into the production of sweet sorghum as a potential ethanol crop in Southwest Louisiana. Questions investigated included: 1.) Can the commodity be produced, harvested and processed with existing agricultural equipment and processing facilities 2.) What is the potential yield in bio-mass and total fermentable solids at different N fertilization rates? In April, two replicated tests with four varieties were planted. The first was drill planted on traditional sugar cane beds (10" drill rows on 72" raised beds) in a farmer's field. Two N rates were applied as treatments (16#/A vs. 86#/A). The second test was established at the Rice Research Station on 30" drill rows planted flat (60# N/A). A large field demonstration was planted in May using 7 1/2" drill rows on 72" raised beds. All tests were harvested 90-100 days post-planting at the soft dough seed stage. Mean yields of bio-mass/variety ranged from 9.5 tons/A to 28 tons/A. Total fermentable solids means/variety ranged from 1 ton/A to 3 tons/A. Estimated Ethanol Potential/variety ranged from 150 gallons/A to 382 gallons/A. Bio-mass yields for 16# N/A averaged 11 tons per acre, while the 86# N/A treatment averaged 22 tons per acre. Total fermentable solids yield was also doubled (1.2 tons/A vs. 2.68 tons/A) by the higher nitrogen fertilization rate. The large field demonstration was harvested with a conventional sugar cane billet harvester and processed in a commercial sugar cane mill with no equipment problems. These results demonstrated that sweet sorghum can be grown and processed with existing equipment. More investigation is needed to determine optimum fertilization rates, optimum harvest stage and economics of production vs. traditional commodities.

FORAGE YIELD AND NUTRITIVE VALUE OF SELECTED COOL SEASON FORAGES UNDER VARYING RATES OF NITROGEN SAM ANGIMA

Cool season forages produce most of their yield or biomass during spring and early summer and early winter. To most livestock farmers, crude protein (CP) and relative feed values (RFV) are the basis for buying or making hay for livestock. Our objective was to determine yield, crude protein and relative feed values from a range of cool season forages harvested as hay when grown under four different rates of nitrogen (N) of

0, 50, 100, & 150 lb/acre. Forages selected included Fescue K-31, Max QTM fescue, CowPro fescue, Timothy, Smooth Bromegrass, and Orchard grass. Forages were harvested once each growing season near LaDue Missouri. Forage dry matter yields ranged between 0.72 and 2.24 tons/acre for no nitrogen plots and 150 lb N/acre plots respectively. Fescue K-31 out-yielded the rest in biomass production followed by Timothy in all categories of nitrogen used. Significant differences in yield were observed with increasing rates of N. Percentage CP levels ranged from 6.4% to 9.2% and generally increased with increasing N rates. No significant differences in CP levels were observed for all the N rates except for CowPro fescue. RFV ranged between 93 and 104. There were no significant differences in RFV under all levels of N used. Nitrogen highly influenced yield and to some extent CP and RFV but not as much as it influenced yield.

ANIMAL SCIENCE

Presenter: Richard Brzozowski
Topic: Northeast Katahdin Hair Sheep Upgrade Project

The major problems facing the sheep industry include low wool prices, increasing resistance to all forms of chemical control of internal parasites and the prion disease scrapie. This research project addresses all three problems. The project is designed to provide the genetic base for profitable production of lamb using sustainable agricultural techniques. The end product will result in a sheep that is resistant to internal parasites, requires less management and input costs than traditional sheep production while producing a carcass size with less fat that meets today's lamb market need. This project will also provide the sheep genetic base to Northeast farmers for producing lamb meat and the opportunity to add significant income from the sale of breeding stock. The project will upgrade the Katahdin hair sheep to produce a more acceptable carcass from a sheep that will not require shearing, docking and will be resistant to internal parasites and scrapie. The upgraded Katahdin will be selected to produce lambs using rotational grazing and locally produced grains. Three performance targets include: (1) Through a defined crossbreeding plan and using a detailed selection process, upgrade the Katahdin sheep to be parasite and scrapie resistant and produce lambs that have a more market acceptable carcass weight. (2) To provide 1600 farmers in the Northeast with information about using improved Katahdin sheep as a

farm enterprise. (3) To provide at least 10 farms with flocks of upgraded Katahdin ewes to produce and sell meat lambs and breeding stock.

Presenter: Robert Mickel
Topic: Value Added Direct Marketing Lamb Project for Adult & Youth Producers

New and existing sheep producers in the region have a tremendous potential to “direct market” home grown high quality lamb (s) to a very affluent clientele that are very supportive of a “grown local/buy local” philosophy. The lamb production model design implemented fifteen years ago continues today as over forty growers annually utilize the models unique concepts. Producers not only use the model to market the lambs for high net returns (up to \$100 per lamb), but also utilize the model to assist them in procuring and maintaining a valid farm tax assessment base in New Jersey. The tax assessment basis component saves the producer/landowner thousands of dollars in taxes annually. The unique “terminal and seasonal” lamb model is designed as an applied livestock project that walks prospective growers through the project step by step. The terminal project design avoids the added components of maintaining a year round flock of sheep that demands 24/7 care. Growers need not worry about lambing, breeding, shearing, wintering and year round feeding as the lamb model is implemented during the grazing season from May to October in our region. Cooperators during their first season work very closely with the agent to insure successful implementation. Concepts and strategies used to implement the model are discussed within the applied project design and cover issues inclusive of the overall concept, facility needs, lamb acquisition, lamb types, feeding, husbandry needs, marketing and processing, quality assurance concerns and potential veterinarian needs. Twilight meetings at cooperator farms and hoof to rail programs provide in-depth training for all the cooperators and related sheep producers in the region.

Presenter: Robert Goodling
Topic: Identifying Milk Quality Limitations with Specialized Data Analysis Tools

Somatic cell levels from a dairy operation have direct impact on the milk premiums offered for a given operation, hence why it is continually monitored on most dairy operations. The biggest difficulty when trying to identify high somatic cell levels is determining the cause. Though the incidence of mastitis is usually a result of a

bacterial infection, there are numerous factors that could have caused the infection. These include poor udder sanitation, faulty milking equipment, teat end damage, improper pre and post milking procedures, and others. During the drill down process for troubleshooting milk quality problems, it is important to look at somatic cell information for groups of animals, and individual animals, if that information is available, and convey that information to the producer. The Somatic Cell SCS Analyzer© was developed to streamline current test day somatic cell information for a given herd, summarize and help identify groups of cows and individual cows with potential problems, as well as look at some historical information related to the current lactating herd. This information is just one step in the overall troubleshooting process for identifying the problem and cause(s) of poor milk quality for a given dairy operation.

Presenter: Mary Schwarz
Topic: Using Dairy Manure Solids as Bedding

Six farms using different types of dairy manure solid (DMS) strategies, including a farm that had side-by-side pens using sand and DMS, participated in a study to assess impact on herd health of using DMS as bedding on dairy farms in the Northeast. Samples of unused and used bedding were taken over the course of a year and analyzed for bacterial content and physical properties. Mastitis, somatic cell (SCC) count and linear score (LS) records were analyzed in relation to those properties. For some bacteria, levels in the unused sand bedding were significantly lower than in some of the DMS bedding, however, depending on how the bacterial levels were calculated (wet weight, dry weight or volume basis), many of the unused DMS bedding strategies proved to be as “clean” as the sand bedding. In used bedding sand ends up having significantly higher levels of Streptococcus, gram positive bacteria and Corynebacterium than all other systems when calculated on a volume basis. Bacterial levels in the unused bedding had no significant correlation with bacterial levels in the used bedding. Teat end bacterial levels were significantly lower for Klebsiella, gram negative and gram positive bacteria for cows on sand versus DMS, but there were no differences in either SCC or LS between the cows bedded on DMS and cows bedded on sand for which teat swabs were taken. There were no significant differences in mastitis incidence between farm bedding strategies over the course of the study and LS in the sand bedded cows was as high as LS in the cows in 3

DMS strategies, and higher than LS in 2 of the DMS strategies. Concern that continued use of DMS will increase SCC was not borne out using linear regression of 7 years worth of linear score data. Lameness was higher in cows bedded on sand compared to DMS. Economic analysis showed 3 out of 4 farms saving between 5 and 28 cents per hundred weight of milk produced through the use of manure solids as bedding. This study suggests that DMS can provide an economic benefit without compromising herd health.

Presenter: Mark D. Heitstuman
Topic: Livestock Field Days: An Experiential Learning Tool for Youth Producers

In Southeastern Washington and Northern Idaho, over 60% of all 4-H youth are enrolled in market livestock or equine projects. With the public concern over food safety and quality assurance, animal welfare and personal safety of both youth and animals, there was a documented need to provide research based information to a diverse audience from a large geographical area. Parents and 4-H leaders indicated that experiential Beef, Sheep, Swine and Horse Youth Field Days would meet this need. Since 2004, Youth Field Days have been conducted in different locations through out the region, focusing on providing knowledge and skills to youth, leaders and parent that will insure their success in animal projects. Topics for the field days included: selecting the project animal, feeding and care of the animal, health updates and vaccination programs, quality assurance, fitting and showing tips and demonstrations, conformation and judging, the Danish System of Judging and more. Speakers for the field day included: extension faculty and staff, FFA Advisors and youth, veterinarians, 4-H leaders and members and WSU college students. Registration was a nominal \$5 per person and lunch was provided. All field days were well attended with audience size ranging from 45 to 90 adult and youth participants. Each field day was evaluated using a retrospective evaluation. Knowledge gains were reported in the following areas: selecting and feeding market animals, steps to take to ensure food safety and quality assurance, enhanced skills in fitting and showing animals for fair, animal first aid and health care. Participants rated the field days as an excellent opportunity to gain relevant knowledge, skills and competencies for the various 4-H projects and contribute to a successful 4-H experience.

Presenter: Susan Kerr
Topic: A Pregnancy Ketosis Teaching Tool for Small Ruminant Educators

Pregnancy ketosis has always been a concern of sheep and goat producers, but the popularity of the Boer goat breed has increased the clinical incidence of this health issue. Pregnancy ketosis occurs in late pregnancy when fetuses are growing rapidly and demanding much of the dam's nutritional resources; it is especially common when the dam is carrying two or more fetuses. If not recognized and treated in time, this disease is often fatal for both the dam and her offspring. Because Boers often have triplets or quadruplets, Boer goat producers in particular need to be educated about pregnancy ketosis signs, treatment and prevention. An educational tool has been created to visually depict energy balance challenges in late-term, multiparous small ruminants. This tool helps producers grasp the concepts involved with understanding both the causes and prevention of this serious metabolic disease, thus enabling them to reduce the incidence and severity of pregnancy ketosis in their herd.

Presenter: Stephen Komar
Topic: Marketing Meat Goats in New Jersey

New Jersey processes and consumes over thirty-six percent of all meat goats slaughtered domestically. However, very few goats are raised in the state. In 2006 an educational program was initiated by Rutgers Cooperative Extension faculty to determine the suitability of raising meat goats in New Jersey. The program consisted of two components including an educational series and an on-farm demonstration project. The educational programs were well attended with 163 local producers attending the two-day sessions. In response to the high level of interest an on-farm trial was conducted in 2007 to quantify the potential for raising meat goats in New Jersey. Goat kids were imported from Texas and separated into two production groups. Goats were slaughtered on two separate dates and fabricated into traditional lamb cuts. A partial budgeting analysis was utilized to compare the different production systems. Differences were observed in average daily gain, production costs and gross-returns with animals produced in a feed lot system performing better than animals maintained in the pasture-based system. Genetic variation among test animals may have contributed to performance variability. Initial results suggest that meat goat production may be a viable option for New Jersey producers. More research is needed to determine optimum feeding

program, breed selection and optimum marketing strategies for New Jersey production.

Presenter: C. Taylor Clarke Jr. and Cynthia L. Gregg
Topic: Working Together to Produce and Market Beef Cattle in Southern Virginia

The need for beef producers to work together on marketing the feeder cattle and bred heifers has come to the forefront with many branded programs and the need to know the age a source verification of beef animals. This is essential on beef operations. Beef Producers want to produce a quality product whether it is beef for the table or cows to produce feeder calves. In Southern Virginia, there is one group who has 43 Virginia Quality Assured feeder calf consignors and 43 Virginia Premium Assured Bred Heifer consignors. The producers work together in conjunction with some feeder/developer operations, state and local associations, and extension agents and specialists. They have developed programs in reference to branded Virginia program standards. They have put together trailer load lots of co-mingled feeder calves and quality bred heifers for beef producers and they hosted a tour in 2007 to showcase their efforts. In 2007 the Southern Virginia groups sold approximately 3200 feeder calves in trailer load lots and developed approximately 480 bred heifers with approximately 150 being sold at 2 sales and some being sold private treaty from home. The efforts include educational programs, newsletters and other marketing programs. It is often said that beef producers cannot work together, as this group has proven there are positive rewards to working together.

Presenter: John Pope
Topic: Adding Value to Cattle through the Monroe County Heifer Evaluation and Reproductive Development Program

The Monroe County Heifer Evaluation and Reproductive Development (H.E.R.D.) program demonstrates that the University of Georgia sponsored model can add value to heifers by providing a method of improved guidelines for reproductive development, breeding and marketing. The program is managed by the Monroe County HERD Steering Committee. The program is sponsored by the Monroe County Cattlemen's Assn., Monroe County Extension and the Monroe County Farm Bureau. The program began in 2005 developing annually more than 500 heifers, from Monroe, Jasper, and Upson Counties. The program serves to identify

better quality breeding stock for use as replacements and to market to other breeders as value-added, elite breeding stock. From 2005 to 2007 nearly 600 head of bred heifers have been developed and marketed to producers in Georgia, Alabama, South Carolina, and Texas. This value-added program has produced \$712,400 in gross revenue and an estimated \$113,281 in additional profits to participating producers.

Presenter: Amie Schleicher
Topic: Missouri Show-Me Quality Assurance Program Reaches Youth with Livestock Projects Through Multiple Formats

The Missouri Show-Me Quality Assurance (SMQA) program was developed to increase the knowledge and awareness of Missouri youth about food quality issues related to animal production. A mixed model approach was used in delivering the program across the state. Instructors, including Extension regional livestock specialists, 4-H youth specialists, and vocational agriculture instructors, were given the flexibility to choose from the materials that had been developed for the program as long as the key elements of the quality assurance curriculum were taught. This has led to a number of innovative teaching methods. Examples include Extension livestock specialists teaching 4-H leaders to deliver the program to their 4-H members, as well as high school students providing instruction to youth in a youth-teaching-youth format. Program settings have varied from traditional face-to-face programs to the use of interactive television (ITV) to connect multiple counties, allowing Extension specialists to share teaching responsibilities. The program has also been offered at industry events such as the Missouri Pork Expo. An online tutorial is available for youth who cannot attend a meeting. Since the program was implemented statewide in 2007, approximately 3700 youth have gone through the program, and 79 are listed as instructors on the SMQA website. Starting June 1, 2008, all Missouri 4-H youth enrolled in food animal projects must go through the SMQA program.

Presenter: Rebecca Thomas
Topic: IPM Demonstrations in Livestock Production

The red imported fire ant is a pest that cattle producers in Grant County have addressed as a concern. This pest causes many problems in Livestock Production in Grant County. The county agent in Grant County was

funded a IPM Grant to fund a demonstration to evaluate the use of baits as well as Methoprene as a Fire Ant control measure in cattle pastures. Demonstrations were conducted FY05 and FY06. Bait stations were used to evaluate the number of fire ants prior treatment and at 7, 14, and 30 days post treatment. FY 05 data indicated Amdro plus Extinguish had the best residual control at 100 percent at 30 days. A second IPM demonstration evaluated conventional pesticides versus parasitic wasps to control flies in 4-H Livestock Projects. Results showed the parasitic wasps to be more effective than conventional pesticides.

Presenter: H.D. Dorough
Topic: Mixing Fire Ant Baits with Fertilizer as an Economic Alternative to Controlling Imported Fire Ants

Fire ants are a recurring problem in Alabama pastures. Although relatively inexpensive, effective treatments are available, most livestock producers view them as cost prohibitive because of a low return on capital investment. In addition, escalating fuel prices have forced an increase in the cost of applying fire ant baits. A bulk mix of fire ant bait with fertilizer could allow producers to apply both products at the same time thereby minimizing application costs. Two growth regulator products, Esteem Ant Bait and Extinguish Professional Fire Ant Bait®, were mixed with fertilizer in a bulk blender at the local farmer's cooperative and taken immediately to the field. An Esteem Ant Bait® treatment, a fertilizer treatment and an untreated control were also included in the experiment. All treatments were applied to the pasture at label rates in a randomized complete block design replicate four times. Maximum fire ant population control obtained in the study was 86%. There were no significant differences between the bulk-mix treatments and the Esteem Ant Bait® treatments at 5, 8, 14, or 21 weeks post-treatment. However, fire ant mound numbers declined slower in the bulk-mix treatments than in the Esteem Ant Bait® only treatment. Mound numbers were less than five per acre in all bait treatments 21 weeks post treatment.

Presenter: Clark Israelsen
Topic: Long Distance Neighbors – Northern Utah Producers Donate Hay to Southern Utah Ranchers Impacted by Wildfires

An estimated 363,000 acres of public and private rangeland were burned in Southern Utah during the summer of 2007 destroying essential forage for

thousands of livestock and wildlife. Roughly 60 ranch families had to deal with dead, injured or displaced animals. Most ranchers want to preserve their income producing assets to carry on a way of life that has supported their families for generations. The wildfires have had, and will have, significant economic and emotional impacts on individuals, businesses and rural communities.

The immediate concern was to replace the loss of fall and winter grazing for cattle and sheep. Additionally, fences need to be rebuilt, watering systems repaired, and thousands of acres of rangeland need to be reseeded.

Northern Utah producers began wondering what they could do to assist. After much discussion, leaders of the Cattlemen's Association's and County Farm Bureau, with the organizational efforts of USU Extension, challenged farmer and ranchers in Cache and Rich Counties to donate at least one ton of hay to our southern Utah friends. Our goal was to donate 100 tons. Our sum efforts resulted in 450 tons being donated and delivered to 13 needy ranch families in Beaver and Millard Counties.

Individuals who wanted to be involved, but had no hay, made cash donations which were used to purchase additional hay. Trucking companies volunteered to deliver the initial loads of hay. Local banks and County Farm Bureaus paid for the balance of the trucking costs.

Presenter: Scott Jensen
Topic: Lost Rivers Grazing Academy

Domestic pastures are generally grazed season-long. According to Gerrish and Roberts (1999) pastures grazed longer than 30 days have a harvesting efficiency of 40% or less. High stocking rates and low stock densities are common, leading to severe grazing, which limits re-growth potential and overall yield. Pasture operators lack motivation to improve management because: 1) conventional management has traditionally been viewed as adequate; 2) good irrigated pastures are undervalued; 3) pastures appear to be more resilient to abuse than other crops; 4) land typically planted to domestic pasture is perceived as marginal and therefore of limited financial value; and 5) producers have not recognized the ecological value of pastures. To improve livestock operator understanding and implementation of the principles of Management-intensive Grazing (MiG), outreach programs featuring multi-day hands on workshops for operators have been

held across southern Idaho. Topics covered in the intensive 4 day, hands-on workshop include the five principles of grazing, tools for managing grazing, anatomy and physiology of forage plants, grazing cell design, low stress livestock handling techniques, and livestock health considerations as well as others. Participants in these workshops come away with a better understanding of the principles involved and often put what they learn into practice on their own places. This growing network of operators is developing, adapting and implementing more economically efficient and environmentally acceptable methods for harvesting and utilizing forages.

Presenter: M. Kent Stanford
Topic: Grazing School for Horse Owners Seeks to Meet Educational Needs of Alabama Horse Industry

The horse industry contributes significantly to the Alabama economy. According to a 2006 Auburn University study, the horse industry directly produces goods and services valued in excess of 573 million dollars. Over 44,000 Alabama households are involved in the industry as horse owners, service providers, employees, and volunteers, and there are over 186,000 horses in Alabama. To meet the educational needs of this rapidly growing industry, agents for the Alabama Cooperative Extension System (ACES) worked cooperatively with USDA-NRCS, the College of Agriculture at Auburn University, and the Alabama Forage and Grasslands Coalition to develop a "One-day Grazing School for Horse Owners". Promotional materials were developed by the Regional Extension Agents on current office equipment and distributed through direct mail and farm supply stores to over 600 people. In order to reach a broad range of people, the course was offered on consecutive days in two different locations in northern Alabama. The courses were attended by a total of 69 persons representing 19 different Alabama counties, plus one from Georgia. In addition to classroom instructions, students also participated in several outdoor field exercises. Over 81% of the respondents to the post-course survey indicated that participation in the course would have either a "significant" or "very significant" economic impact on their horse operation. This unique program has allowed ACES to build a better working relationship with horse owners in Alabama while continuing efforts to meet their educational needs.

EARLY CAREER DEVELOPMENT

BALANCING THE POLITICAL DEMANDS OF A COUNTY EXTENSION EDUCATOR POSITION

Bruynis,* C. L.¹

¹ Extension Educator, Ohio State University Extension, Wyandot County, Upper Sandusky, OH 43351

Extension Educators early in their career sometimes find it difficult to balance the political demands that are inherent in a county Extension position. Due to funding formulas plus other contributing factors, the political demands include the duality conflict between the University and the County leadership both taking ownership of the position. This conflict can be further complicated by actions of Extension Advisory Committees, Senior Fair Boards, and other affiliated organizations. This session will explore the sources of influence affecting the position, provide strategies for dealing with the ownership duality conflict, and provide some suggestions on how to balance the competing goals of between being viewed as a successful county Educator by your clientele and completing the necessary teaching, research and publishing rigor to make tenure.

EARLY CAREER DEVELOPMENT – TRICKS OF THE TRADE

Torell,* R.C.

Area Livestock Specialist, University of Nevada Cooperative Extension, 701 Walnut, Elko, Nevada 89801

You cannot teach an old dog new tricks. However, an old dog can teach new dogs old tricks. The author of this paper has acquired many successful extension trade tricks during his fifty year affiliation with the University of Nevada, Reno (UNR) Land Grant system. He was born and raised on the UNR Knoll Creek Experiment Station, schooled at UNR College of Agriculture, managed the UNR Gund Research and Demonstration Ranch and for the past twenty-three years has served as UNCE Livestock Specialist. Evidence of success include the 2003 Nevada Cattlemen's Association President's Award, 1994 Outstanding Extension Award presented by the Western Section of American Society of Animal Scientists, the 1989 Gamma Sigma Delta Extension Award of Merit and the Nevada Agriculture Foundation's Arvin Boerlin Excellence Award. The successes of

these programs were featured in the fall 1989 issue of the *Ag Forum* and reprinted in the winter 1989 issue of *USDA Extension Review* magazine. Seven of his extension programs won national awards through the National Association of County Agriculture Agents' Association. Most importantly, livestock producers in northeastern Nevada rely on the author for their livestock production and marketing educational needs. Come learn from this seasoned extension agent how to develop and deliver successful extension programs.

GETTING THE MOST OUT OF MENTORING

Kluchinski*, D.¹

¹ County Agent and Assistant Director, Rutgers NJAES Cooperative Extension, New Brunswick, NJ 08901

Mentoring is designed to serve as a staff development tool for junior personnel or untenured faculty members (protégés). The protégé and the senior personnel or tenured faculty comprise the mentoring committee. The primary purpose of mentoring to provide a network of support and guidance to protégés in meeting the objectives of their position description; achieve excellence in performance and programming; demonstrate creativity, innovation and risk-taking; acquire excellence and recognition on a state and national level; and attain advancement or promotion and tenure based on outstanding accomplishment. In order to get the most out of mentoring, those involved must understand and appreciate the philosophy of mentoring, more so than the process. Taking part in a mentoring program means becoming involved in a relationship. The mentoring relationship is one which is designed to promote the growth and development of the protégé, and in turn, that of the mentors and the organization. Effective relationships are based on many factors. Some of these include communication; an attraction to or appreciation of the other person's qualities; commitment to the same goals; and sharing of feelings, values and beliefs. Mentoring programs are designed to help develop an effective relationship between protégé and mentor. The structure is designed to allow, as much as possible, protégés to be assigned mentors to whom they can relate and with whom they share common goals and interests. The keys to making the mentoring relationship work for both parties are communication, commitment and trust.

HORTICULTURE AND TURFGRASS

TEACHING MATH, SCIENCE, HISTORY AND LANGUAGE ARTS TO ELEMENTARY STUDENTS THROUGH THE JUNIOR MASTER GARDENER PROGRAM

Borel S.R.², Brashier,* M.J.¹

¹ Extension Agent, Louisiana Cooperative Extension, Pointe Coupee Parish, New Roads, Louisiana 70760

² Associate County Agent, Louisiana Cooperative Extension, Pointe Coupee Parish, New Roads, Louisiana 70760

This program is designed to teach science, math, history and language arts by raising vegetables for students in grades K thru 6th. Each student grew six vegetable plants which consisted of two each of the following: broccoli, cabbage, and cauliflower. Three fertilizer rates were used. Weekly growth measurements were used to graph and chart means and averages in their math lessons. For science, the students learned scientific names of plants and insects. An ABC Garden was set up using science words. The students were given definitions and had to walk around the garden to find the words that went with the definitions. Historical events that were happening at the time specific vegetables were introduced in the United States were learned by the students for their history lessons. Nutrition facts were reinforced when students were allowed to bring vegetables home to share with their families. For language arts, a journal was kept by each student on all of the activities in the garden. The results were a better understanding of classroom lessons learned through gardening. The program started with 48 fourth graders and has since expanded to 300 students. Future plans are to write a curriculum based on science, math, history, and language arts.

INSURING THE FUTURE OF POLLINATION IN PENNSYLVANIA VIA YOUTH

Butzler*, T.M. ¹, Weinreb-Welch, Laurie ²

¹ Extension Educator, Horticulture/Integrated Pest Management, Penn State Cooperative Extension – Clinton County Office, Mill Hall, Pennsylvania 17751

² Extension Educator, Children, Youth and Family, Penn

State Cooperative Extension – Clinton County Office,
Mill Hall, Pennsylvania 17751

Pennsylvania agriculture is diverse, from traditional animal husbandry and field crops to specialty crops such as small fruits and vegetables. Many of these specialty crops require insect pollination to produce a marketable and high yield. Although native insects can pollinate Pennsylvania crops, they are not in abundance to adequately complete the job and honeybees are regularly brought into fruit and vegetable fields. Several key pest problems are placing immense pressure on our honeybee pollinators in Pennsylvania. As a result, a shortage of bees and beekeepers may be looming in the near future in Pennsylvania and impact specialty crop producers. Our program is an effort to be proactive before the state reaches a critical stage where we lack enough pollinators for Pennsylvania's growers. It is hoped that participants will carry on this knowledge as a hobby or part-time business. Eight youth are introduced into the art and science of beekeeping (10-15 year olds) each year by both lecture and hands-on activities. Participants meet weekly for the first several weeks to build equipment, install package bees, and monitor the early progress of their effort. Each class starts with a video and/or "chalk talk" before we move to the hands-on component. After the first five weeks, the youth take their hive home to manage the rest of the season. The groups meet throughout the spring/summer/fall season to talk about their experiences with their hive, discuss relevant beekeeping topics, and go on field trips. Other topics covered during the class are history of beekeeping, how bees make honey, diseases and pests of the honey bee, pollination, and division of labor. All participants the past two years have completed the class and had an increase in their knowledge about honey bees, equipment, and techniques. Each individual walks away from the class with an active hive and the knowledge to carry on beekeeping for years to come. Fifteen of the sixteen participants from the past two classes plan to continue beekeeping this year (2008).

THE PLANT SCIENCE CENTER, A RESOURCE FOR SOUTHEASTERN ARIZONA

Call*, R. E.

Horticulture Extension Agent, University of Arizona
Cooperative Extension, Cochise County, 450 S. Haskell
Ave. Willcox, AZ 85643

The Plant Sciences Center (PCS) established in 1998, is a research and educational facility and a repository for salvaged native plants from public works constructions projects and are used for revegetation, planting demonstration and as mother-stock for propagation. A water usage demonstration landscape was constructed in 2003, with four automated irrigated plots, each having an independent water meter. Plots consist of two mulched xeriscapes, and two turfgrass plots- one warm-season, one cool-season. Water harvesting demonstrations have been installed using rainwater from the roof of the Cochise County Herbarium. The Herbarium is a volunteer effort, involving Master Gardeners and others. To date over 1,600 plants are in the collection. A water use study of five desert adapted plants was established for two years using three watering schedules to determine plant performance. Last fall plants were harvested and growth data taken. Another planting of ornamental plants has been established to determine susceptibility to Texas Root Rot fungus.

Website: <http://cals.arizona.edu/cochise/psc/index.htm>

THE GARDEN ACADEMY – MEETING NEEDS OF A GROWING CLIENTELE

Chance III, W.O.¹, Westerfield, R. R.²

¹ UGA Extension Agent, Houston County, 801 Main Street, Perry, GA 31069

² UGA Extension Horticulturist, 1109 Experiment Street, Griffin, GA 30223

Urban agriculture agents face the challenge of teaching a growing clientele using limited resources. Master Gardeners help greatly, but homeowners often want more in-depth programming.

Master Gardeners and the Extension Agent planned and conducted an in-depth home gardening series which trained homeowners and introduced them to the educational resources of UGA Extension. The Garden Academy is a series of approximately fourteen classes scheduled over a seven week period. Classes are taught at night. This complements the Master Gardener program which is taught during the day. Avid gardeners that cannot take the Master Gardener course now have an alternative training. The Academy is taught in even numbered years and the Master Gardener class is taught in odd numbered years.

There have been sixty-four 'graduates' of the Academy. After one Garden Academy, 85% of our students told us that they learned new information that would help

them improve water management while 100% planned to use what they learned about pruning.

Attendees received a notebook of Extension publications and were introduced to other Extension resources like the Garden Calendar and our local newsletter, The Garden Bench. We added fun activities like a plant swap, a social with Master Gardeners, a tour or a hands-on planting demonstration. Master Gardeners planning The Academy reinforced their training, gained experience with facilitating training, and improved networking with other Master Gardeners and UGA Extension faculty. More than ten of our 'graduates' went on to take the Master Gardener training.

SOUTHEAST LOUISIANA NURSERY ASSOCIATION MARKETING EFFORTS

Coco,* A.M.

County Agent, LSU AgCenter, Tangipahoa Parish, PO Box 848, Amite, Louisiana 70422

The Southeast Louisiana Nursery Association (SELNA) is a non-profit organization whose purpose is to promote and enhance the green industry (nursery & landscape) through educational opportunities, marketing opportunities, and social activities for its members. There are 36 of the 167 licensed nursery growers in the 3 parish area to which I am assigned in southeast Louisiana who are members of SELNA. The marketing efforts which I have coordinated include the creation and bi-annual revisions of the Southeast Louisiana Wholesale Plant Locator List, annual SELNA Trade Show & Open House, and selna.net website. The Plant Locator List includes a list of plants with numbers representing nurseries that carry those plants and a map inside the back cover to show the locations of the participating nurseries. The Trade Show has been held for 5 years, is directed by a committee of SELNA members, and has had additions and revisions each year to encourage participation by landscapers and retailers. The website was officially started in late 2006 and includes a list of members, the plant locator list, nursery locator map, newsletters, timely trade show information, and contact information. An exhibitor evaluation is done at the trade show each year; as a result of participation in the October 2007 show, 71% surveyed reported they felt their business increased or will increase in sales revenue, 79% reported they felt their businesses increased in becoming known to potential new customers, and 79% also reported they renewed or reinforced existing customers.

MAESTROS DEL JARDIN – BRINGING MASTER GARDENING TO COSTA RICA

Bolques, A.¹, Culbert,* D.F.², Halsey, L.A.³, Hunsberger, A.⁴, Mayer, H.⁴, Marshall, D.⁵, Seals, L.⁶ and Vergot, P.⁷

- ¹ Extension Agent, Florida A&M University, Gadsden County, Quincy, Florida 32351
- ² Extension Agent, University of Florida, Okeechobee County, Okeechobee, FL 34972
- ³ Extension Agent, University of Florida, Jefferson County, Monticello, FL 32344
- ⁴ Extension Agent, University of Florida, Miami-Dade County, Homestead FL 33030
- ⁵ Extension Agent, University of Florida, Leon County, Tallahassee FL 32301
- ⁶ Extension Agent, University of Florida, Brevard County, Cocoa, FL 32926
- ⁷ District Extension Director, University of Florida, Northwest District, Quincy, Florida 32351

The Florida Extension Service has initiated Costa Rica's first non-formal training program for landscape management. Three county agents and two administrators spent a week in April 2007 visiting EARTH University's new LaFlor Campus near the Pacific coast. Similar to Florida, the region is experiencing rapid growth in tourism development. Stresses of growth, decreased water quality and quantity, and misuse of horticultural chemicals now impact the local economy and environment. Agents sought to provide informal training for landscapers, ornamental producers and homeowners lacking gardening experiences. Two concurrent seven-week multidisciplinary educational programs were presented in early 2008. Seven county agents each spent two weeks at LaFlor preparing and presenting two concurrent training tracks. Florida agents rotated in and out each week for program continuity, developed course materials, and taught lessons in Spanish. The "Master of Gardens" program was designed for nursery and landscape professionals. A "Gardeners of Costa Rica" course focused on homeowners and ecotourism personnel. Curriculum was similar to US Master Gardener programs. Participants learned about best management practices suitable to dryland tropics, then practiced concepts with hands-on exercises including the installation of demonstration gardens. After seven weeks a graduation ceremony was held and 47 participants received completion certificates. Pre/post test data indicate improved test scores of up to 61 points on concepts taught. Follow-up activities including

enhancement of a website are on-going. Materials developed will be used for other Spanish-speaking audiences. The programs also provided an international experience for faculty to broaden their knowledge of different environments and cultures.

THE MICHIGAN GARDEN PLANT TOUR: A COLLABORATIVE EFFORT BETWEEN MSU-EXTENSION AND GREENHOUSE PLANT PROPAGATORS TO INCREASE FLORICULTURE SALES IN MICHIGAN.

Dudek,* T.A.¹, Runkle, E.S.²

¹. District Extension Horticulture and Marketing Educator, Michigan State University Extension,

Ottawa County, Grand Haven, Michigan, 49417

². Extension Floriculture Specialist, Michigan State University, Department of Horticulture, East Lansing, Michigan, 48824

Michigan ranks third in the U.S. (over 379 million dollars in wholesale sales) in the production of floriculture crops. A significant portion of the industry is devoted to young plant propagation, with receipts in 2006 totaling 81.6 million dollars. Michigan State University (MSU) Extension has had a long-standing close relationship with this segment of the greenhouse industry. In 2004, two young plant producers who hosted display gardens contacted us to consider working with MSU and the MSU Trial Gardens on a statewide garden plant tour for retailers, landscapers and other wholesale greenhouses. Following a number of conference calls and discussions, a proposal was developed to involve five Michigan young plant greenhouse producers and MSU in a coordinated two-week open house showcasing display and trial gardens. Impact of the 2004 effort indicated 1,185 attendees visited at least one of these sites during the showcase period, which was a significant increase from what the growers had previously reported. In 2005, the program was expanded to six companies plus MSU. Detailed online web-based evaluations of visitor participants were conducted following the tour. Data from the evaluations indicated that 29% of the participants planned to increase purchases of new plants for their business by 10 or more as a result of participating in the 2007 tour. The 2007 effort resulted in over 1,500 participant visits and significantly increased the economic value of the floriculture in Michigan.

PROFESSIONAL IMPROVEMENT – HORTICULTURE; DEVELOPING FUNDING, COALITIONS AND SUPPORT FROM CITY AND COUNTY OFFICIALS FOR A PUBLIC BOTANICAL GARDEN

Goodspeed*, J.L.

Extension Horticulture Agent, Director Ogden Botanical Gardens – Utah State University Extension, Weber County, Ogden, Utah 84404

The Ogden Botanical Garden was established in 1994 as a cooperative effort between Utah State University Extension, Ogden City, Weber County and private citizens. The majority of the funding for the Gardens and its maintenance is supplied through the different government entities. This makes the funding dependent on elections and different political priorities and agendas. In an effort to reduce the impact of elections and changing government leadership, I have developed and implemented a plan that increases the fundraising ability, incorporates more cities and private entities into the picture, and uses other money generators to ensure the future of the Gardens and the Extension educational programs. The plan includes: 1. developing a base support group using Master Gardeners, neighborhood groups, interested individuals, and government administrators along with elected officials: 2. developing a membership program that benefits visitors, even though the Garden is a free public garden: 3: working with the University in establishing an endowment for future growth: and 4. Looking into grants and other funding possibilities that accomplish both the Gardens goals as well as the funding organization. I also encourage governments to use the Gardens by hosting different events and regular meetings to ensure the elected officials are regularly in the Gardens. This also strengthens the likelihood that different and unique coalitions will form as different groups meet on neutral ground. The effort is proving to be successful and has increased the funding and likelihood of future support.

THE EFFECTIVENESS OF PREDATORY MITES AGAINST THE TWOSPOTTED SPIDER MITE IN THE LANDSCAPE

Alcaide, J.¹; Henry,* M.E.²; Osborne, L.S.³; Price, J.F.⁴; Rauche, P.⁵

¹. Human Resources, Nanaks Landscaping, Tampa Florida, 33634

2. Extension Agent I, University of Florida IFAS Extension, Hillsborough County, 5339 CR 579 Seffner, Florida 33584-3334

3. Entomologist, University of Florida IFAS, Mid-Florida Research and Education Center, Apopka, Florida, 32703

4. Entomologist, University of Florida IFAS, Gulf Coast Research and Education Center, Wimauma, Florida 33598

5. Wildrose Lawncare Inc., Lutz, Florida 33549

Biological Control of insects and other arthropods using lab raised predators and parasitoids has been shown effective under greenhouse and field conditions in Florida, however very little information is available about their effectiveness under landscape conditions. A research and demonstration project was conducted through Hillsborough County Extension to explore the practical effectiveness and usability of predatory mites, *Phytoseiulus persimilis* and *Neoseiulus californicus* for control of the twospotted spider mites on landscape roses, with the assistance of innovative landscape maintenance companies interested in partnering with Extension and possibly adopting the practice. In addition to providing opportunity for interested landscape companies to gain knowledge and experience in biological control, our objectives were to answer the following questions: Will predatory mites be able to persist under landscape conditions? Will predatory mites be able to reproduce under landscape conditions? How does the cost of using predatory mites compare with typical treatment costs? Companies attended a project meetings held at GCREC, MREC, and the "Living with the Land" attraction at Epcot. Companies contacted interested customers and began scouting for spider mites, which were then reported to the Agent for confirmation. Once confirmed, an order was place for the biological control agent. After initial release, ten leaves per plant were inspected weekly. The project began with an orientation in mid January 2007 and concluded at the end of June. Project sites included a garden at the Museum of Science and Industry, and a homeowner property. Challenges were predator shipments not on time or with few live predators, very time consuming scouting, and other pest and non pest mites in the landscape. Successes include increased experience with predators and observation of released mites reproducing on landscape roses.

DEVELOPING CERTIFIED ARBORISTS FOR PROPER COMMUNITY TREE CARE

Holmes, *D.B.¹

¹ Extension Agent, Florida Cooperative Extension, Marion County, Ocala, Florida 34470

Ocala, Florida, is a community with a mature tree canopy primarily featuring Live oak, *Quercus virginiana*, Laurel oak, *Quercus laurifolia*, and Water oak, *Quercus nigra*. Although several commercial firms perform tree care and storm clean up, none were certified International Society of Arboriculture (ISA) Arborists. The Extension Advisory Committee requested that Extension supply an educational program to help commercial firms obtain and maintain ISA certification. A six week course was developed to prepare participants for the rigorous ISA examination and grant funding was obtained to have a professional videotape the course for future use. The course reviewed tree biology and climbing techniques and emphasized proper pruning, health care and diagnosis of tree disorders. At the conclusion of the course participants could elect to sit for the certification exam. Of sixteen class participants, three commercial firms and one planning professional received their ISA certification as professional arborists. In subsequent years, training sessions have been developed to enable arborists to obtain Continuing Education Units to maintain their certification. As a result of the course, residents are able to contract with certified professionals for their tree care needs.

CRASH COURSE IN FLORIDA GARDENING

Jordi, R.L.

Environmental Horticulture Agent II, University of Florida/ IFAS Nassau County Extension, 543350 U.S. Highway #1, Callahan, FL 32011

The Crash Course in Florida Gardening is a Nassau County program developed as a result of a needs assessment from local Nassau County residents who had attended Extension programming. In addition, an analysis of phone calls received by the horticulture agent revealed local clients required information on proper plant selection and landscape care. Many of these individuals are retired and moved from areas vastly different in climate and terrain from Florida. Disease and insect problems seem to flourish all year causing havoc on lawns and landscape plants. The Crash Course in Florida Gardening provides basic information on the following topics: Extension overview, general horticulture practices, lawns, perennials, trees & shrubs, vegetables, attracting wildlife & dealing with

nuisance wildlife, citrus & palms, annuals, and important websites. Most of the material was edited and condensed from University of Florida/IFAS publications to specifically include only plant material and information pertinent to Northeast Florida. The course is 6 hours, usually administered in two sessions. Attendance for two winter sessions has been 107 adults. Nearly three-fourths of the participants were new to extension programming as it was advertised in local newspapers. Post-survey results indicated 74% of participants would now apply slow release fertilizers at proper amounts and time of year. 79% indicated they would now irrigate lawngrass with proper amounts of water at optimum morning hours. Post-survey results indicated 74% of participants felt their ability to select plants according to the water and light requirements were good or excellent after attending the program.

MICROBIAL FOOD SAFETY TRAINING FOR THE PRODUCE INDUSTRY IN NEW JERSEY

Kline, W.L.¹, Hardwick, L.D.²

1. Agricultural Agent, Rutgers Cooperative Extension, 291 Morton Ave., Millville, New Jersey 08332
2. Chief, Bureau of Commodity Inspection and Grading, New Jersey Department of Agriculture, P.O. Box 330, Trenton, New Jersey 08625

The Food and Drug Administration (FDA) reports that five commodity groups make up 76% of produce related food borne illness outbreaks (lettuce/leafy greens – 30%, tomato – 17%, cantaloupe – 13%, herbs – 11% and green onions – 5%). All these commodities are grown in New Jersey. In September 2006, an E. coli 0157:H7 outbreak in spinach grown in California affected the whole produce industry when the FDA stopped sales of spinach in the United States. New Jersey growers lost over \$500,000. Rutgers Cooperative Extension and the New Jersey Department of Agriculture developed a food safety program to educate growers and buyers on food safety and what is required to meet the increasing demand from the wholesale industry for a third party audited food program. Twenty-one workshops with over 950 participants were held from January 2007 to March 2008. These workshops covered worker health and hygiene, animal/wildlife and livestock management, manure and municipal biosolids use, field sanitation, field harvesting and transportation, packing house management, storage facilities, pest control and produce traceback. A food safety manual was developed along with an accompanying CD to address

all topics. Following the workshops growers scheduled on-site evaluations of their operations prior to having a formal third-party audit. The main problems observed were incomplete records, lack of pest control and proper latrine maintenance. Growers gained better understanding of how important food safety is to their operations with the workshops and on-site visits. Forty-three operations passed the United States Department of Agriculture Third Party Audit Verification after this program.

MAKING GARDENS MORE PRODUCTIVE THROUGH ADVANCED MASTER GARDENER TRAINING

Sagers,* L. A.

Extension Horticulture Specialist, Utah State University Cooperative Extension, Thanksgiving Point Office, Lehi, Utah, 84043-3506

Many households in Utah still rely on their home garden as a way to produce high-quality produce and also to stretch family budgets. Younger couples typically have had little or no training in producing home-grown fruits and vegetables. Consequently, the author trained Advanced Master Gardeners in four counties to address this need and to help participants learn to produce food more efficiently and at a lower cost. This training consisted of twenty hours of classroom instruction and twenty hours of field and laboratory training beyond the Basic Master Gardener curriculum. Training was done in soil improvement, fertilization, variety selection, and intensive gardening. Other subjects included integrated pest management, irrigation and water conservation and training so the Advanced Master Gardeners could deliver quality succinct presentations. These presentations were made at garden fairs and workshops and other venues and more than five hundred people were trained to increase their backyard food production. The instructor and Master Gardeners created twenty PowerPoint presentations which they shared with all the class participants so they could utilize them in training clients.

ARKANSAS COMMON LANDSCAPE PROBLEMS

Sanders, * S.L.

County Extension Agent – Agriculture, University of Arkansas Cooperative Extension Service, White County Extension Service, 411 North Spruce, Searcy, AR 72143

In an effort to develop a tool that would benefit clientele and county agents statewide, our team developed a plan to compile a book of the top twenty-five landscape diseases, weeds and insect pests for Arkansas, simply called Arkansas Common Landscape Problems.

It was vitally important to have the book printed in color, so that the photographs were high-quality, true to color and easy to distinguish. The team wanted the book to be user-friendly and a manageable size so that it would be easily carried in a shirt pocket. Our goal for this booklet was to provide a concise, easy-to-navigate guide to diagnosing and treating the diseases, insects, and weeds that can affect our green spaces.

The team consisted of county agents and specialists in the areas of: horticulture, plant pathology, entomology, weed science and the communications department. County agents were surveyed statewide to determine the most common landscape weeds, diseases and insect in their area. As a result, specialists in each area were asked to assist by providing images and information on their specific topic of expertise. Each entry contains a color photograph and the following information: name, description, plants attacked, damage and control recommendations.

Over 1000 copies of the booklet were printed and distributed statewide to each county Extension office for every agricultural agent to use and for interested clientele.

BUILDING THE CAPACITY OF THE YAVAPAI COUNTY MASTER GARDENER PROGRAM THROUGH VOLUNTEER ENGAGEMENT

Schalau*, J. W.¹, Barnes, M.C.²

¹Associate Agent, Agriculture and Natural Resources, University of Arizona Cooperative Extension, 840 Rodeo Dr #C, Prescott, AZ 86305

²Yavapai County Master Gardener (Volunteer Coordinator), University of Arizona Cooperative Extension, 840 Rodeo Dr #C, Prescott, AZ 86305

Between 1998 and 2007, the Yavapai County Master Gardener Program has increased the numbers of clients served, active Master Gardener volunteers, and documented volunteer service hours. The increased participation and clientele service can be attributed to multiple factors which include the Arizona Highlands Garden Conference, web-based resources (monthly newsletters, electronic volunteer reporting, and meeting information), volunteer recognition events, introduction of continuing education requirements, formation of a Master Gardener Association, formalized volunteer coordination and a mentoring program. During the same period, Master Gardener service hours per year increased by 550%, number of clients served per year increased by 235% and the dollar value of volunteer service to Yavapai County communities per year increased by 738%. Formalized volunteer coordination (provided by Master Gardener volunteers) was critical to achieving these increases in service and associated dollar values. These data indicate that by providing expanded educational opportunities and volunteer recognition, adding electronic reporting, and creating opportunities for social networks, Yavapai County Master Gardeners are more likely to remain engaged and provide increased service to their communities.

NORTH GEORGIA TURFGRASS FIELD DAY: STATEWIDE EVENT FOR GREEN INDUSTRY PROFESSIONALS

Skaggs*, W.D.

County Extension Coordinator & Agriculture & Natural Resources Agent

University of Georgia Cooperative Extension - Hall County

734 East Crescent Drive, Suite 300

Gainesville, Georgia 30501

In May of 2003, Hall County Cooperative Extension held the first North Georgia Turfgrass Field Day at the Allen Creek Soccer Complex in Gainesville. Since then the Turf Field Day has become an annual event attended by 'Green' industry professionals from across Georgia. Topics have included water management, equipment maintenance, disease management, pesticide safety, common sports field problems, and weed control strategies. This annual event includes an extensive tour of the Soccer Complex, during which time participants have an opportunity to evaluate maintenance practices and field conditions. Presenters have included the UGA Extension Turf Team, county Extension agents, industry experts, and technical college instructors. Since its inception, over 500 turf professionals have attended the

North Georgia Turfgrass Field Day. Participants have received twenty hours of commercial pesticide credit, nine certified sports field manager continuing education units, and six golf course superintendent continuing education units. In total, 370 attendees applied for category 24 pesticide credit (average of 4 hours per applicator) over the five field days held. Based on estimates from the UGA Center for Agribusiness & Economic Development, each hour of pesticide credit has a minimum economic value to the business of \$6,427. As such, the economic value to the businesses represented at the Turfgrass Field Day totaled \$9,511,960. In addition, the North Georgia Turfgrass Field Day has been supported by over 20 landscape and turf businesses and suppliers over the years totaling over \$10,000 in contributions.

NATURAL RESOURCES/ AQUACULTURE

eXtension Launch for Livestock and Poultry Environmental Learning Center

Proposed by: RICK KOELSCH

The proposed program will introduce the two significant accomplishments of the Livestock and Poultry Environmental Learning Center. First, the Learning Center is an approved eXtension Community of Practice which launched its web product March 1, 2008. To develop its content, the project has assembled nine issue teams to which more than 100 land grant university faculty and NRCS staff are contributing or reviewing content. The session will provide a tour of this national product.

In addition, the Learning Center has hosted 17 web cast seminars on animal manure management issues for a national audience as of February 2008. Thirty-four national experts from 14 universities, US EPA, USDA (ARS, CSREES, and NRCS), and USGS have contributed to the web casts. The proposed session on the LPE Learning Center will provide a brief review of our web cast seminar accomplishments and discuss opportunities for utilizing these live or archived resources in local extension program.

INCOME OPPORTUNITIES WITH BOTANICAL HERBS

Proposed by: MR. BILL WORRELL

Increasing employment opportunities, diversifying jobs and developing entrepreneurial skills are priorities in Southwestern Virginia. Conditions in Southwest Virginia present opportunities for cultivating many botanical herbs. Extension agents held workshops to introduce landowners to this alternative income opportunity. One hundred thirty-three individuals attended March workshops and 45 participated in follow-up meetings in October.

Ninety-five percent of March participants found the information useful. Over 75% of respondents expressed that their knowledge of ginseng and goldenseal increased "to a great extent." A majority said that they planned to plant at least one herb on their property and many stated that they planned to evaluate their property for planting sites.

October participants were given goldenseal and ginseng to plant, and a shitake mushroom log that they inoculated as part of the workshop. Eighty-four percent were going to plant at least one herb for a crop. Agents plan to evaluate the progress of this micro-business opportunity through follow-up visits with participants.

REMIEDIATING STORMWATER RUNOFF WITH MANUFACTURED TREATMENT DEVICES, AGRICULTURAL MANAGEMENT PRACTICES AND COMMUNITY RAIN GARDENS

Proposed by: WILLIAM SCIARAPPA

Wreck Pond Brook Watershed is a 12 square mile area comprised of a wide variety of land uses. This coastal region has important environmental resources as water, soil, minerals and natural habitat yet is responsible for the majority of NJ beach closings in 2005, 2006 and 2007. As part of a Regional Stormwater Management Planning Committee, Rutgers Cooperative Extension (RCE) has characterized landuse for the agricultural, forestry, recreational and open space components. After assessing intertwining environmental impairments, recommendations have been made to remediate non-point source problems in nutrient loading, sedimentation and fecal coliform.

Best Management Practices (BMPs) have included manufactured treatment devices, public and private rain gardens, soil conservation practices and improved

agricultural methods. The success of this multi-faceted program has required detailed scientific data, team building, working group consensus, community outreach, educational workshops and external funding. Implementation of these remediation programs was expedited after receiving three additional grants totaling over one million dollars along with synergistic in-kind contributions of organizational resources and staff time

COSSATOT FORESTRY CLINIC: A COLLABORATIVE EFFORT TO EDUCATE PEOPLE IN HOWARD, POLK, AND SEVIER COUNTIES

Beaty, S.L1., Vaught, C.J2.

1. Extension Agent-Agriculture, Arkansas Cooperative Extension, Howard County, Nashville, AR 71852
2. Extension Agent-Staff Chair, Arkansas Cooperative Extension, Polk County, Mena, AR 71952

Six years private timberland owners and pro-loggers of the Ouachita Mountain region of Howard, Polk, and Sevier Counties, were a neglected audience. This clientele has been receptive to the educational opportunities we have provided them and have taken an active role in planning the program by offering suggestions of topics and speakers. The clinic takes place on a Saturday in March, so that working landowners and loggers have the opportunity to attend. The program is divided so that the landowners have a training session while loggers are on a tour after lunch the groups switch. The training hours allow pro-loggers and foresters to receive continuing education hours up to six of the all day training. The continued support and attendance of tree farmers and pro-loggers is evidence of the quality programming. The program receives positive comments from the participants on their evaluations taken at each clinic. This clinic has been a cooperative effort with many other state agencies such as Arkansas Forestry Commission and Arkansas Game & Fish, with Extension taking the leadership role in planning, conducting, and evaluating the program.

ECOSYSTEM MONITORING TO EVALUATE GRAZING PLAN INFLUENCE ON RANGELAND HEALTH

Proposed by: TIPTON HUDSON

The Wild Horse Coordinated Resource Management

group has been working since January 2006 to coordinate management of a 62,000 acre landscape of eastern Washington shrub-steppe/ bunchgrass rangeland under checkerboard ownership that includes the Wild Horse Wind Farm owned by Puget Sound Energy as well as private land and state agency land. The group was formed to develop a "prescription" grazing plan targeted at improving forage quality for resident elk, consider recreational access influences on elk movements, and ensure watershed protection in management of critical winter and spring habitat. A subgroup of this elk herd has caused significant damage to hay and irrigated pasture in the Kittitas Valley. Because of the public visibility of this project, history of use, and geographical proximity to a major population center it is important to collect robust, comparable monitoring data on all ownerships within the CRM boundary. WSU Kittitas County Extension secured a grant in the summer of 2007 to establish long-term monitoring sites on non-agency land to collect baseline data on plant community attributes and soil stability that could be compared to future monitoring results and to other sites following implementation of the grazing plan. The monitoring team used 6 pairs of subjectively located permanent monitoring locations based on history of use and vegetative characteristics using the "Monitoring Manual for Grassland, Shrubland, and Savanna Ecosystems" by Herrick, et al 2005 and the Land EKG® monitoring system developed by Charley Orchard to assess attributes of rangeland health.

WORKING WITH ANIMAL FEEDING OPERATIONS TO IMPLEMENT BEST MANAGEMENT PRACTICES

Proposed by: MICHAEL L. CHRISTIAN

Christian,* M.L.1

1 Watershed Specialist, Kansas State University Research and Extension, 1007 Throckmorton Hall, Manhattan, KS 66506.

In Kansas, any animal feeding operation with an animal unit capacity of 300 or more must register with the Kansas Department of Health and Environment (KDHE). Additionally, any facility that has the potential to cause significant water pollution must register with KDHE and implement best management practices (BMPs) to remove the pollution potential. Extension has been playing a leadership role in high priority watersheds in Kansas to assist livestock producers with waste management and water quality protection plans. The

objective of this presentation is to share the process and resulting impacts of our work with small to mid-size livestock producers in the Blue River Basin of northeast Kansas.

Using a Significant Pollution Potential Assessment worksheet, facilities are evaluated. The numerical value of the assessment determines the type and number of BMPs that need to be developed and implemented. These BMPs can include reducing the number of animals being fed; changing the feeding period; installing a vegetative buffer or increasing the size of an existing buffer; and installing a sediment basin and/or a lagoon. Conceptual drawings and management plans are developed for each livestock feeding facility. This shows the operator the types of BMPs that need to be implemented and the extent of the practices.

By implementing the conceptual drawings and plans for management changes, livestock producers can reduce the potential for water pollution from their facilities, and be in compliance with the state regulations. In the last three years, 126 animal feeding operations have implemented BMPs to reduce the pollution potential for 33,623 animal units.

BARRIERS AND OPPORTUNITIES FOR LOW IMPACT DEVELOPMENT: CASE STUDIES FROM THREE OREGON COMMUNITIES

Proposed by: DEREK GODWIN

BARRIERS AND OPPORTUNITIES FOR LOW IMPACT DEVELOPMENT: CASE STUDIES FROM THREE OREGON COMMUNITIES

Godwin,* D.C.¹, Chan, Samuel², Burris, F.A.³
¹Oregon State University Extension Service, Marion County, 3180 Center Street NE Room 1361, Salem, Oregon 97301.

²Oregon Sea Grant, OSU campus, Corvallis, Oregon 97331. ³Oregon State University Extension Service, Curry County, 29390 Ellensburg, Gold Beach, Oregon 97444.

Oregon State University Extension Service and Oregon Sea Grant conducted three needs-assessment workshops with local decision makers and residents in three Oregon communities of vastly different populations. The workshops addressed (1) the biggest

barriers to planning and implementing future development while minimizing impacts to water resources (that is, adopting LID practices); (2) their needs for education, training, or other resources on these issues; and (3) the audiences to which these efforts should be directed. Despite geographic and demographic differences in size and location, consistent themes emerged from these three Oregon communities: 1. Lack of basic understanding of planning and the impacts of growth; 2. Need for active leadership; 3. Need for technical information and assistance, and 4. Funding, economics and incentives. These workshops used a facilitation process which maximized input from all participants providing a wealth of information that will be used by Extension staff and partnering agencies to design and implement education practices, technical assistance and programs that remove barriers and provide incentives for conducting low impact development practices.

CAPTURE THE FLOW AND WATCH IT GROW – DEMONSTRATION RAIN GARDENS IN NORTHWEST ARKANSAS

Kurz, B.F.¹ and Teague*, K.A.²

¹Staff Chair, Arkansas Cooperative Extension Service, Washington County, Fayetteville, Arkansas 72704

²Extension Agent, Arkansas Cooperative Extension Service, Washington County, Fayetteville, Arkansas 72704

Rain gardens are depressions landscaped with native plants, shrubs and trees that are irrigated through the collection of stormwater runoff. By capturing and allowing rainfall to slowly percolate into the soil, rain gardens reduce urban runoff and recharge groundwater supplies while beautifying yards and neighborhoods and attracting local wildlife. During 2007, a \$12,000 U.S. Forest Service grant through the Arkansas Forestry Commission's Urban Forestry Program supported the installation and promotion of 8 demonstration rain gardens in Fayetteville, Arkansas. This project was a collaborative effort among the University of Arkansas Cooperative Extension Service, Washington County Master Gardeners, Beaver Water District, the University of Arkansas Landscape Architecture department, the City of Fayetteville, Fayetteville Public Schools, the Illinois River Watershed Partnership, the Botanical Garden of the Ozarks and Seven Hills Supportive Housing. In total, more than 800 volunteer hours valued at \$14,750 were dedicated to the planning, design,

installation, maintenance, and promotion of the 8 rain gardens and 36 varieties of Ozark native perennials, grasses, shrubs, and trees are showcased in the demonstration gardens. Educational signage, 17 presentations, and the distribution of nearly 3,000 fact sheets effectively promoted the ease, beauty and benefits of installing rain gardens in Northwest Arkansas. The public garden locations at elementary schools, city parks and a homeless transitional housing facility along with extensive press coverage and links to water quality protection and conservation have sparked tremendous public interest and rain gardens are now being created at several homes, churches, schools and city facilities throughout the region.

WHAT THE BAY HINGES ON: TEACHING ECOLOGY AND STEWARDSHIP THROUGH SHELLFISH RESTORATION

Proposed by: CARA MUSCIO

The Barnegat Bay Shellfish Restoration Program has won local support, significant press, and awards for its efforts to “ReClam the Bay”. Its educational programs reach out to volunteers, citizens, and youth to increase environmental involvement, change behaviors, and raise awareness about the Barnegat Bay Watershed. What the Bay HINGES on is a twelve lesson curriculum activity guide designed for use all educational settings. The guide teaches about shellfish biology, Barnegat Bay ecology, water quality, pollution, seafood safety and nutrition, and stewardship. Its focus is on integrating these topics to foster understanding of the complex nature of environmental issues. The guide was made available to educators in the summer of 2007, along with interactive CDs and mini- Taylor Floats full of accessory materials for the lessons. Each lesson provides demonstrations and activities that increase understanding of the topics discussed. Through five workshops, these lessons have been used to instruct sixty-eight volunteers and educators statewide. The guide content was rated 4.51, and the guide’s content 4.67 (scale 1-5, 5=excellent). The guide was also used as a basis for the six lesson “Clam Camp” taught at the St. Francis Community Center in 2006 and 2007. Over one hundred youth between the ages of 5 and 15 have increased their understanding of shellfish aquaculture, bay ecology, and water pollution issues through the camp, rating their learning as 2.45 (scale 1-3, 3=“a lot”). In addition, 90% of students (average of sessions) reported they would improve their environmental behaviors and share what they learned with someone.

TRACKING HUMAN PATHOGENS WITH OPTICAL BRIGHTENERS

Proposed by: CARA MUSCIO

Coastal recreation and tourism is a multi-million dollar industry at the Jersey Shore. Increased development and continual impact to surface waters threatens the health, quality of life, and economic livelihood of this region. Bacterial pathogen pollution, in particular, often leads to beach closings and reduced recreational opportunities, as well as presenting a health concern for both residents and visiting tourists. Although agencies conduct regular monitoring, the isolation of human bacterial pathogens remains a problem for both analysis and remediation of this pollution type.

These concerns led to the founding of the New Jersey Microbial Source Tracking Working Group, which is composed of governmental administrators and scientists, university researchers, extension educators, environmental agencies, water authorities and watershed organizations. Several new detection methods for identifying specific bacteria are being investigated such as MAR and qPCR, which are complex, quick, accurate and relatively expensive. Optical Brighteners have been identified as an inexpensive, simple method of human-specific microbial source tracking with the potential for success. Optical brightener traps were deployed at known bacterial contamination sites, including some where MAR analysis was taking place. The results of this preliminary study concluded that the trap design used was prone to vandalism and sedimentation. Continued research is being conducted using fluorometric optical brightener analysis to determine if this technology can be implemented as a screening tool by non-profit and volunteer groups.

SUCCESSFUL LAND USE PLANNING EDUCATION ADDRESSING MULTIPLE JURISDICTIONS

Proposed by: NEILA. CLARK

Clark*, N. ⁽¹⁾, Fogel J. ⁽²⁾, Slade, G. ⁽³⁾

1. Associate Extension Agent, Agriculture and Natural Resources, Southeast District.

2. Associate Extension Agent, Community Viability, Northeast District.

³. Extension Agent, Agriculture and Natural Resources, Surry, Virginia 23883.

Land use planning decisions have become increasingly complex as the pace of growth has recently accelerated creating many decisions about the details of this growth regarding rate, location, and how it affects the economic, social, and environmental climate of the localities.

Stated need is coming from land-based industries and landowners desiring relief from nuisance lawsuits and “highest and best” tax rates that do not accurately reflect working land use. Local governments desire knowledge and tools to assist them in dealing with the ever-increasing complexity of state and federal incentives, regulations, and mandates and dealing with pressures from many diverse interests.

As a response, a consortium of partners combined to hold an educational session attended by 36 municipal staff and decisions-makers representing 5 municipalities. These attendees were presented with information about new changes at the state level, agency programs to address natural resource conservation issues, and case studies looking at the costs and benefits where these practices have been put to use. The participants then participated in a panel discussion with the experts allowing them to address specific questions that impact their current situations.

As a result, county staff were made aware of funds, expertise, and programs available to assist in land use planning issues. Some counties have begun instituting land conservation activities including purchasing development rights, adopting land use taxation, and adding smart growth concepts into their comprehensive plans and development ordinances. These elements demonstrate information dissemination, knowledge gain, partnerships formed for future assistance, and application of lessons learned.

TEACHING

USING WEB 2.0 TOOLS TO BUILD STAKEHOLDER DRIVEN PROGRAM

Balliet, *K.L.¹, Murphy, T.B.², Robbins, E. D.³

¹. Extension Educator, Penn State Cooperative Extension, Multicounty, Middleburg, Pa 17842

². Extension Educator, Penn State Cooperative Extension, Lycoming County, Montoursville, Pa 17754

³ Extension Educator, Penn State Cooperative Extension, Tioga County, Wellsboro, Pa, 16901

Web 2.0 is a frame of mind that takes us from thinking of Extension websites as “electronic publications” to the realm of “collaborative networked learning” (CNL). CNL uses networks to facilitate the process of sharing to build ideas and concepts as a means to inform and solve problems. The Natural Gas Exploration and Leasing (NGEL) program was emerging from development as our team began looking for solutions to several problems regarding how to reach our clientele with useful, comprehensive information in a timely fashion. We needed to reach landowners across the state with information 24/7/365 in a format that was easy to add to or change quickly. Most landowners never thought they would have to learn about the exploration for natural gas until they got a knock on the door by a landman offering them money for their lease. Second, we needed to be accessible and easy to find. Third and most important, we needed to utilize expertise from resources outside of Extension to provide the most comprehensive information possible. A wiki offered us a solution to those problems. The password is printed on just about every page, so anyone can publish to our wiki. As new issues emerge, any of our stakeholders (ie, Department of Environmental Protection, attorneys, energy companies, landmen and landowners) can add or change information. Later a forum page was linked into the pages to add effective “question and answer” functionality. These exchanges are kept in the forum as threads for others to read, which ultimately builds a base of knowledge and reduces the calls into the extension office. A well designed wiki will take on a life of its own as interested stakeholders expand and diversify its scope and content to meet their diverse needs across the state.

TEACHING ABSTRACT

Bradley,* L.K.¹, Neill, * K. C. 2

¹ - Extension Specialist, North Carolina State University, Department of Horticultural Science, Raleigh, NC 27695

², Extension Agent, North Carolina Cooperative Extension, Guilford County, Greensboro, NC 27405

With shrinking staff sizes there has been an increased reliance on a volunteer workforce to manage extension urban horticulture programs. The number of volunteers as well as their level of responsibility has increased at the same time that staff available to manage volunteer programs has decreased. In order to effectively manage over 3,600 Master Gardener volunteers in 100 counties in North Carolina a statewide, county specific, password protected intranet was created. Agents in each county can tailor their website

to meet their needs and can give staff and volunteers authority to manage part or the

entire website. Individual volunteers enter and update their volunteer hours, their contact & profile information. Volunteer directors post information directly to the web. Scheduling meetings, speakers, and ambassadors for tradeshow is all done on line, by volunteers who prior to making a commitment are able to see what slots are available and who has already signed up. This strategy frees agents, program coordinators and secretarial staff to focus on other demands, while engaging volunteers effectively in administering the program. To view the site <http://ncsugarden.com> - Guest Pass, Guilford County, Your Name, PW=Welcome

HOW TO INCORPORATE THE NEWEST NATIONAL EXTENSION TOOL (eXtension) INTO YOUR EXISTING EXTENSION PROGRAMS

Greene^{1*}, E. A., Brady², C., and Martinson³, K.

¹Extension Equine Specialist, University of Vermont, Burlington, VT 05405

²Youth Extension Horse Specialist, Purdue University, Lafayette, IN 47907

³Extension Assistant Professor, University of Minnesota Extension Regional Center, Andover, MN 55304

eXtension (pronounced E-extension) is the web-based learning platform that provides unbiased, research based information from national extension professionals in multiple content areas. Extension Directors, the United States Department of Agriculture and others have invested financially and programmatically in this national web presence. The content has been developed and peer-reviewed by extension professionals throughout the nation. eXtension provides subject matter information in diverse

areas including: horses, financial management, child development, diversity, environmental stewardship, agriculture, and more. This workshop will provide training for participants in using the eXtension platform and the information on the eXtension website to increase subject matter knowledge, as well utilize this resource for addressing clientele questions and issues. Participants will also learn how to get their youth and adult extension clientele actively engaged in the self-study programs available on the site. Skills learned in this workshop will be directly applicable to all eXtension content areas. Therefore, NACAA members from program assistants to specialists and beyond can gain competency that they will be able to use and teach to home state extension colleagues and external clientele. In addition, aspects of this resource may fit into existing training programs for extension volunteers. The authors are active members of the eXtension HorseQuest Community of Practice, they have developed content, and they have provided training for both developing and utilizing the resource at the local, regional, and national levels.

Electronic Journal Papers

2008 NACAA

RELATIVE FEED VALUE AND CRUDE PROTEIN OF SELECTED COOL AND WARM SEASON FORAGES IN RESPONSE TO VARYING RATES OF NITROGEN

Angima,* S.D.¹, Kallenbach, R.L.²

¹. Assistant Professor, Oregon State University Extension, Newport, Oregon 97365

². Extension Professor, Plant Science Unit, University of Missouri, Columbia, Missouri 65211

Cool season forages produce most of their biomass during spring and early summer and early winter, while warm season forages are productive during hot summers therefore filling in the slump left by cool season grasses. To most livestock farmers, crude protein (CP) and relative feed values (RFV) are the basis for buying or making hay for livestock. Our objective was to determine crude protein and relative feed values from a range of cool and warm season forages harvested as hay when grown under four different rates of nitrogen (0, 50, 100, & 150 lb/acre). Cool season forages included Fescue K-31, Max Q™ fescue, CowPro fescue, Timothy, Smooth Bromegrass, and Orchard grass, and warm season forages Bermudagrass, Switchgrass, Eastern gamagrass, Indiangrass, Little bluestem, and Big bluestem. Forages were harvested once each growing season near LaDue Missouri. Percentage CP levels ranged from 6.4% to 9.2% and 3.4% to 7.1% for cool and warm season forages respectively and generally increased with increasing nitrogen rates. There were no significant differences in CP levels for all the nitrogen rates except for CowPro fescue, Bermuda grass, and Indian grass forages. Relative feed values ranged from 93 to 104 and 84 to 98 for cool and warm season forages, respectively. There were no significant differences in RFV for both cool and warm season forages under all levels of nitrogen used. Nitrogen did influence CP and RFV but not as much as it has been shown to influence yield.

RELATIVE FEED VALUE AND CRUDE PROTEIN OF SELECTED COOL AND WARM SEASON FORAGES IN RESPONSE TO VARYING RATES OF NITROGEN

Angima,* S.D.¹, Kallenbach, R.L.²

¹. Assistant Professor, Oregon State University Extension, Newport, Oregon 97365

². Professor, Plant Science Unit, University of Missouri, Columbia, Missouri 65211

Introduction

Forages play a significant role in livestock nutrition and approximately 85% of all feed units are from forages. In well-managed systems, pasture and hay can supply year-round nutrition with minimal supplementation from other feeds (3,16). Hay, though expensive to produce (7), supplies growers with much-needed feed in winter months when pastures are dormant or not growing. Nitrogen (N) fertilization of grasses has been shown to increase yield (5,17,18). Application of N also decreases dead material and reduces concentration of Neutral Detergent Fiber (NDF) while increasing crude protein (4). Nitrogen fertilization favors grass development by increasing its competitive utilization of light, nutrients, and water (2). However if N is applied in excess of the plants' need, it can also leach below effective root zone (5).

Cool season forages produce most of their biomass during spring and early summer as well as early winter, while warm season forages are productive during hot summers, therefore filling in the slump left by cool season forages (1,8,13). Most of the warm season forages are photoperiod sensitive and determinate in growth, especially switchgrass and big bluestem. Once hay is harvested, it is important to determine the nutrient

composition so as to match feeds to animal requirements. To most livestock farmers, crude protein (CP) and relative feed values (RFV) are the basis on how much hay to buy or feed livestock.

The objective of this study was to determine crude protein and relative feed values from a range of cool and warm season forages harvested as hay when grown under four different rates of nitrogen (0, 50, 100, & 150 lb N/acre). The results could be used in conjunction with other N-rate yield data as a basis for N recommendations to local beef and hay producers in the lower Midwest USA. The cool season forages used were: Fescue Kentucky 31 (*Festuca arundinacea*) Max QTM fescue (friendly endophyte), CowPro fescue (endophyte free), Timothy (*Phleum pretense*), Smooth Bromegrass (*Bromus inermis*), and Orchard grass (*Dactylis glomerata*). The warm season forages were: Bermudagrass (*Cynodon dactylon*) Var Ozark, Switchgrass (*Panicum virgatum*), Eastern gamagrass (*Tripsacum dactyloides*), Indiangrass (*Sorghastrum nutans*), Little bluestem (*Schizachyrium scoparium*), and Big bluestem (*Andropogon gerardii*).

Research Design

The selected forages were established during the spring of 2002 (year 0), in 10 by 15 ft plots on-farm near LaDue Missouri following University of Missouri (MU) guidelines on rates for establishing forages (10), with actual harvesting starting in 2003 (year 1). The species were selected due to their widespread use by growers in the lower Midwest USA and the fact that there were no local yield data for growers. The experimental design was a randomized complete block with a 6 by 4 factorial arrangement in split plot design with the following levels: (a) four N levels = 0, 50, 100, 150 lb/acre applied once a year in the spring, (b) six cool season and six warm season forages (c) replication of 3 for a total of 12 plots for each grass species (144 total plots) in the study.

Soils in this region are predominantly Hartwell silt loams and Hartwell silty clay loams on 0-5% slopes (*Fine, mixed, active, thermic, Typic, Agriudols*). These soils are somewhat poorly-drained to moderately well-drained and are formed in very thin loess and shale bedrock. They are best suited for grass and legume production for hay or pasture under medium water capacity. Soil test results showed a pH of 6.9 with all macronutrients and micronutrients adequate for forage production. Nitrogen source was ammonium nitrate applied between March 15 and April 15 for cool season forages and between April 15 and May 15 for warm season forages. Data were gathered for three hay cutting seasons (May-June) of each year from 2003-2005 when forages were at or near boot stage. Historically, farmers in this area harvest their cool season hay in June-July and warm season hay in July-August when it has already gone to seed. However, in this research, hay was harvested in May and June for cool and warm season forages, respectively.

At harvest, a 42-inch swath was removed from the center of each plot with a flail type mower, weighed and recorded and a sub-sample collected and dried to constant weight indoors for dry matter determination and for nutrient analysis. Crude protein and relative feed values were then tabulated over the three year period and analysis of variance (ANOVA) procedures were conducted using the GLM procedure of SAS (12) to test the differences on effect of N treatment on crude protein and relative feed value within each grass species. Student-Newman-Keuls range test procedure was used for mean separations because it is relatively conservative. Differences reported in this paper are at the P<0.05 level of significance. Relative feed values were calculated as follows (6)

$$\begin{aligned} \text{RFV} &= (\% \text{DDM} \times \% \text{DMI}) / 1.29 \text{ where} \\ \% \text{DDM} &= 88.9 - (\% \text{ADF}) (0.779) \text{ and} \\ \% \text{DMI} &= 120 / \% \text{NDF} \end{aligned}$$

[ADF=acid detergent fiber, NDF=neutral detergent fiber, both obtained from forage nutrient analysis]

Forage Establishment

Variable climatic conditions played a major role in establishment and yearly forage yields for all the grasses within the years. Monthly precipitation and average temperature for 2002-2005 are reported in Table 1. Air temperatures were above normal and precipitation below normal during the establishment period (year 0) when the forages were seeded. During this time, most of the precipitation that came during the summer months (June-September) came in one or two rainfall events leaving many days dry and hot (Table 1). This was a challenge to grass seedlings that were not fully established and deep rooted. Timothy succumbed to the drought and lost up to 85% of its seedlings and had to be reseeded in the fall of year-0. All the other forages including MaxQ and CowPro persisted the dry season in year 0 and were not reseeded. For the warm season forages, Bermuda grass had to be irrigated in the first year after sprigging to survive. Eastern gamma grass was the hardest hit as it had lower germination rates than the rest, and germinated later than other warm season forages and had to be re-seeded in the second year. However, warm season grasses persist better in dry weather and heat than cool season grasses (8) and, therefore, the stands were not affected much by the drought.

Table 1. Monthly total precipitation and average air temperature at Windsor Missouri, (10 miles away from the study site), during the 2002-2005 (year 0 – year 3). Historic averages represent 30 years of data

Month	<u>Monthly Total Precipitation</u>					<u>Avg. Air Temperature</u>				
	Year 0	Year 1	Year 2	Year 3	Historic avg.	Year 0	Year 1	Year 2	Year 3	Historic avg.
	-----Inches-----					-----°F-----				
Jan	2.5	0.6	1.7	5.5	1.6	34	26	29	31	28
Feb	0.8	0.5	1.0	2.9	2.0	37	30	32	39	34
Mar	1.2	3.1	5.5	0.9	3.1	39	43	47	42	44
Apr	3.9	3.8	2.6	2.2	3.7	57	56	56	56	55
May	6.6	5.1	8.3	2.4	5.2	61	64	66	64	64
Jun	3.4	2.8	5.4	7.3	4.5	75	71	70	75	73
Jul	2.2	1.3	7.5	1.3	3.9	80	80	74	79	78
Aug	3.0	3.9	5.2	7.7	3.7	78	81	71	79	76
Sep	2.6	6.7	3.7	1.1	4.3	73	66	69	72	68
Oct	2.7	3.7	4.3	2.6	3.6	53	56	58	58	57
Nov	0.5	3.1	3.7	1.7	3.4	41	45	48	47	44
Dec	1.1	2.9	1.2	0.4	2.1	36	36	34	26	33
Annual	30.6	37.3	50.1	35.8	40.9	55	55	55	56	55

Crude Protein

Percent CP for all forage species are shown in Table 2 and Figures 1 and 2. There is a distinct difference noticeable between cool and warm season forages when looking at CP. All the cool season forages show a progressive increase in CP with increasing rate of N. There were also no significant differences in CP among the cool season forages for all rates of N used except for endophyte free CowPro fescue at 100 and 150 lb N/acre compared to the no N-control (Table 2).

For warm season forages, CP figures were all over across the board but two general trends were observed. Crude protein values increased with increasing N rates except for switchgrass, eastern gamagrass, and bermudagrass. Eastern gamagrass and little bluestem showed higher but non significant CP values for no N-control plots compared to forage that received 50 lb. N/acre. This is not unusual in warm season forages. Actually, studies have shown some quadratic response in which the no-N control had a greater CP concentration than plots receiving moderate rates of N. This response has been attributed to the fact that plots receiving little or no N produce much less total growth, but that growth tends to be dominated by leaf material (15). Other

researchers have found that forage CP was negatively correlated with yield and have emphasized that the negative associations found between forage yield and quality factors have to be considered in developing hay quality factors especially for warm season grasses (9). This trend shows that N use in hay production is primarily advantageous in increasing yield but does not uniformly increase CP or RFV at the same ratio.

Relative Feed Values (RFV)

Relative feed values for both cool and warm season forages are shown in Table 3 and Figure 1 and 2. Despite minor differences in RFV within each species in cool and warm season forages, there were no significant differences in RFV in all forage species in this study relative to rate of N used (Table 3). However, for cool season forages, RFV were close to or above 100, a value equivalent to full bloom alfalfa. These values indicate that quality of the forage grasses were sufficient to ensure relatively high intake by livestock (11,14). For warm season forages, RFV were all below 100 but above 80. This trend in CP and RFV levels among cool and warm season forages was expected. In general annual forages are more nutritious than perennial forages, while cool season forages rate higher in nutrition than warm season forages.

Table 2. Percent crude protein three-year average for cool and warm season forages fertilized with different rates of nitrogen near Ladue Missouri

Cool Season Forages						
N-Rate	Timothy	MaxQ fescue	CowPro fescue	Smooth Brome	Orchard grass	Fescue K-31
<i>lb/acre</i>	-----%-----					
0	7.92a**	6.79a	6.37b	7.76a	8.42a	6.37a
50	8.09a	7.14a	7.04ab	7.76a	8.47a	7.42a
100	8.20a	7.61a	7.92a	8.20a	8.98a	7.80a
150	8.44a	7.85a	7.99a	8.28a	9.18a	7.85a
Warm Season Forages						
N-Rate	Bermuda Grass	Switch Grass	Eastern Gama	Little Bluestem	Indian Grass	Big Blue Stem
<i>lb/acre</i>	-----%-----					
0	6.28ab**	4.80a	5.99a	5.08a	3.68b	4.76a
50	6.03b	4.80a	5.83a	4.81a	3.91ab	4.89a
100	5.98b	5.33a	6.51a	4.86a	4.39ab	5.02a
150	7.07a	5.04a	6.25a	5.74a	4.73a	5.26a

**Values within a column followed by the same letter do not differ significantly ($P \leq 0.05$, Student-Newman-Kuhls, (SNK), Multiple Range Test).

Table 3. Relative feed values three-year average for cool and warm season forages fertilized with different rates of nitrogen near Ladue Missouri

Cool Season Forages						
N-Rate (lb/acre)	Timothy	MaxQ fescue	CowPro fescue	Smooth Brome	Orchard grass	Fescue K-31
0	105a**	100a	101a	93a	110a	96a
50	104a	101a	101a	92a	106a	98a
100	101a	104a	101a	94a	106a	98a
150	103a	101a	99a	93a	104a	97a
Warm Season Forages						
N-Rate (lb/acre)	Bermuda Grass	Switch Grass	Eastern Gama	Little Bluestem	Indian Grass	Big Blue Stem
0	93a**	92a	89a	84a	88a	89a
50	92a	92a	89a	84a	85a	88a
100	93a	90a	91a	84a	88a	90a
150	93a	88a	87a	84a	88a	98a

**Values within a column followed by the same letter do not differ significantly ($P \leq 0.05$, Student-Newman-Kuhls, (SNK), Multiple Range Test).

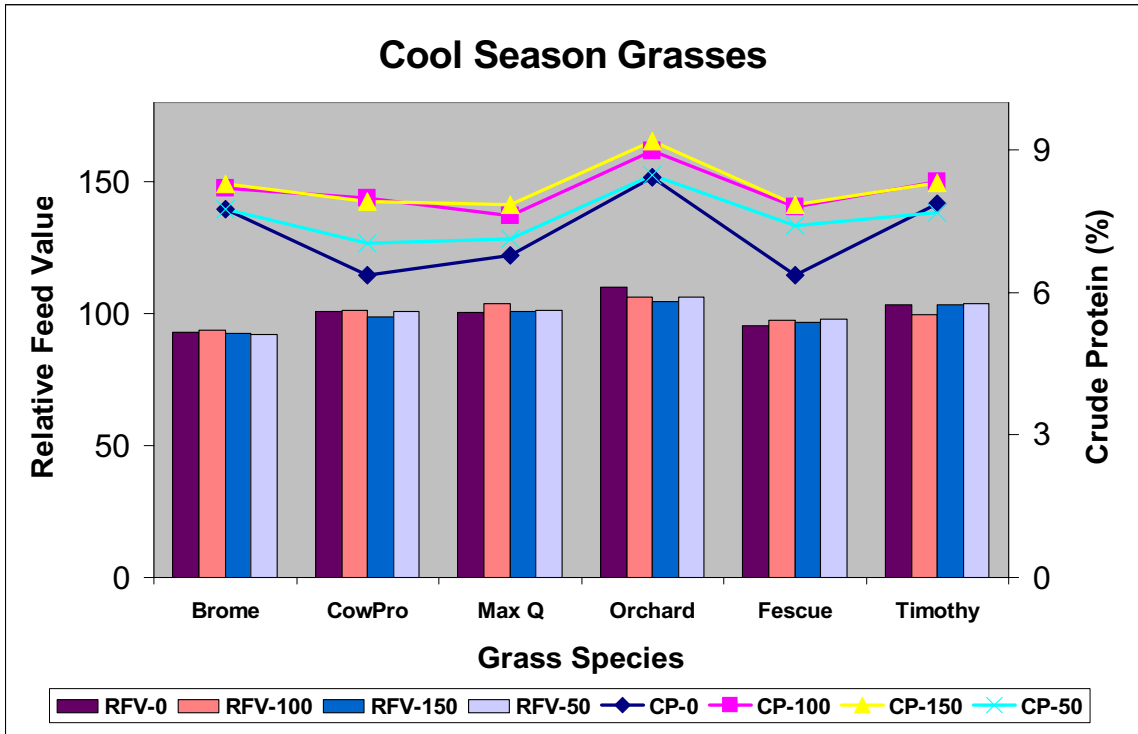


Figure 1. Percent crude protein and relative feed values for cool season forages fertilized with different rates of nitrogen near Ladue Missouri

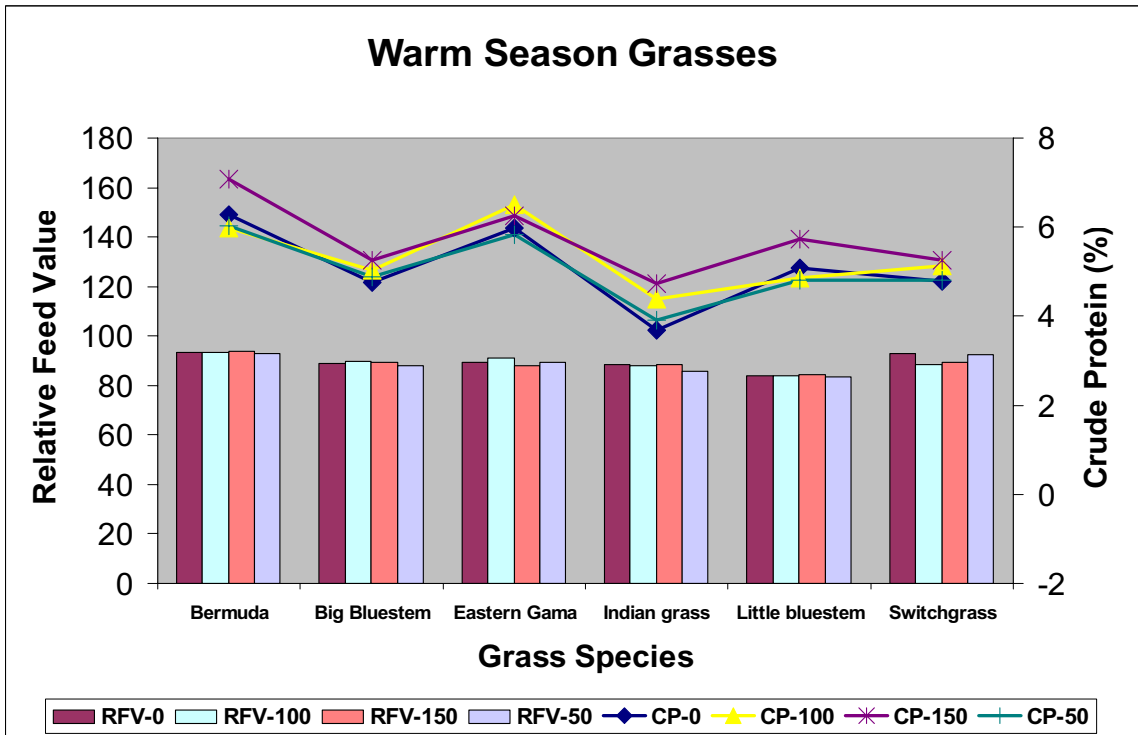


Figure 2. Percent crude protein and relative feed values for warm season forages fertilized with different rates of nitrogen near Ladue Missouri

Conclusion & Recommendations

With increasing prices for nitrogen fertilizer, producers must be aware of and use good economic principles in purchasing and applying fertilizers to their forages. While forage yields generally increase with increasing rates of N, we found from this study that CP and RFV do not change significantly with increasing rates of N used in this study. Therefore, the benefit of using more N is advantageous largely in producing more biomass, and therefore more feed at a given nutritional level for livestock. These results are especially important for those who feed hay in winter and use CP or RFV as a basis for buying or making hay. By using nitrogen wisely to raise more hay that has good levels of CP and RFV, one can reduce input costs and increase animal productivity.

Reference:

1. Fike, J. H., C. D. Teutsch, and D. L. Ward. 2005. Warm season grass production response to site and defoliation frequency. Online. Forage and grazinglands doi:1094/FG-2005-0824-01-RS.
2. Follett, F. F., and S. R. Wilkinson. 1995. Nutrient management of forages. p. 55-82. In R. F. Barnes et al. (ed.) Forages. Vol. II. The science of grassland agriculture. 5th ed. Iowa State Univ. Press, Ames IA.
3. Fontenot, J. P., L. L. Wilson, and V. G. Allen. 1995. Forages for beef cattle. p. 279-293. In R. F. Barnes et al. (ed.) Forages. Vol. II. The science of grassland agriculture. 5th ed. Iowa State Univ. Press, Ames IA.
4. Gerrish, J. R., P. R. Peterson, C. A. Roberts, and J. R. Brown. 1994. Nitrogen fertilization of stockpiled tall fescue in the Midwestern USA. *J. Prod. Agric.* 7:98-104.
5. Hall, M. H., D. B. Beegle, R.S. Bowersox, and R.C. Stout. 2003. Optimum nitrogen fertilization of cool season grasses in the NE USA. *Agron. J.* 95:1023-1027.
6. Holland, C., and Kezar, W., eds. 1990. Pioneer forage manual . a nutritional guide. Pioneer Hi-Bred International, Inc. Des Moines, IA.
7. Kallenbach, R. L., G. J. Bishop-Hurley, M. D. Massie, M. S. Kerley, and C. A. Roberts. 2003. Stockpiled annual ryegrass for winter forage in the lower Midwestern USA. *J. of Crop Sci.* 43:1414-1419.
8. Mitchell, R., J. Fritz, K. Moore, L. Moser, K. Vogel, D. Redfearn, and D. Wester. 2001. Predicting forage quality in switchgrass and big bluestem. *Agron. J.* 93:118-124.
9. Moyer, J. L., Fritz, J. O., and Higgins, J. J. 2003. Relationships among forage yield and quality factors of hay type sorghums. Online. *Crop Management* doi:10.1094/CM-2003.
10. Roberts, C., and J. Gerrish. 2001. Seeding rates, dates, and depths for common Missouri forages. Univ. of Missouri Ext. Guide G4652. Columbia, MO.
11. Robinson, A. P., Horrocks, R. D., Parker, D. D., and Robert, D. F. 2007. Quality of stockpiled pasture and hay forages. Online. *Forage and Grazinglands* doi:10.1094/FG-2007-0926-01-RS.
12. SAS Institute. 1997. *Statistics*. SAS Inst., Cary, NC.
13. Scarbrough, W. K., W.K. Coblenz, K. P. Coffey, K. F. Harrison, T. F. Smith, D. S. Hubbell, J. B. Humphrey, Z. B. Johnson, and J. E. Turner. 2004. Effects of nitrogen fertilization rate, stockpiling initiation date, and harvest date on canopy height and dry matter yield of autumn-stockpiled bermudagrass. *Agron. J.* 96:538-546.

-
14. Smith, L. B., and Kallenbach, R. L. 2006. Overseeding annual ryegrass and cereal rye into soybean as part of a multifunctional cropping system: II. Forage yield and nutritive value. Online. Forage and Grazinglands doi:10.1094/FG-2006-0907-02-RS
 15. Teutsch, C. D., Fike, J. H., Groover, G. E., and Tilson, W. M. 2005. Nitrogen fertilization rate and application timing effects on the nutritive value and digestibility of crabgrass. Online. Forage and Grazinglands doi:10.1094/FG-2005-0614-01-RS.
 16. Waller, S. S., and L. E. Moser. 1986. A guide for planning and analyzing year round forage program. Univ. of Nebraska Extension Bulletin EC 86-113-C. Lincoln Nebraska.
 17. Wolf, D. and W. Opitz von Boberfeld. 2002. Effects of nitrogen fertilization and date of utilization on the quality and yield of tall fescue in winter. *J. Agron.* 189:47-53.
 18. Zemenchik, R. A., and K. A. Albrecht. 2002. Nitrogen use efficiency and apparent nitrogen recovery of Kentucky bluegrass, smooth bromegrass and orchard grass. *Agron. J.* 94:421-428.

BACKYARD WOODLOT OWNERS: A GROWING ISSUE AND NEW APPROACH

Downing, A. K.¹, Kays, J. S.², Finley, J. C.³

¹Extension Agent, Virginia Cooperative Extension, Northern District, Madison, VA 22727

²Extension Specialist, Maryland Cooperative Extension, Western Maryland Research & Education Center, Keedysville, MD 21756

³Associate Professor and Extension Specialist, The Pennsylvania State University, School of Forestry, State College, PA 16802

As populations expand into rural areas, the Eastern United States, particularly, is experiencing forest fragmentation and parcelization. This process creates major challenges for natural resource managers, as rural forest and agriculture land convert into suburban developments. Meeting the diverse ownership objectives on these smaller forestland parcels, which do not often focus on timber production, requires innovative and sophisticated methods of communication to convey both the benefits and responsibilities associated with land stewardship.

Landowners with less than 10 acres of forest own 59% of forest properties in the Eastern United States. While the overall acreage of this audience is still relatively small (8%), they represent a growing underserved audience and a significant political base that could provide support for forestry programs.

Forests in this changing landscape can provide myriad environmental benefits to society as well as raw materials for forest industry. Landowners who believe non-management is the best management practice do not think about their connection to natural resources, or they have insufficient information for making informed decisions about improving the ecological function of this evolving urban landscape. As a result, landowners do not understand the intrinsic benefits gained from managing their forestland, no matter how small. A new educational tool and approach entitled, “The Woods in Your Backyard” is available to encourage small acreage landowners to understand their role in conserving forest values and to lead them to more active involvement with their natural resources.

BACKYARD WOODLOT OWNERS: A GROWING ISSUE AND NEW APPROACH

Downing, A. K.

Virginia Cooperative Extension, Northern District, Madison, VA 22727

Kays, J. S.

Maryland Cooperative Extension, Western Maryland Research & Education Center, Keedysville, MD 21756

Finley, J. C.

The Pennsylvania State University, School of Forestry, State College, PA 16802

INTRODUCTION

Today’s most underserved forest landowner audience is the majority. Small acreage forest owners account for the vast majority of owners in the United States and especially in the Northeast and Southeast Regions. Landowners with less than 10 acres of forest own 59% of forest properties in the Eastern United States (Butler and Leatherberry 2004). While the overall acreage of this audience is still relatively small (8%), they represent a growing underserved audience that could be a significant political base in support of forestry programs (Eagan and Luloff 2000, Hull et al. 2004).

Traditionally, Natural Resource Professionals have stood on the sidelines watching as Private Forest Landowner (PFL) characteristics have gradually but drastically changed. We have a “new” type of landowner and new resource challenges.

The “New” Landowner

Most forestland in the United States is owned by Private Forest Landowners (PFLs). In the 17 southern states, for example, 59% of the 215 million acres of forestland is in PFL ownership (Butler and Leatherberry 2004). Historically, these PFLs have met most of society’s fiber needs. However, as our nation’s population has become increasingly affluent and older, many people have chosen to follow the American Dream of land ownership. Through this process, the finite supply of land is under increasing pressure, and we find that parcelization is rampant.

In the Southern Region, for example, the average forested tract size in 1978 was 45 acres and by 1994 the average dropped to 38 acres (Birch 1996). The next 10 years dropped another 10 acres from the average. In a 2004 survey by Butler and Leatherberry, the average forest ownership size was 28 acres for PFLs in the Southern Region (2006).

Kendra & Hull (2005) found that new, small acre, forest owners in Virginia were most motivated by lifestyle concerns such as living simply, near nature and escaping the urban stress. Yet, they are not necessarily preservationist desiring to leave the land “pristine.” For example, management tools such as herbicides, tree pruning and harvesting are options these landowners would consider using to improve wildlife habitat, forest health, and scenic views. Kendra and Hull (2005) found that landowners cite many reasons for not managing their land, such as, they never thought about it, time and money limitations, parcel size, and lack of knowledge. Many of these can be addressed through information, demonstration, consulting, and outreach programs.

Clearly, segments of the new forest owner generation offer new challenges and opportunities for resource managers and educators. While these individuals most likely tend to look inside their boundaries, the decisions they make have ecologic, economic, and social impacts across the landscape. In this regard, resource professionals should recognize they have a role with this new clientele. Scaled down traditional forest management approaches may work in some cases, but there is a need to restructure both our ideas and approaches. Hull et al. (2006) suggest that the management of these lands is important for the environmental services they provide and because these owners are politically active. If educators and professional foresters are to remain relevant, they must be proactive in making the changes necessary to serve this growing audience and the resources they control.

The Issue

Unfortunately, land parcelization in general and forest parcelization specifically are legacies of our heritage. The settlement of our country was largely driven by the individual desire for land, which was readily within the reach of the commoner. Numerous studies and reports document, quantify, and articulate the potential threats of our land resource consumptions (Egan & Luloff 2000, Macie et al. 2002, Sampson and Decoster 2000, Vince 2005, Wear 2002).

Resource professionals have the training to understand the effects and ramifications of landscape fragmentation – the breaking apart of systems as we impose varying land uses. Whether we fragment or parcel the land, the potential to adversely affect forest and ecosystem health, economic structures, and future management are enormous. Resource professionals need to respond by encouraging responsible stewardship to traditional owners and to the new tenants of the land.

The Void

The importance of private forestland ownership is indisputable. Increasingly, stakeholders from diverse perspectives recognize the role they play in providing ecological services to the public. The traditional economic benefits remain, but often there is increasing recognition of the social and ecological values forests provide. Because of ownership patterns in the East; this places a large emphasis on the private forests. In the past, governmental incentive programs focused on the timber base encouraging forest owners to manage for products. Recent programs expanded the discussion to wildlife, water, and recreation. The Forest Stewardship Program, launched in 1991, is one of the most recent federal initiatives to assist PFLs with management. A principle stewardship goal is to provide PFLs with management plans to guide their decision making. Unfortunately, this valuable program targets forest owners owning more than ten acres leaving smaller acreage owners with no publicly-supported source of technical or cost-share assistance.

Why was the threshold set at 10 acres? Resource professionals argued that smaller ownerships are too difficult to manage – it is inefficient. Can we afford this luxury? Weir and Greis (2004) argue that we have to change our perspective and reach out to the landowner of smaller forests if we are to continue to meet societal needs.

With the current base of assistance programs, small acreage landowners rarely come in contact with resource professionals. This void calls for a variety of new tools, including educational material for small acreage forest owners that, to begin with, enables them to develop their own plan. Cooperative Extension and agency partners are well situated to meet this educational void of small acreage landowners with some of the new tools becoming available.

METHODS

The objective behind the Woods in Your Backyard project was to reach small acreage landowners (1-10 acres) with research-based information to help them create or enhance natural areas while meeting their personal goals and improving their property's contribution to ecosystem health.

Approach

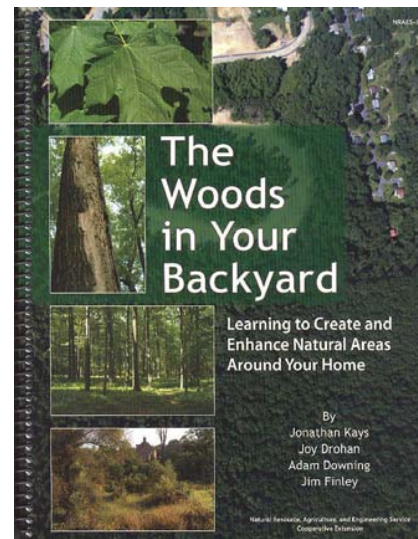
The first step was to define an approach to reach small acreage woodlot owners. Knowing that there are increasingly more of them, and relatively, if not actually fewer of us, we adopted a train-the-trainer model. The Master Gardener and the newer Master Naturalist programs are excellent examples of extension programs using this approach..

The train-the-trainer model simply attracts interested citizens to participate in training programs with the agreement that they will share information with others in a peer learning approach. In practice these individuals have access to networks and opportunities that could never be accessed by trained professionals, resulting in the dissemination of information by credible citizens in the community that is valued and implemented.

Tool

After choosing an approach, the authors began crafting the “tool” for training volunteers. However, we soon realized that the product envisioned would also serve as a stand alone product for independent use, or self-assessment. **“The Woods in Your Backyard: Learning to Create and Enhance Natural Areas Around your Home”** is the end result. Development proceeded using the following principles:

- Utilize a case study approach
- Focus on better management of existing natural areas & conversion of lawn into forest



- Focus on non-timber values
- Require no forestry tools or previous knowledge and utilize user-friendly jargon
- Provide support materials for volunteers who do delivery & mentoring
- Include a separate workbook for personal assessment of the users property
- Design the publication to be used to guide group education and outreach efforts with new extension audiences
- Assume the user has Internet access to find needed resources and make those resources available at a specific website

RESULTS

The Woods In Your Backyard (Kays et al. 2006) uses a case-study approach to guide users through a process of creating their own plan while learning basic forest stewardship concepts. Table 1 presents to the headings for the four major parts of the publication and incorporated workbook in part five.

Table 1. Publication contents

Part	Theme	Lessons
1	Introduction	<ul style="list-style-type: none"> • Identify interests and mapping • Family involvement • Constraints to management
2	Property Inventory	<ul style="list-style-type: none"> • Landscape view • Management unit identification • Tree & Plant identification
3	Ecological Processes	<ul style="list-style-type: none"> • Succession • Principals of Forestry • Water resources • Wildlife ecology
4	Putting Knowledge to Practice	<ul style="list-style-type: none"> • Recreation & aesthetics potential • Choosing projects • Land management techniques • Timetable of activities • Recording progress
5	Workbook	Twenty activities completed while working through the first four sections and in tandem with a case study

Users who work their way through the material will have, in the end, a self-designed plan, with research-based input, to help them accomplish their goals in a sustainable and ecologically sound manner. Impact results from trainings in Virginia reveal implemented practices on the land as a result of the planning exercise and training that includes converting excess lawn to natural areas, controlling invasive plants and improving wildlife habitat.

While targeted to the Mid-Atlantic region, the manual has application to most areas of the country. Extension and other natural resource professionals can use the core manual and adapt the resource list, PowerPoint presentations, and other CD resources to suite their respective area.

DISCUSSION

Research into adult learning and the use of information by adults suggests that self actuation – wanting to learn and to solve their own problems is important and leads to higher levels of implementation (Knowles 1984 and

Allman. 1983). Extending these concepts central to adult learning, also know as andragogy, we believe it is useful to engage landowners in developing their own plans, which should lead to higher implementation levels. We set out to create a tool for owners of smaller tracts that they would find useful in a guided planning process. We believe that we have a need to reach out to the “new” landowner to provide educational materials that they can use to guide their stewardship of land. We also believe that we lack the capacity to lead this process using traditional materials and approaches. Therefore, we offer that “The Woods in Your Backyard” is an approach that people will find useful and provide us the means for guiding decisions that will affect economic, ecological, and social returns from the forests in a changing landscape.

“The Woods in Your Backyard” is a tool for reaching a currently underserved audience with both management information and mechanisms for designing their own plan and putting it into action.

CONCLUSIONS

While “The Woods in Your Backyard” is a step forward reaching out to small acreage landowners, it is only one step. We do need to train service providers.

The audience’s socio-economic traits suggest they would be willing to pay for professional assistance to achieve their management objectives (Hull et al. 2004). Trained service providers might have credentials and experience in a variety of areas such as raw material extraction (logging), resource management (forestry & wildlife), and home landscape care (arboriculture and/or horticulture). There is a clear need for individuals with a mix of skills who can work in the context of myriad ownerships and objectives. We need individuals with the traditional natural resource management skills, but in the situation where we see value for “The Woods in Your Backyard,” they require a set of new skills. They have to have the ability to build trust (Hull et al. 2004) with this new clientele.

ACKNOWLEDGEMENTS

The authors thank the funding agencies, U.S. Fish & Wildlife Service and the Virginia Department of Forestry through the Potomac Watershed Partnership of this project for their patience and financial support. In addition, we thank our respective institutions, Virginia Tech, University of Maryland and Penn State University for various resources provided throughout this 3.5 year effort.

REFERENCES

- Allman, P. 1983. The nature and process of adult development. In M. Tight (Ed.), *Adult learning and education* (pp. 107-123). London: Groom Helm.
- Birch, T.W. 1996. *Private forest-land owners of the United States, 1994*. USDA Forest Service, Northeastern Forest Experiment Station Resource Bulletin NE-134. 183 p.
- Butler, B. and E. Leatherberry. 2004. America’s Family Forest Owners. *Journal of Forestry* 102(7): 4-9.
- Egan, A.F. and A.E. Luloff. 2000. The Exurbanization of America’s Forests: Research in Rural Social Science. *Journal of Forestry*. 98(3): 26-30.
- Finley, A.O., D.B. Kittredge, T.H. Stevens, C.H. Schweik, and D.C. Dennis. 2006. Interest in Cross-Boundary Cooperation: Identification of Distinct Types of Private Forest Owners. *Forest Science* 52(1): 10-22.
- Hull, B.R., D.P. Robertson, G.J. Buhyoff. 2004. Boutique Forestry: New Forest Practices in Urbanizing Landscapes. *Journal of Forestry* 102(1): 14-19.

Hull, B.R., S.F. Ashton, R.N. Visser. 2006. "Who are Interface Landowners?" Fact Sheet 2.1. In: Monroe, M. C.; L. W. McDonell; L. A. Hermansen-Báez (Eds.). 2006. Changing Roles: Wildland-Urban Interface Professional Development Program. Gainesville FL: University of Florida.

Kays, J., J. Drohan, A. Downing, J. Finley. 2006. *The Woods in Your Backyard: Learning to Create and Enhance Natural Areas Around Your Home*. Ithaca, NY: Natural Resource, Agriculture, and Engineering Service.

Kendra, A. and R.B. Hull. 2005. Motivations and Behaviors of New Forest Owners in Virginia. *Forest Science* 51(2): 142-154.

Kittredge, D.B. 2004. Extension/Outreach Implications for America's Family Forest Owners. *Journal of Forestry* 102(7): 15-18.

Knowles, M. 1984. *Androgogy in Action: Applying Modern Principles of Adult Learning*. San Francisco, CA: Jossey-Bass Publishers. 444p.

Macie, E.A., L.A. Hermansen, eds. 2002. Human influences on forest ecosystems: the southern wildland-urban interface assessment. Gen. Tech. Rep. SRS-55. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 159 p.

Sampson, N. and L. DeCoster. 2000. Forest Fragmentation: Implications for Sustainable Private Forests. *Journal of Forestry*. 98(3): 4-8.

Vince, S.W., M.L. Duryea, E.A. Macie, L.A. Hermansen, eds. 2005. *Forests at the Wildland-Urban Interface: Conservation and Management*. Boca Raton, FL: CRC Press LLC.

Wear, D.N., J.G. Greis. 2002. Southern Forest resources assessment: summary report. Gen. Tech. Rep. SRS-54. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 103 p.

FIBER DIGESTIBILITY IN RYEGRASSES

Downing, T.W.¹, French, P.²

¹ Dairy Extension Agent, Oregon State University, Tillamook, Oregon 97141

² Dairy Nutritionist, Southern States Coop., Richmond, Virginia. 23260

Dairy nutritionists have known for years that forages with the exact same laboratory analysis could have significantly different performance in lactating cows. It has been speculated that the digestibility of neutral detergent fiber (NDFD) may explain much of this variation. The objectives of this study were to demonstrate digestibility variation between varieties and season and use this information as the basis of an extension education program. Eleven ryegrasses that were commonly grown in Oregon were selected and planted in September 2004 in Tillamook, OR. Plots were 5' x 20', replicated three times and all planted at the same time. Plots were fertilized in four separate applications of nitrogen annually of approximately 75 lbs/acre/year or 300 lbs N annually. For two years, the plots were mechanically harvested six times a year at approximately 28 day intervals beginning in March and continuing through August. Yield data was recorded and samples were dried in a 55°C in a forced-air oven for 48 hour. Samples were ground and analyzed for neutral detergent fiber and NDFD. Fiber digestibility was determined using a Daisy II Incubator. Total dry matter produced ranged from 6.5 tons down to 5.8 tons of dry matter per acre. The fiber digestibility data indicated there was around a 10% difference between the highest variety Elgon and the lowest Flanker. When digestibility and total dry matter yield were combined, this analysis showed a 32% variation in digestible fiber per acre from the highest (Elgon) to the lowest (Tonga). It is estimated the amount of extra energy produced in the form of digestible fiber from our highest ryegrass over our lowest is enough to produce an extra 28 cwt of milk per acre per year. While there was some variation from year to year, most varieties were very consistent from one year to another. This project has been used as the basis of an extension educational program. This information has been used to change the way livestock rations are balanced and hopefully alter the types of grasses being developed in the future.

FIBER DIGESTIBILITY IN RYEGRASSES

Downing, T.W.

Tillamook County Extension

Oregon State University

troy.downing@oregonstate.edu

French, P.

Southern States Cooperative

Richmond, Virginia

Introduction

Plant fiber has three major components: cellulose, hemicellulose, and lignin. Cellulose and hemicellulose are digestible to some extent by ruminants. Ruminants can convert these fiber components to energy because the rumen provides the correct environment for bacteria and other microorganisms that actually break down the fiber. Lignin is indigestible, and thus cannot be used by ruminants for energy.

Most of the energy a cow receives in her diet comes from carbohydrates, which are a combination of non-fiber carbohydrates (grains) and fiber carbohydrates. As the digestibility of the fiber fraction increases, the total net energy of the forage increases as well as total feed intake increases (Titel, 2000). Increasing neutral detergent

fiber digestibility (NDFD) by 1 percentage point resulted in a 0.37 lb increase in dry matter intake and boosted fat-corrected milk production by 0.55 pounds (Oba, 1999).

Several factors can affect forage's NDF digestibility, including the amount of lignin, hybrid or variety, soil fertility, weather conditions, and forage harvest and storage practices. In the past few years, several researchers have looked closely at NDF digestibility in corn and alfalfa; particularly the variation among varieties (Beckman, 2005). However, limited research has been done regarding the variation in NDF digestibility of cool-season grasses.

In one study in the Midwest, the average NDFD of grass hay/silage samples submitted for fiber digestibility analysis was 53%, individual samples ranged from 36 to 74% (Hoffman, 2003). For a typical dairy ration, this variation could result in 5 lb in milk per cow per day difference. Similar production responses and variation would be expected in growing sheep and cattle as well.

Dairy producers and dairy cattle nutritionists have known for years that forages with the exact same laboratory analysis could have significantly different performance in lactating cows. In the past few years, research has shown that the digestibility of neutral detergent fiber (NDF) may explain much of this variation. However, in Oregon very few nutritionist or dairymen have been accounting for fiber digestibility in grass while ration balancing. Part of the resistance for change has been the lack of understanding on the large variations seen in grasses compared to corn or alfalfa. This project was created to help highlight the large variation in grasses and persuade producers and nutritionist to change the way they balance rations.

Objectives

The objectives of this project were to:

- Determine fiber content and digestibility variability of eleven common ryegrasses
- Evaluate variation from cutting and season
- Determine annual energy differences due to NDF digestibility differences
- Use the information as part of an extension educational program aimed at both livestock producers and the grass seed industry.

Procedures

Eleven ryegrasses that were commonly grown in Oregon were selected and planted in September 2004 in Tillamook, OR. Plots were 5' x 20', replicated three times and all planted at the same time. Plots were fertilized in four separate applications of nitrogen annually of approximately 75 lbs/acre/year or 300 lbs N annually.

For two years, the plots were mechanically harvested six times at approximately 28 day intervals beginning in March and continuing through August. Yield data was recorded and samples were taken and dried in a 55⁰C forced-air oven for 48 hour and analyzed for DM content. All samples were ground with a Wiley Mill (1mm screen; Arthur H. Thomas, Philadelphia, PA). Samples were analyzed for NDF and NDFD (VonSoest et al., 1991.) Fiber digestibility was determined in our lab using a Daisy II Incubator (Ankom Technology, Macedon, NY).

Digestibility and yield data were analyzed and developed into an Extension educational program. Extension educational programs were conducted across the state in two statewide workshops and six regional programs. Information was included in newsletters going to producers, nutritionist and grass seed industry as well as being presented at the Pacific Northwest Nutrition Conference.

Results

Total dry matter produced ranged from 6.5 tons down to 5.8 tons of dry matter per acre. Bronsyn was the highest yielding both years and Tonga was the lowest producing both years as well (Figure 1). Figure 2 illustrates the NDF digestibility seen by variety over the two years studied. Data indicated there was around a 10% difference between the highest variety Elgon and the lowest Flanker. If you compare Figure 1 to Figure 2

you will notice some varieties that yielded high like Bronsyn ended up having one of the lowest fiber digestibility values.

Figure 3 shows the total pounds of digestible fiber harvested on an annual basis by variety. This value is generated by multiplying the yield times the percentage of digestible fiber. This analysis showed a 32% variation in digestible fiber per acre from the highest (Elgon) to the lowest (Tonga). Figure 4 shows the NDF digestibility of each variety studied for each year. While there was some variation from year to year, most varieties were very consistent from one year to another.

One major goal of this project was to understand seasonally changes in fiber and fiber digestibility. Figure 5 illustrates NDF and NDFD values throughout the season. Neutral detergent fiber values started in March averaging 45% of the total dry matter and ended up at 51% by August. Conversely, NDF digestibility started up at 83% in March and declined to around 65% in August.

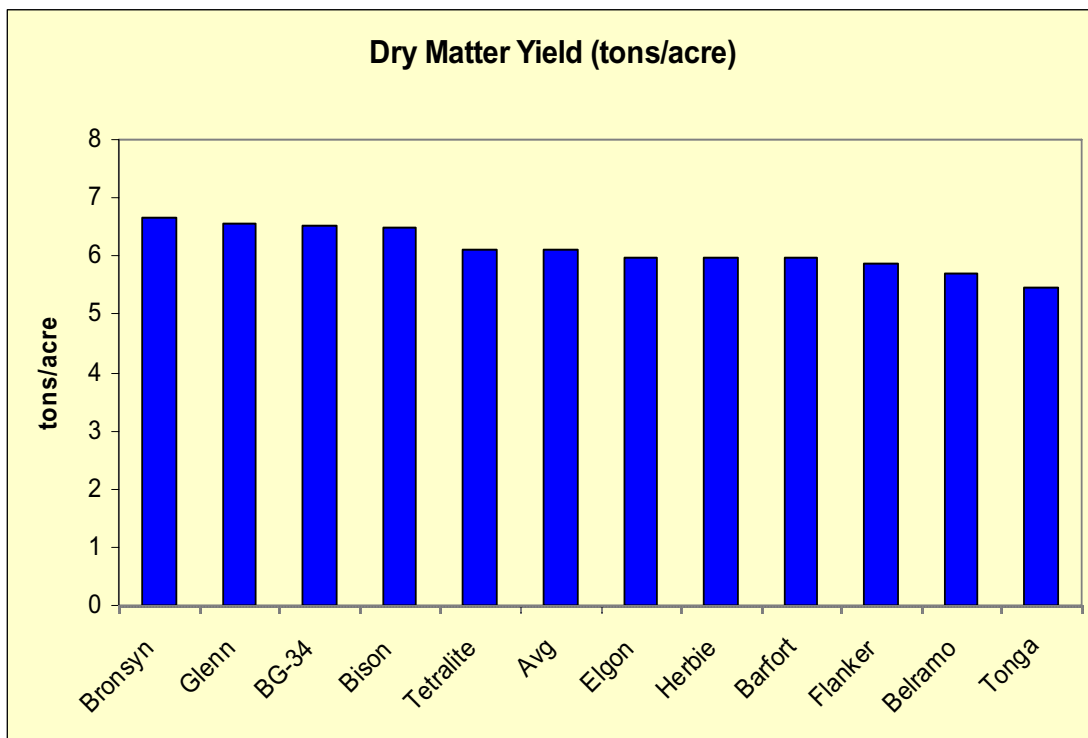


Figure 1 – Tons of dry matter produced by variety per year (two years averaged)

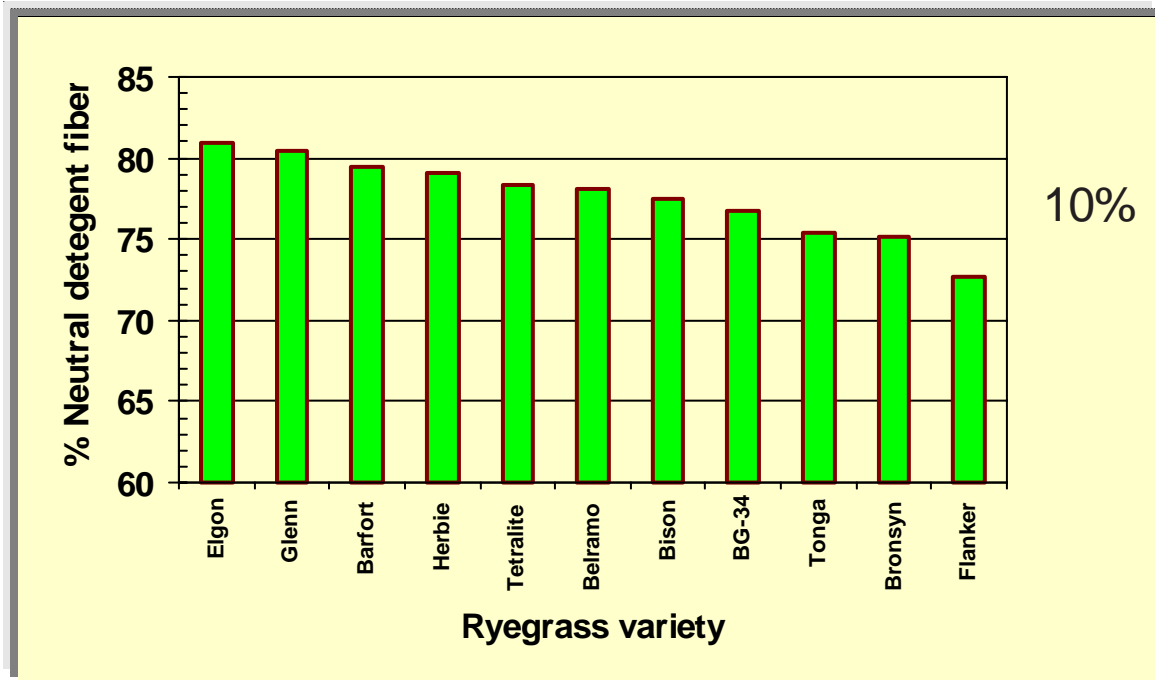


Figure 2 - Fiber digestibility of the ryegrasses studied highlighting that there is a 10% difference from the highest to the lowest.

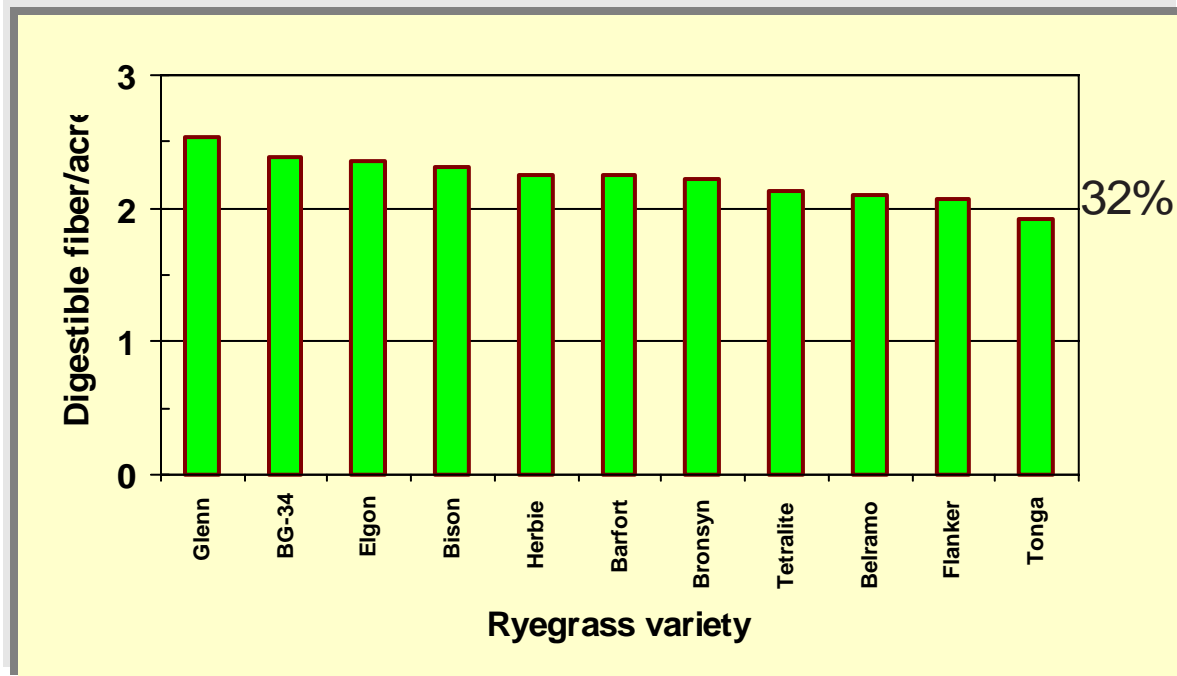


Figure 3 - Ryegrass digestible fiber yield in tons per acre. When you multiply total yield times the percent digestible, the difference becomes very significant.

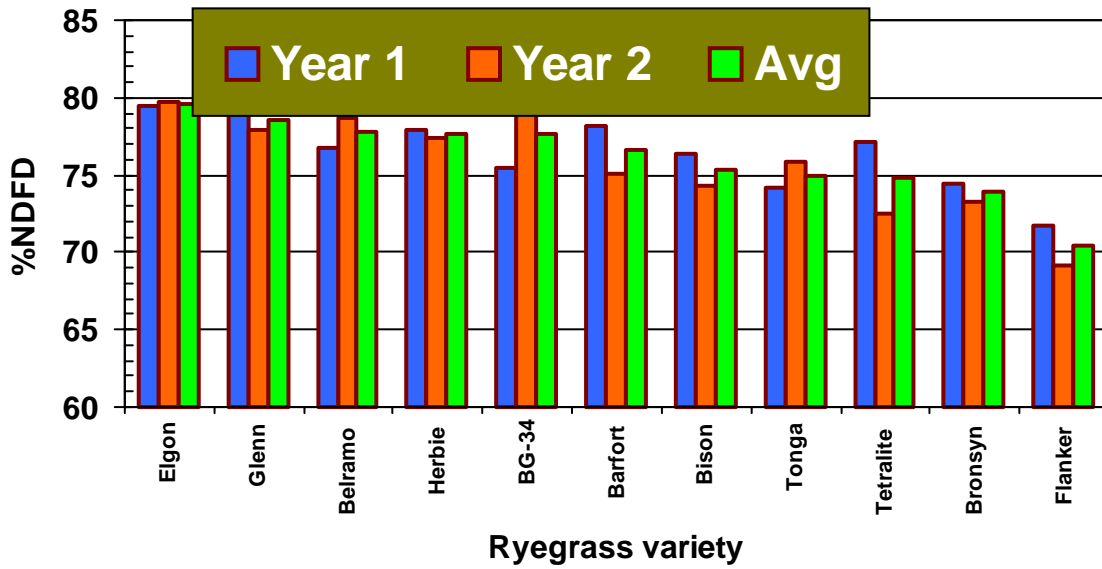


Figure 4 – NDF digestibility of ryegrasses for each year studied.

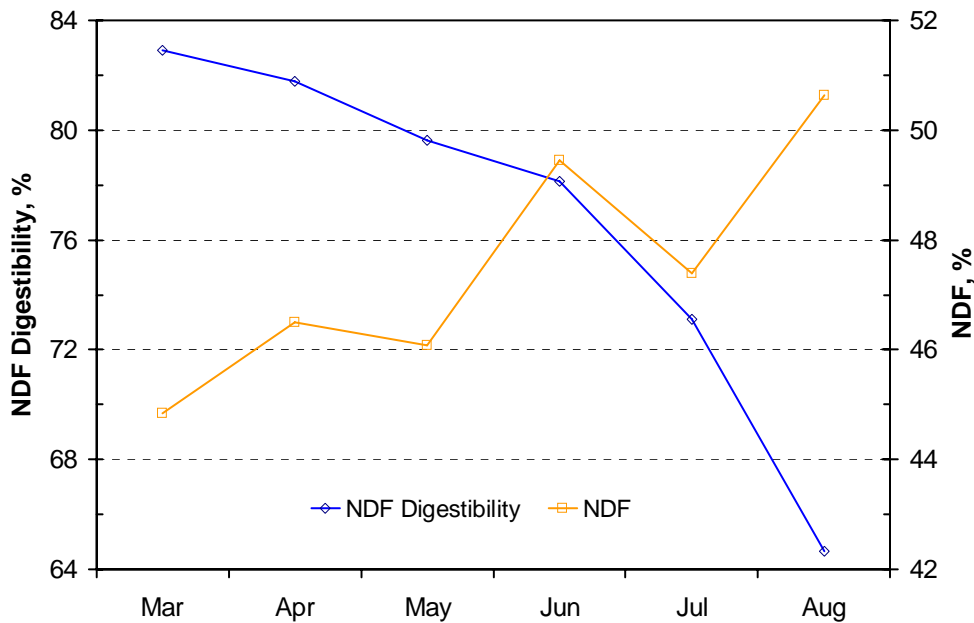


Figure 5- Neutral detergent fiber (NDF) and NDFD.

Summary

This project had a major impact on the way nutritionists and livestock producers consider the digestibility of grasses when balancing rations. Before this project, very little attention was given to the variability seen between grass varieties or season of harvest. This project has helped emphasize the importance of using feed analysis instead of book values for digestibility. As we continue to learn more about NDF digestibility in grasses it becomes apparent there are significant variations that have large financial impacts on producers and alter animal performance. The difference seen from the best ryegrass to the worst is significant for several reasons. First, a 10% increase in digestible fiber means there is more energy available in the rumen for microbial growth and ultimately milk production. This increased energy actually increases nitrogen efficiency allowing the ruminant to make better utilization of the protein of nitrogen in the forage. This reduces losses in the form of ammonia gas and excretions in the urine. Additionally, this increased energy is available for growth and milk production. When looking at the impacts on grass or farm productivity, the 32% difference from the best to the worst ryegrass becomes the important difference. It is estimated the amount of extra energy produced in the form of digestible fiber from our highest ryegrass over our lowest is enough to produce an extra 28 cwt of milk per acre per year. Even at \$15.00 per cwt., this is a difference of \$420 extra digestible fiber per acre. We would expect to see additional growth and productivity from grazing livestock as well.

Accounting for NDFD in grasses is turning out to be critical for the livestock industry. It is probably more important as a producer to understand the NDFD of grasses than even corn silage or alfalfa because we are learning there are more variations seen in the grass population. This educational program has demonstrated how fiber digestibility impacts animal performance and farm profits. It also helps us understand the large variations seen in grasses and the need to research variety performance before re-establishing new pastures. This project has already changed the way we balance rations in Oregon. It's still too early to tell, but we hope this also changes the varieties available from seed companies to more digestible ones in the future.

References

- Beckman, J.L. and W.P. Weiss. 2005. Nutrient digestibility of diets with different fiber and starch ratios when fed to lactating dairy cows. *J Dairy Sci.* 88:1015.
- Hoffman, P. C. 2003. New developments in analytical evaluation of total mixed rations. In: Proc. Pacific NW Anim. Nutr. Conf., Vancouver, B.C., Canada. p 120-133.
- Oba, M and M.S. Allen. 1999. Evaluation of the important of the digestibility of neutral detergent fiber from forage: Effects on dry matter intake and milk yield of dairy cows. *J Dairy Sci.* 82:589.
- Titel, R. 2000. "NDF-digestibility." 4-4-05. www.agrinutrition.com
- Van Soest, P.J., J.B. Robertson, and B.A. Lewis. 1991. Methods for dietary fiber, neutral detergent fiber, and non-starch polysaccharides to animal nutrition. *J. Dairy Sci.* 74: 3583-3597.

DEVELOPING A SYSTEM TO TRACK NITROGEN CYCLING ON PASTURE-BASED DAIRIES

Downing, T.W.¹

¹Regional Dairy Extension Agent, Oregon State University, Tillamook County, Tillamook, OR 97141

Most animal waste management plans written for pastured based dairies use estimates for manure produced and yields removed to design the waste plan. Landowners theoretically have been required to apply nitrogen (N) in quantities equal to what they remove annually in a crop. As concerns for water quality have increased, so has the need to demonstrate that the nutrients applied are equal to what is removed. The objectives of this research were to develop a system to document nutrient application and removal on pasture based dairies. This challenge was fairly complex, because grazing animals are constantly harvesting forage and depositing manure. Additionally, grass growth over time is a factor. This work was conducted on a 200 head Holstein grazing dairy over two years. An animal waste management plan was written, manure handling equipment calibrated, and a detailed farm map developed. Daily forage measurements were recorded before and after grazing. Soils samples were taken at 12" deep at the end of each growing season and tested for nitrates to determine nitrogen application residues. Annual grass yields ranged from 3.9 to 9.2 tons of dry matter/acre with an average of 7.55 tons. Pasture protein levels varied some throughout the season, but were averaged to determine the approximate level on nitrogen removed. Total nitrogen removed per acre by grazing ranged from 201 up to 526 lbs. of N/acre removed. The cooperators found this increased level of management rewarding and profitable. Having good data gave him the confidence to add commercial fertilizer and recorded a 20.1% (1.45 tons/acre) increase in total dry matter produced in year two over year one. This project successfully demonstrated a new model of tracking nitrogen applications and removal in pasture-based dairies and has been adopted by others in our region.

DEVELOPING A SYSTEM TO TRACK NITROGEN CYCLING ON PASTURE-BASED DAIRIES

Downing, T.W.

Tillamook County Extension

Oregon State University

troy.downing@oregonstate.edu

Introduction

Dairy farmers in the coastal areas of Oregon rely heavily on pastures for both grazing and silage production. As managers, they ideally should be matching the nutrients supplied in the form of manure to their forage crops for maximum productivity, without over applying any one particular nutrient.

Several studies have shown the timing of manure application is important in the uptake of nutrients from the soil. The more frequent applications increase nutrient removal and total crop yield. Perennial plants have also been shown more effective in removing nutrients when compared to annuals crops with similar requirements (Knezack and Miller, 1976; Hensler, 1970). Some of the more modern forage grasses have limited to no data on nutrient utilization. Moore and Gamroth (1995) showed some grass varieties in the Willamette Valley, Oregon, treated with 300lbs/N per acre in season removed over 400 lbs/N per acre in plant growth. In their study they also had a treatment of manure at 450-lbs/N per acre, with plant removal rates of nitrogen near 500 lbs/ N per acre. It was thought for years, forage grasses utilized only around 200 lbs up to 300 lbs /N acre for the highest producing grasses like orchard grasses.

Most animal waste management plans written for pastured based dairies use estimates for manure produced and yields removed to design the waste plan. Landowners theoretically have been required to apply nitrogen (N) in quantities equal to what they remove annually in a crop. As concerns for water quality have increased, so has the need to demonstrate that the nutrients applied are equal to what is removed. Over the past year, a trial was conducted to develop a realistic plan for dairymen to document nutrient application and removal on pasture based dairies. This project was designed to be a model for documenting manure applications and forage removal in pasture-based dairies.

Materials and Methods

An animal waste management plan and record keeping system was developed that allowed the land owner to make daily recordings and have running totals on nitrogen balance for each field. The customized nitrogen tracking spreadsheet was designed in Microsoft Excel. During the grazing season, the quantity of forage-removed was measured daily to track dry matter removed and estimate N removal rates. Standing forage height was recorded using a Farm Tracker electronic rising plate meter (Farm Works, Feilding, New Zealand) before and after grazing each pasture. The rising plate meter was calibrated by clipping, drying and weighing known areas in the field to determine standing dry matter (DM). Forage samples were analyzed for nitrogen content and these values were multiplied by DM harvest data to determine nitrogen removed. All cuttings and grazing cycles were totaled for DM yields and nitrogen removed through grazing.

Soil samples (12" deep) were taken from all major fields from the cooperating dairy at the end of each growing season. These data were used to evaluate the effectiveness of nitrogen removal. Manure application equipment was calibrated and nutrient application rates were recorded by field. Manure applied by grazing animals was estimated using Natural Resource Conservation Service excretion values and adjusted for the number of hours a day the cows were in a particular paddock.

Results and Discussion

Dairymen have historically done an excellent job keeping track of essential information to manage the dairy cow. Everything from production information, genetic merit information, reproductive statistics, feed analysis, and various other information sources to make good management decisions about their cattle have been used. However, most do not have the same desire or see the need to have a detailed record keeping system to make management decisions about their cropland. This project was as much about the behavior and attitudes of dairymen as much as it was about waste management or managing cropland for optimal fertility.

The cooperating farm took this project very seriously. The dairyman took daily records and recorded them on the spreadsheet, giving them the daily totals of nitrogen balance for each field. Running totals by field were used early in the spring to confidently add some additional commercial fertilizer. Table 1 illustrates the total N applied, estimated N balance, yield and fall nitrate soil results for each field on the farm. In year one, dry matter yield ranged from 3.9 to 8.8 tons per acre/year. Fall soil nitrates showed ranging from 39 to 146 lbs/acre essentially leftover after the growing season. Soil nitrates in year one are considered high. It was theorized the commercial fertilizer applications were too late in the growing season to be properly utilized. Figure 1 illustrates the percentage of N applied throughout the year from liquid, solid or grazing cow manure, in addition to commercial N fertilization.

Table 2 illustrates the total N applied, estimated N balance, yield and fall nitrate soil results for each field on the farm in year two. This year yields ranged from 7.4 to 9.4 tons of dry matter per acre/year. This represents a 20.1% increase (1.45 tons/acre) in total dry matter production from the first year. This second year commercial N was applied earlier in the season to maximize the growing potential. Soil nitrate levels were appreciably lower in year two ranging from 18 to 84 lbs. of N per acre. Figure 2 illustrates the percentage of N applied throughout the year from liquid, solid or grazing cow manure, in addition to commercial N fertilization.

Conclusion

At the start of year one, the animal waste management plan written described spreading all manure evenly (approximately 276 lbs/N/acre). Yields were estimated to be 5.5 tons dry matter acre, with no commercial fertilizer added. By making informed decisions, the dairy altered their manure applications and added some commercial fertilizer. The change in management resulted in an increase of 20% more feed grown. After two years experience, the farm was milking 25 more cows than it had historically and saved on purchased hay costs during the second summer. Having this information to make decisions is just as important to them now as the information they have on their cows to make management decisions.

Documenting agronomic utilization of nitrogen application in grazing dairies is a challenge. Dairymen that conduct high intensity, short duration grazing are apt to be more successful because grass growth during the spring flush can be so significant it can complicate measurements. In addition, it appears essential to have daily running balances available to the dairymen to make management decisions and document grazing or other pasture management successes.

Dairymen typically have a significant percentage of their total enterprise investment in cropland. It is impossible for them to make good decisions without good information. Changes in management on dairies like the ones illustrated in this project should go a long way to solving of our waste management problems in addition to making dairies more profitable.

References

- Hensler, R.F. (1970). Cattle Manure: Effect on crop and soils II. Retention properties for Cu, Mn, Zn. Ph.D. Thesis, University of Wisconsin, Madison.
- Knezak, B.D. and Robert Miller. (1976). Application of sludges and wastewaters on agriculture land. A planning and educational guide. Ohio Agriculture Research and Development Center. Research Bulletin 1090.
- Moore, J.A., and M.J. Gamroth. (1995). Report presented to the Oregon Center of Applied Research.

Table 1. Nitrogen applied, estimated N balance, dry matter yield and fall N₃ recorded by field for year 1

Field	N Applied ₁	Balance lbs/acre ₂	DM Yield ₃	Fall soil nitrates ₄
1	201	-132	7.1	83
2	316	-98	7.1	51
3	353	-70	7.4	73
4	383	-58	7.4	98
5	375	-93	7.8	146
6	436	-91	8.8	109
7	356	-85	7.4	111
8	379	-17	6.6	88
9	404	-55	7.7	145
10	357	-84	7.4	100
11	344	-115	7.7	98
12	407	-70	8	105
13	358	-137	8.3	81
14	355	-68	7.1	66
15	361	-134	8.3	75
16	347	-193	9	80
17	236	2	3.9	54

18	206	-70	4.6	39
19	277	-74	5.9	56

¹Nitrogen applied is presented as lbs of N per acre by field

²Balance is the difference between Nitrogen applied and estimated removal per field

³ Dry Matter yield estimated by measure grass height before and after grazing

⁴Soil nitrates taken at 12” at the end of the growing season (lbs/acre)

Table 2. Nitrogen applied, estimated N balance, dry matter yield and fall N0₃ recorded by field for year 2

Field	N Applied ¹	Balance Lbs/acre ²	DM Yield ³	Fall Soil nitrates ⁴
1	421	-101	8.1	27
2	428	-58	9.4	52
3	593	-39	9.4	66
4	569	-91	8.3	84
5	568	-106	8.5	65
6	279	-62	7.4	68
7	530	-162	8.9	65
8	526	17	9.2	50
9	548	-5	9.2	40
10	419	-1	9	45
11	383	-130	9	48
12	514	-157	8.6	61
13	539	-26	8.8	59
14	445	-203	9	66
15	462	-195	8.8	26
16	476	-151	8.5	33
17	335	-160	8.3	27
18	449	-64	8.6	34
19	357	-87	7.4	18

¹Nitrogen applied is presented as lbs of N per acre by field

²Balance is the difference between Nitrogen applied and estimated removal per field

³ Dry Matter yield estimated by measure grass height before and after grazing

⁴Soil nitrates taken at 12” at the end of the growing season (lbs/acre)

Figure 1 - Total field inputs in year one

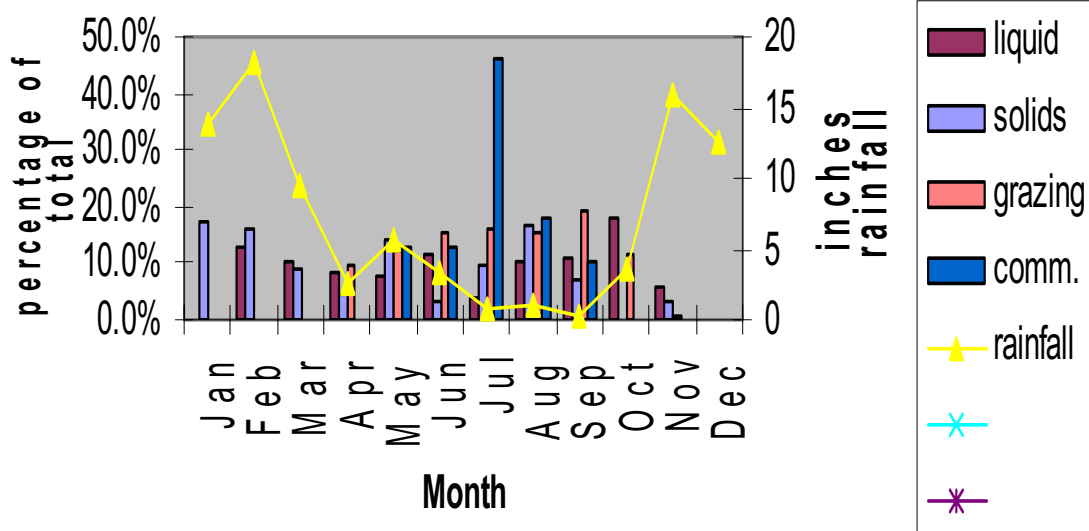
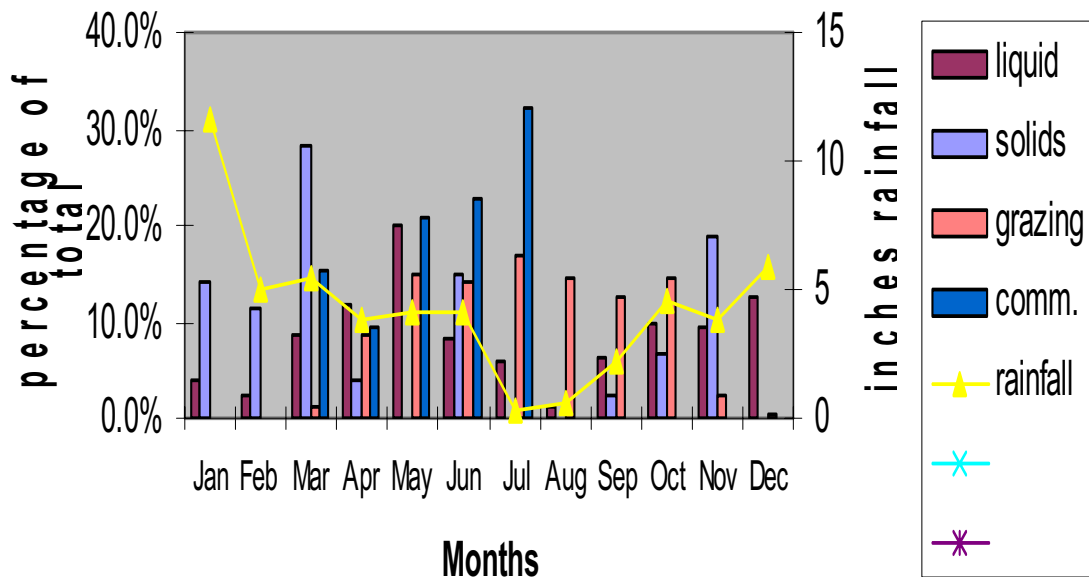


Figure 2 - Total field inputs in year two



MONITORING THE NATURAL FALL OF VARROA MITES IN HONEYBEE COLONIES WITH THE USE OF STICKY BOARDS IN CLAY COUNTY, WEST VIRGINIA

Friend, D.P.¹ , Shamblin, M.D.²

¹ Extension Agent, West Virginia University Extension Service, Clay County, West Virginia 25043

² Extension Agent, West Virginia University Extension Service, Clay County, West Virginia 25043

The Varroa mite (*Varroa destructor*) is one of the most destructive pests of the honeybee (*Apis mellifera*) in the United States. Because varroa mites have developed resistance to chemical treatments, producers need to adopt integrated pest management (IPM) strategies to manage varroa mites successfully. Five beekeepers monitored their hives monthly for varroa mites by assessing the natural mite fall using sticky boards. Sticky boards were placed in hives and removed 24 hours later. The boards were analyzed for number of varroa mites. As expected, varroa mites were detected in each hive in at least one of the months that hives were monitored. The average number of mites increased as summer progressed ($R^2 = .84$). There was tremendous variation in the rate at which individual colonies developed mite populations. Further education and research on the identification of threshold levels of varroa mites in honey bee colonies will encourage producers to adopt an IPM program that will monitor varroa mite populations and treat only those hives that reach a threshold level thereby reducing honeybee losses, resistance to miticides and production costs.

MONITORING THE NATURAL FALL OF VARROA MITES IN HONEYBEE COLONIES WITH THE USE OF STICKY BOARDS IN CLAY COUNTY, WEST VIRGINIA

D. P. Friend and M.D. Shamblin

West Virginia University

Clay County Extension Office, PO Box 119, Clay, WV 25043

INTRODUCTION

The Varroa mite (*Varroa destructor*) is one of the most destructive pests of the honeybee (*Apis mellifera*) in the United States. Originating in Asia, the mite has now spread to most areas of the world through bee shipment (migratory colonies, package bees, and queen shipment). Colonies containing varroa mites will eventually die if mite levels are not controlled. The introduction of this pest in the United States has led to a decrease in honeybees nationwide. In the United States, approximately 130 agricultural crops rely on the honeybee for pollination producing over \$9 billion in added value to these crops (<http://interests.caes.uga.edu/insectlab/agimpact.html>).

Beekeepers across the nation have come to rely on pesticides for mite control. Because pesticides were initially effective, beekeepers began using them habitually in colonies at the end of every production season. This method of varroa treatment was conducted with little knowledge about the actual mite levels of each colony. Colonies were treated regardless of the infestation level. At times this gave varroa mites unnecessary exposure to pesticides leading to pesticide resistance while increasing production costs to beekeepers.

Two chemical controls that have been used by beekeepers over the last decade are tau-fluvalinate and coumaphos. With reports of varroa mites developing resistance to these two chemicals nationwide, the WVU Clay County Extension Office conducted resistance assays for these two products for members of the Clay County Beekeepers Association. Our results indicated that there was widespread resistance to tau-fluvalinate and sporadic resistance to coumaphos in colonies tested.

Although other controls have now become available, it is evident that beekeepers must stop the habitual use of chemical treatments in order to prevent further buildup of resistance by varroa mites. Producers need to adopt

integrated pest management (IPM) strategies in order to manage varroa mites successfully. After identifying the pest and setting action thresholds, monitoring the pest population is the next step in any IPM program.

Several methods exist for monitoring varroa mite populations in honeybee colonies. Methods include visual inspection, drone sampling, powder sugar shakes, ether roll, wash methods and sticky boards. These methods are not meant to quantify the total number of mites in a colony, but to give an estimate of the mite load within a hive.

Of mite sampling methods, the sticky board method is a more accurate, passive way to determine mite levels in colonies. Varroa mites naturally fall from bees within a hive to the bottom of the colony. A study at the University of Delaware determined that natural mite fall onto sticky boards was an effective way to monitor mite populations in honeybee colonies (<http://ag.udel.edu/enwc/faculty/dmcaron/Apiology/mitesampling.htm>). Sticky boards are easy to use; you simply place them beneath the screen bottom board in the hive and count the number of mites on the sticky board after a 24-hour period.

The purposes of this demonstration were:

- to monitor mite population levels over the course of a production season by using sticky boards to assess the change in the varroa mite population in colonies in Clay County, West Virginia.
- to educate beekeepers to recognize colonies that do not need treatment against varroa mites and thus reduce pesticide use, thereby reducing production costs.

METHODS

Hives were identified by 5 beekeepers for varroa mite monitoring. Sticky boards were provided to each beekeeper to sample up to 5 hives. Sticky boards were placed in hives on the Monday prior to Clay County Beekeepers meetings and were removed 24 hours later. The sticky boards were placed in the same hives for monitoring each month.

Month of application, hive number and beekeeper were recorded on the sticky boards. The boards were analyzed for number of varroa mites. Monthly mite counts were recorded for each hive. Beekeepers were instructed to treat hives when a threshold level of 50 mites per sticky board was reached.

A regression analysis was performed for month of application and number of varroa mites in hives that were not treated for varroa mites and in hives that were treated for varroa mites. Correlation coefficients were calculated for the number of varroa mites in treated and non-treated hives.

RESULTS

The number of hives monitored for varroa mites with sticky boards varied from month to month. The number of beekeepers using the sticky boards also varied. Some participants did not have 5 colonies to sample initially, so as additions were made to their bee yard in May and June, these colonies were also sampled.

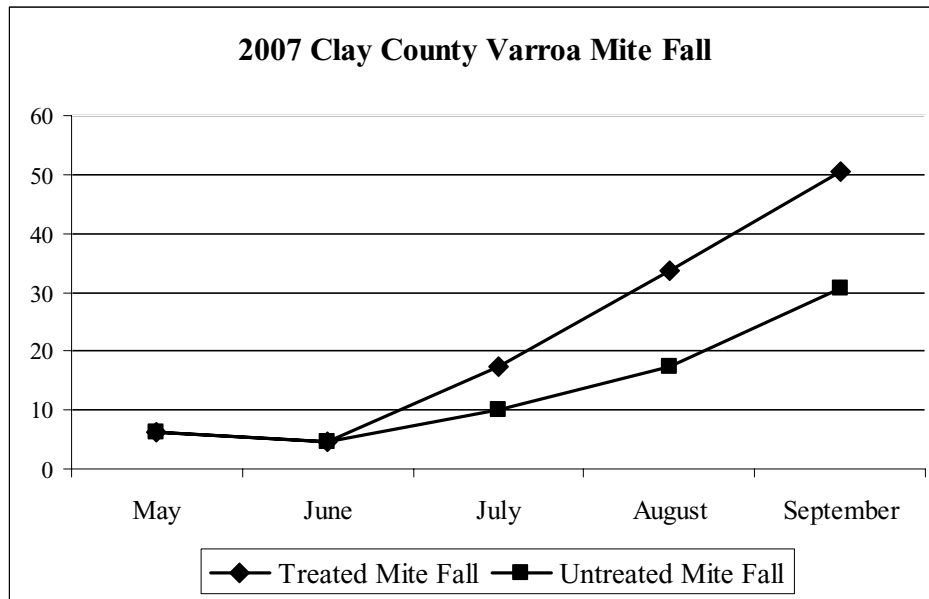
The use of pesticides by beekeepers accounted for the diminishing sample size, namely, the number of beekeepers with monitored colonies in August and September. In some cases, the threshold number of varroa mites was reached. In other cases, beekeepers resorted to the habitual use of pesticides, even while sampling varroa mites with sticky boards and knowing the recommended threshold for treatment had not been met. In August, 1 beekeeper had treated all of their colonies. By September, 2 of 5 had treated all colonies. Once all colonies were treated in a yard, sampling stopped. See Table 1.

Table 1. Number of beekeepers, and colonies monitored by month.

Month	Number of Beekeepers with Monitored Colonies	Number of Colonies Monitored
May	5	16
June	5	21
July	5	22
August	4	20
September	3	16

Varroa mites were detected in each hive in at least one of the months that hives were monitored. The average number of mites increased as the summer months progressed. Because this project was designed to monitor natural mite fall, producers were encouraged to treat their colonies for varroa mite infestations as necessary. Some of the mite counts were artificially inflated because a pesticide was applied near the monitoring date. Average number of varroa mites per hive is depicted in Figure 1. The “Mite Fall from All Colonies” line includes the mite count from all the hives, including treated colonies while “Untreated Mite Fall” includes only the hives that received no treatment during the month.

Figure 1. Average number of mites counted on sticky boards by month.



The regression coefficient (R^2) for month and number of varroa mites counted for all colonies is .91 and for the untreated hives is .84. These high regression coefficients indicate a very strong relationship between the month the hives were monitored and the number of mites counted. The correlation coefficient between all colonies and untreated varroa mite counts is .99 ($P < 0.05$) which indicates that although the numbers are not the same, they are increasing at very similar rates. So, while all colonies had a greater mite fall and therefore higher numbers of mites on the sticky boards, the treatment did not trigger the increasing mite numbers as the summer progressed. Mite numbers increased regardless of treatment.

DISCUSSION

There were two expected outcomes from this project: 1) mites were found in each colony at least once during the summer months and 2) the varroa mite population in colonies increased during the summer months. Population of mites increased through the season, with some colonies reaching threshold mite levels by August and September. These months are critical times for beekeepers since brood rearing will end in mid to late October. Mite levels during these months should be monitored carefully to ensure adequate time for mite control and additional brood cycles before winter.

An unexpected observation from this study was the tremendous variation in the rate at which individual colonies develop mite populations. Some colonies developed mite levels at much slower rates than others and had essentially flat lines. These colonies may have a hygienic behavior or other characteristic that prevents mite buildup. Monitoring with sticky boards will aid beekeepers in this county in identifying those colonies that exhibit mite inhibiting behavior.

While conducting this project, beekeepers continued their habitual use of pesticide to control varroa mites. Fortunately, with this project they were able to detect threshold levels well in advance of fall, thus not treating too late for winter. However, hives that had not reached a threshold level of varroa mite infestation were also

treated. Before hives with natural resistance to varroa mite can be determined, habitual treatment with pesticides must end.

One challenge in getting beekeepers to adopt an IPM program for varroa mites is the “zero tolerance” mentality. For example, beekeepers routinely treat their hives against American Foulbrood. A bi-annual treatment of oxytetracycline is used as a preventative for the disease. As a result, beekeepers treated for varroa mites in a similar manner. The early response of beekeepers to varroa mites was an attempt at complete eradication with pesticides through routine calendar applications; beekeepers failed to understand that small mite loads could be present within a healthy colony, unlike the disease, American Foulbrood. Now that it appears that varroa mites will be present in hives in spite of treatment, learning to manage the population rather than attempting to eliminate it with chemical treatments is a key point for beekeepers to adopt.

The data from this demonstration has been included in educational programs for the Clay County Beekeepers Association. The goal is to encourage the adoption of an IPM program that will monitor varroa mite populations and treat only those hives that reach a threshold level of infestation. Beekeepers will continue monitoring their hives. The difficulty comes in persuading beekeepers to withhold treatment until threshold levels of varroa mites are reached.

When treating pests, their presence in damaging numbers is necessary for their control. As ironic as it may seem, many beekeepers continue to treat for an undetected pest. Their lack of understanding on how to identify threshold levels of varroa mites in their colonies exacerbates their misuse of pesticides. As a result, resistance of varroa mites to these control products will only increase. There is a great need in the beekeeping community for further education and research on the identification of threshold levels of varroa mites in honey bee colonies. This effort would reduce honey bee losses, reduce resistance to miticides and will also save beekeepers additional production costs.

BARRIERS AND OPPORTUNITIES FOR LOW IMPACT DEVELOPMENT: CASE STUDIES FROM THREE OREGON COMMUNITIES

Godwin,* D.C.¹, Chan, S.A.², Burris, F.A.³

¹Oregon State University Extension Service, Marion County, 3180 Center Street NE Room 1361, Salem, Oregon 97301. ²Oregon Sea Grant, OSU campus, Corvallis, Oregon 97331. ³Oregon State University Extension Service, Curry County, 29390 Ellensburg, Gold Beach, Oregon 97444.

Oregon State University Extension Service and Oregon Sea Grant conducted three needs-assessment workshops with local decision makers and residents in three Oregon communities of vastly different populations. The workshops identified (1) the biggest barriers to planning and implementing future development while minimizing impacts to water resources (that is, adopting LID practices); (2) their needs for education, training, or other resources on these issues; and (3) the audiences to which these efforts should be directed. Despite geographic and demographic differences in size and location, consistent themes emerged from these three Oregon communities: 1. Lack of basic understanding of planning and the impacts of growth; 2. Need for active leadership; 3. Need for technical information and assistance, and 4. Funding, economics and incentives. These workshops used a facilitation process which maximized input from all participants providing a wealth of information that will be used by Extension staff and partnering agencies to design and implement education practices, technical assistance and programs that remove barriers and provide incentives for conducting low impact development practices.

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Oregon is nationally known for its bountiful natural resources and conservation-minded approach to land use development. However, it is anticipated that by the year 2030 Oregon's population will grow 40 percent (U.S. Census, 2000). Recent rapid population growth has challenged the ability of many communities to keep up with development pressures (for example, meeting infrastructure needs) without jeopardizing the long-term health of their local environment. In response to this need, Oregon State University's Extension Service (OSUES) and Sea Grant Extension Program (OSG) began exploring their potential role in helping communities manage growth and land use development in ways that promote the health of their economy and natural resources. Scoping workshops were held to increase awareness and understanding of low impact development (LID) designs and to assess the barriers and opportunities of implementing these designs in local communities.

For the purpose of this project, low impact development is defined as "a stormwater management strategy that emphasizes conservation and use of existing natural site features integrated with distributed, small-scale stormwater controls to more closely mimic natural hydrologic patterns in residential, commercial, and industrial settings" (Puget Sound Action Team, 2005).

Methodology – Community Workshops

OSUES and OSG conducted needs-assessment workshops with local decision makers and residents in three Oregon communities of vastly different populations—Portland/Metro, Grants Pass, and Brookings. The communities were chosen to represent a broad range in population, local government size, land use regulations and natural resources. Portland is the state’s population center, with approximately two million people – roughly 57 percent of the state’s population – in the greater metropolitan area. Grants Pass has a population of 30,390 and is located in the rapidly growing Rogue River Valley in southern Oregon. Brookings is a small, somewhat isolated community on the rugged and scenic southwest Oregon coast, just north of the California border. Brookings and the surrounding areas’ population is approximately 10,000.

Local, state and national partners were enlisted to help deliver workshops using a “scoping” approach. Two faculty from the Nonpoint Education for Municipal Officials (NEMO) program, based in Connecticut, delivered an overview of the impact of growth and development on stormwater and water quality based on a variety of research-based journal articles and research projects from around the U.S. They also included specific examples of how the national NEMO network has empowered local communities nationwide to address these issues using LID practices and natural resource-based land use planning. Following these presentations, audience input was sought from local decision makers and residents by asking two primary questions:

1. What are the biggest issues and barriers confronting your ability to plan and implement future development while minimizing impacts to water resources?
2. What education, training, or additional resources would help you address these issues, and to what audience(s) should these efforts be targeted?

State and local partners helped facilitate and record input from the 79 participants attending from the three communities. One facilitator asked the two primary questions and managed the conversation and input. A second person recorded oral input on flip charts, while a third person recorded the conversations on a computer. The facilitator also gathered supplemental written input on note cards from all participants. Using a variety of methods to gather input accommodated different communication styles and resulted in both high quality and quantity of input.

Local partners identified and invited the workshop participants to ensure a broad representation of interests linked to watershed management which included city, county and regional planners; representatives from the local engineering departments; planning commission members; watershed council members; developers; major landowners; and citizens that routinely engaged in local land use decision-making processes.

What we learned from communities: barriers and opportunities

The input received from these three communities was surprisingly consistent, despite their differences in size, location, and situation. The few differences encountered were primarily reflected of their varying geographic terrain (e.g. steep slopes versus flat valleys, and coastal sites versus inland). The following barriers and opportunities represent emerging themes expressed by the participants.

Theme 1 - Barrier: Lack of basic understanding of planning and the impacts of growth. The most significant theme emerging from the workshops was a lack of basic understanding of the connection between today’s land use and development decisions and tomorrow’s consequences, in terms of both costs and resource quality. Neither the public nor local officials grasp the effects that individual planning decisions will have on infrastructure capacity, stormwater management, and water quality.

Theme 1 - Opportunities: Participants suggested several ways to increase basic LID fluency and better understand the impacts of growth on a community. One way is to employ computer-generated visualization tools to show various ways a community will develop over time and the associated consequences of planning decisions on the future of a community (i.e. build-out analysis). A second way is to hold a variety of forums to

raise awareness of the social and environmental consequences of conventional development versus LID practices and to present research-based LID information. A third way is to assist communities in analyzing the costs and benefits of incorporating LID practices into ordinances.

Theme 2 - Barrier: Need for active leadership. Participants expressed a need for strong administrative support and direction to incorporate LID practices into codes or to encourage developers to try LID projects. Local government staff persons felt it was unreasonable to expect them to deviate from normal practices without significant support from superiors. They also identified the need for coordinating education and outreach across jurisdictions (such as departments and governments) and between government (for example, public safety, planning, and health) and industry (developers, contractors, real estate professionals, landscapers, suppliers, etc.).

Theme 2 - Opportunities: Participants suggested the following educational methods and assistance to foster the needed leadership and teamwork to overcome these hurdles.

- forums on natural resource issues to inform political and industry leaders
- forums on the long-term “costs” of continuing traditional development versus incorporating LID techniques
- coordination of educational efforts and communication between local government and industry groups, and encourage consistent standards and enforcement among adjacent jurisdictions
- training for developers on incorporating LID techniques into affordable housing
- leadership and technical training to empower citizen advisory committees, planning departments, and local chapters of the Home Builders Association to address LID issues
- identify local champions (e.g. developers, contractors, consultants, planners) of LID techniques and use them in seminars to familiarize builders, the public, and community officials on LID techniques and encourage demonstration projects.

Theme 3 – Barrier: Need for technical information and assistance. Technical impediments to instituting LID practices included a basic unfamiliarity with low impact techniques and designs, and a difficulty in shepherding these designs through the local government approval processes.

Theme 3 - Opportunities related to technical resources and assistance. Participants requested introductory workshops, streamlined access to LID technical assistance, funding sources, technical assistance for demonstration projects, short- and long-term cost/benefit analyses, and suggestions on how LID practices might be adapted in special environments (low-permeability soils, steep slopes). To streamline local approvals of these designs, planning department participants requested help reviewing current codes and ordinances and creating new ones to support LID. They also requested information on funding and technical consultation to help them develop standards and become proactive in implementing LID. Participants suggested establishing a regional outreach position to assist local jurisdictions in educating builders on LID techniques and existing regulations, enforcing existing regulations, identifying incentives and new rules, and coordinating education and enforcement among adjacent jurisdictions.

Theme 3 - Opportunities related to incentives and disincentives. Participants recognized the need for facilitated discussions across disciplines to identify incentives for developers to incorporate LID techniques into their designs. They stated that LID designs would be easier for developers to implement if the codes and enforcement became more consistent among adjacent jurisdictions (for example, street and highway design). They also would like to address existing “disincentives” to developers from uncertain timelines of approval by establishing a known, streamlined process for approving LID designs.

Theme 4 – Barrier: Funding, economics, and incentives. Participants from local jurisdictions stated they do not have the staff or funding to develop, revise, and enforce new codes or regulations, or to educate builders and

developers on LID techniques. They must rely on other entities or develop a funding strategy to pay for these efforts. Participants had several related questions, such as, “How can local governments generate the funding required to cover the “delayed” costs of growth to taxpayers, that is, demands on infrastructure (insufficiently sized roads, stream crossings, stormwater facilities, maintaining open spaces)?”, “Can a local government afford to offer financial incentives to developers to employ alternative designs?”, and “If the local public is educated on LID techniques and benefits, will it create the economic demand and incentive for green buildings and alternative development methods?”

Theme 4 - Opportunities: Participants suggested inviting people with experience to deliver presentations in a forum on the following topics;

- funding sources used in other jurisdictions to pay for infrastructure and open space associated with new development
- real costs of not fixing problems in existing and future infrastructure (for example, reduced water quality or quantity, limitations in water/sewer hookups, building moratoriums)
- differences in property values and public infrastructure costs between the status quo and LID methods of development
- short- and long-term values of “green development” designs, in terms of natural resource quality and infrastructure needs, and marketability for developers
- techniques to save money and resources while yielding a higher-value, more marketable finished product

Summary and broad appeal to Extension

The scoping workshops identified (1) the biggest barriers to planning and implementing future development while minimizing impacts to water resources (that is, adopting LID practices); (2) needs for education, training, or other resources on these issues; and (3) the audiences to which these efforts should be directed. Responding to such complex barriers and opportunities effectively requires partnership of many organizations. Oregon Extension faculty are using these scoping workshop results to develop funding proposals, programs to assist jurisdictions with several identified LID issues, and new partnerships among local, state and national organizations. For example, since this project was completed, Extension faculty have received \$265,000 in grants, applied for an additional \$165,000, created several new partnerships and are working to create a new Extension faculty position to work on LID education programs.

Based on discussions with the National NEMO representatives and their coordination of their national network, these barriers and opportunities are very similar to communities around the United States. With this in mind, these results provide other Extension professionals a basis for initial program planning on low impact development education. A tool that is popular with University Extension Services nationwide is the “logic model”, which facilitates education program planning and evaluation with multiple team members (University of Wisconsin Cooperative Extension, 2003; Arnold, 2002). These results provide a basis for following the five basic steps used in the Logic Model: define the situation, identify and quantify inputs, describe outputs, project outcomes and design evaluations to measure outcomes.

This project also provides ideas on how to organize and facilitate scoping workshops on LID or other topics in communities. Since Extension faculty often work with focus groups and advisory groups, the specific questions can be modified to identify barriers and opportunities for addressing other land management issues such as water quality, water supply and fish habitat.

References

Arnold, Mary E. 2002. "Be 'Logical' about Program Evaluation: Begin with Learning Assessment." June 2002. *Journal of Extension* 40:3.

Puget Sound Action Team and Washington State University Pierce County Extension Service. 2005. *Low Impact Development Technical Guidance Manual for Puget Sound*. January 2005 (Revised May 2005). Publication No. PSAT 05-03. Olympia, WA.

U.S. Census 2000. www.census.gov

DEVELOPING BEEF QUALITY ASSURANCE MATERIALS FOR YOUTH

Holmgren, L.N.¹, Zobell, D.², Chapman, C. K.³

¹Extension Agent, Utah State University Extension, Box Elder County, Utah 84337

²Extension Beef Specialist, Utah State University, Logan, Utah 84322

³Extension Area Animal Scientist, Utah State University, Richfield, Utah 84701-2158

4-H and FFA livestock programs provide a unique educational experience for youth development. In Utah, 4-H and FFA youth livestock projects produce livestock including beef, pork and lamb with a commercial market value of more than \$1 million per year. Youth must realize that they are not just raising a project for the county fair; they are in the business of producing a food product for the consumer. This program focuses on the beef aspect of youth market livestock projects and how beef quality assurance principles can be applied to beef projects. Economic and production data on live animals and corresponding carcass information were collected. Digital photographs and video footage of live beef animals and carcasses were taken to provide FFA instructors, county agents and youth leaders with visual teaching aids. This project focuses on three objectives.

1) Help youth understand and have an increased awareness of the commercial livestock industry; 2) teach principles of Beef Quality Assurance (BQA) and how these principles relate to youth livestock projects; and 3) provide 4-H and FFA leaders and teachers with materials to enable them to teach Beef Quality Assurance. 4-H and FFA beef project leaders and parents can use these materials to teach their youth about live animal and carcass evaluation and BQA and how they can produce a better beef product for the consumer.

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Introduction

Beef Quality Assurance is a program that ensures that beef cattle are maintained in a manner which will result in a safe and wholesome beef product for the consumer. Youth livestock programs such as 4-H and FFA involve thousands of youth nationwide. These programs provide youth with a unique opportunity to use live animals to develop valuable life-long skills. With the increasing popularity of junior livestock shows, product safety and quality is every bit as important as it is in the commercial industry. Today, more than ever before, 4-H and FFA students need to realize they are in the business of producing food. These youth must take every precaution to ensure a high quality product that the consumer will find safe and wholesome. This project developed instructive materials that will enhance the educational aspects of 4-H and FFA junior livestock projects.

The objectives of this project were: 1) Increase youth awareness of the commercial livestock industry, the impact junior livestock shows have on that industry and how his or her steer project and product compares to industry benchmarks as determined by national beef quality audits. 2) Teach youth principles of Beef Quality Assurance (BQA) and animal livestock evaluation from the perspective of the wholesale and retail trades. These principles will benefit them as future producers and/or consumers. 3) Provide 4-H and FFA leaders with

materials that will enable them to teach youth about carcass quality and other BQA principles that will assist in a greater understanding of the beef industry.

Materials and Methods

Live animal, carcass, and economic data on 4-H and FFA steer projects were collected from the Box Elder County Fair and Junior Livestock Show since 1974. Each year, 4-H and FFA youth exhibiting beef projects are required to register and weigh their beef animal with the livestock show committee in March and care for their animal for a minimum of 150 days. Beef projects are consigned to the junior livestock show in late August. No project is accepted under 1,075 lbs net weight. The average market weight during the period of 2004 to 2007 was 1,286 lbs live, an increase of 70 lbs over the previous 5 year period. A standard shrink of 3% is applied to all show steers.

Data collected on the steers includes: 1) A photograph of the rear and side view of each live animal (Figure 1) was taken as the exhibitor and project exited the judging contest; 2) an ultrasound scan including a digital image (Figure 2) of the ribeye area and backfat thickness taken by a certified ultrasound technician; 3) live weight and breed type which were gathered at the livestock show; and 4) after harvesting the animals, a photograph of a cross section of the ribeye between the 12th and 13th rib was taken (Figure 3). Collecting accurate carcass measurements in a large beef packing plant is difficult because the measurements usually need to be made while the carcass is moving on the rail.

Because of limited processing area, it has become almost impossible to have commercial processors rail aside carcasses for closer examination. For this reason, we had to incorporate data gathered from ultrasounds with the limited data gathered from the processor. Carcasses were measured for quality and yield grade, carcass yield, hot carcass weight, percent kidney, pelvic and heart fat, ribeye area, backfat thickness and marbling score. Carcass data were compared to data acquired from the ultrasound scan and the placings in the livestock show.

Results and Discussion

Objective 1 – Help youth gain an understanding of the livestock industry.

Recent county and state junior livestock show research indicates that many youth are trained in fitting and showing their steers but do not associate their project with the overall beef or consumer retail industry. Many know little about careers available to them in the livestock industry (Holmgren and Reid, 2001).

Educational BQA resources included a teaching manual, *From the Farm to the Table, Teaching Youth About Carcass Quality*. Some of the material contained in this manual has been gathered from reliable beef production resources around the country. A series of 17 color sheets are included in the manual which have live animal photos, ultrasound images, actual ribeye photos and measured carcass data for each individual animal. Additional calf sheets are included on a CD, along with other multimedia materials to assist with teaching. A 19 minute DVD video production titled, *Youth Beef Quality, Producing a Quality Product for the Consumer* were developed to help youth understand their relationship as beef producers to the consumer who purchases this product. It stresses that youth who are raising project beef for the retail market improve the quality of their beef product by reducing the frequency of producer-caused carcass quality problems and ensure that best management practices are followed. Specifically, it discusses:

1. Daily Care and Management
2. Prevention

-
3. Handling
 4. Carcass Quality
 5. Health Care

A second 26 minute DVD, *Realizing the Impact of Injection-site Lesions*, produced by Utah State University Extension was included with the educational materials. This video discusses the impact of injection site lesions and emphasizes the economic losses to the industry that occur from improperly injecting vaccinations, vitamins, and other drugs into the animal. Since this program has been initiated, there has been an increase in the percent of beef carcasses grading choice or better. At the Box Elder County Junior Livestock show, the number of beef carcasses grading choice or better has increased 62 percent from an average of 38.31 percent during the period of 1994 to 1998 to 58.50 percent during the most recent period of 2004 to 2007.

Objective 2 — Teach youth principles of Beef Quality Assurance and how these principles relate to 4-H and FFA projects.

Traditionally, packers discount prices paid for carcasses outside the hot carcass weight range of 550 to 950 lbs (McKenna et al., 2002). Recent trends in the junior livestock industry show that 4-H and FFA beef project carcass weights continue to increase but remain within acceptable National Beef Quality Audit – 2000 standards as shown in Table 1. According to the National Beef Quality Audit – 2000, 4.6% of carcasses had hot carcass weights outside of the 550 to 950 lbs range.

One objective of the NBQA was to increase the percentage of cattle making it into the USDA Prime and the upper part of the Choice grade (Busby et al., 2001). Table 1 illustrates 4-H and FFA beef carcass trait averages for carcasses grading Choice or better at the Box Elder County Junior Livestock Show. Since the mid 1980s there has been an improvement in the percentage of carcasses grading Choice or higher. The information developed from this project was distributed to each FFA advisor and county extension agent with youth livestock project responsibilities. In our own county, the information is taught in club meetings and at our county livestock field days where BQA principles are emphasized.

Objective 3 — 4-H and FFA leaders will have materials that will enable them to teach youth about carcass quality and other BQA principles that will assist in a greater understanding of the beef industry.

A CD containing supplemental material included 53 calf data sheets which have rear and side view live animal photos, ultrasound images, actual ribeye photos and measured carcass data for each individual animal. These sheets can be used to teach youth about quality and yield grading and how much variability can exist between different carcasses with the same quality or yield grade.

Implications

Often in our youth livestock programs, youth get so involved in competitive aspects of the project that they lose sight of the fact that the livestock they produce is eventually destined to the consumer. 4-H and FFA beef project leaders and parents can use these materials to teach their youth about Beef Quality Assurance and how they can produce a better beef product for the consumer.

Literature Cited

Busby, D., D. Strohbehn, M. Dikeman. Iowa 4-H Beef Carcass Summary – 1997-2000. 2001 Beef Research Report – Iowa State University. A. S. Leaflet R1761.

Holmgren, L. N., C. Reid. FFA and 4-H Livestock Project Survey for County and State Sponsored Livestock Shows. 2001. Utah State University.

McKenna, D. R., D. L. Roeber, P.K. Bates, T. B. Schmidt, D. S. Hale, D. B. Griffin, K. E. Belk, and G. C. Smith. 2002. National Beef Quality Audit – 2000. Survey of targeted cattle and carcass characteristics related to quality, quantity, and value of fed steers and heifers. J. Anim. Sci. 80.1212-1222.

NCBAQA, Executive Summary of the 2000 National Beef Quality Audit, Improving the Quality, Consistency, competitiveness and marketshare of beef. National Cattlemen’s Beef Association.

Strohbehn, D. 2001. A Historical Review of the 4-H Beef of Merit Carcass Contest at the Iowa State Fair. 2001 Beef Research Report, Iowa State University. A. S. Leaflet R1760.

Figure 1. Side and rear view photograph of steer.

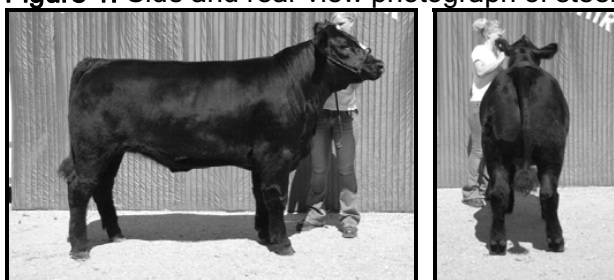


Figure 2. Ultrasound image of rib eye taken between the 12th and 13th rib of the same steer.

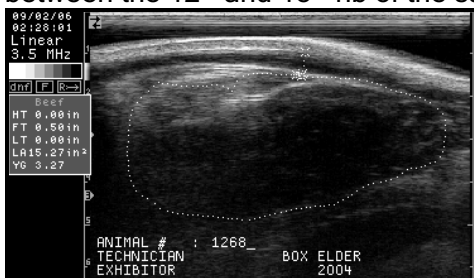


Figure 3. Digital photograph of the same ribeye muscle.

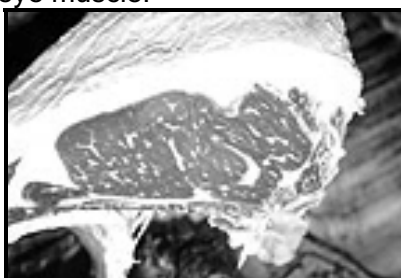


Table 1. Average quality production data, rib eye size and quality grades from 1974 to 2007 in 5 year increments at the Box Elder County Junior Livestock Show.

Period	1974 - 78	1979 - 83	1984 - 88	1989 - 93	1994 - 98	1999 - 03	2004 - 07
Number of Cattle	443	310	340	397	448	393	358
Live Weight	1,101	1,095	1,156	1,162	1,177	1,225	1,286
Hot Weight	621	674	700	713	719	743	768
% > 700 lb HW	7.2%	31.9%	52.5%	59.5%	62.7%	75.0%	91.0%
Ribeye Size	11.6	12.1	12.2	13.2	13.0	13.2	12.8
% Choice	59.2%	44.4%	32.1%	45.9%	38.3%	53.5%	62.0%
% Select	37.0%	52.4%	63.5%	51.3%	53.8%	41.0%	33.5%
% Off Grade	3.8%	3.2%	4.4%	2.8%	7.9%	5.5%	4.5%

MANAGING GLYPHOSATE-RESISTANT PALMER AMARANTH IN ROUNDUP READY SOYBEANS

Kichler, J.M.^{1*}, Prostko, E.P.²

¹Macon County Cooperative Extension, The University of Georgia, Oglethorpe, GA 31068

²Department of Crop and Soil Sciences, The University of Georgia, Tifton, GA 31793

Abstract

Glyphosate-resistant (GR) Palmer amaranth was confirmed in Macon County, Georgia in 2005. It has been estimated that 87 percent of the soybeans planted in the U.S. during 2005 were herbicide tolerant varieties (NASS, 2007). Soybean producers utilize Roundup Ready systems because of low costs and simplicity. In 2006, two on-farm field trials were conducted in Macon County to evaluate preemergence and postemergence herbicides for the control of GR-Palmer amaranth in soybeans. Preemergence herbicides that showed potential to be used by Georgia soybean growers included Valor, Reflex, Intrro, and Boundary. Glyphosate + Cobra, Reflex, or Ultra Blazer tank-mixes applied postemergence were not effective in controlling GR-Palmer amaranth. The results of both trials suggest that GR-Palmer amaranth will only be controlled using a combination of both preemergence and postemergence herbicides.

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¹Macon County Cooperative Extension, The University of Georgia, Oglethorpe, GA 31068

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Introduction

Glyphosate-resistant Palmer amaranth (*Amaranthus palmeri*) was confirmed in Macon County, Georgia in 2005 (Culpepper et al, 2006). Initially, GR-Palmer amaranth was confirmed on 500 acres in Macon County in 2005 (Culpepper and Brown, 2006). Since 2005, this pest has spread very quickly across Georgia. As of May 2008, 20 Georgia counties have confirmed GR-Palmer amaranth populations. (Culpepper, 2008). Palmer amaranth can grow one to two inches a day and a single female can produce 500,000 seeds making this pest hard to control with postemergence herbicides (Culpepper et al, 2007).

In 2005, it has been estimated that 87 percent of the soybeans planted in the U.S. were herbicide tolerant varieties. Growers have reduced the use of residual herbicides in herbicide tolerant crops and have depended more on postemergence herbicides for weed control. Weed management programs recommended to control glyphosate-resistant Palmer amaranth depends on the activation of residual herbicides and timely postemergence herbicide applications. Dryland producers struggle getting residual herbicides activated making Palmer amaranth management difficult.

Materials and Methods

Two field trials were conducted in 2006 in Macon County, Georgia to evaluate herbicide systems to control glyphosate-resistant (GR) Palmer amaranth in soybeans. The soybeans were planted in 36 inch rows on May 3, 2006 with an air planter. The plot size was 2 rows by 25 feet long. All herbicide treatments were applied with a CO₂ powered backpack sprayer calibrated to deliver 15 GPA with 11002DG flat fan nozzle tips. Rainfall (1.5

inches) occurred 3 days after the preemergence herbicides were applied. Traditional small plot techniques were used and all treatments were replicated 4 times.

Test one evaluated 14 herbicide treatments to control glyphosate-resistant Palmer amaranth in soybeans. The treatments consisted of combinations of preemergence and/or postemergence herbicides in order to develop herbicide systems for GR Palmer amaranth control. The preemergence herbicides included Boundary® (s-metolachlor + metribuzin)¹, Canopy® (metribuzin + chlorimuron ethyl)², First Rate™ (cloransulam-methyl)³, Intro® (alachlor)⁴, Prowl® H20 (pendimethalin)⁵, and Valor™ (flumioxazin)⁶. The postemergence herbicides included Cobra® (lactofen)⁷, Flexstar® (fomesafen)⁸, Fusion® (fluazifop-P-butyl + fenoxaprop-P-ethyl)⁹, Roundup WeatherMax® (glyphosate)¹⁰, and Select® (clethodim)¹¹. The postemergence herbicides were applied at 3 different timings which included early postemergence (0.5 inch Palmer amaranth), mid postemergence (2 to 5 inch Palmer amaranth), and late postemergence (up to 12 inch Palmer amaranth). The herbicide treatments are shown in

Table 1.

Table 1. Herbicide Treatments and Timing, GR Palmer Amaranth Test 1, Macon County, GA, 2006

Treatment	Herbicide Timings			
	PRE	EPOST	MPOST	LPOST
A			Roundup WeatherMax 22 oz/A + AMS 2% v/v	Roundup WeatherMax 22 oz/A + AMS 2% v/v
B		Roundup WeatherMax 22 oz/A + Flexstar 12 oz/A + AMS 2% v/v		
C	Intro 2 qt/A		Roundup WeatherMax 22 oz/A + AMS 2% v/v	
D	Intro 2 qt/A		Roundup WeatherMax 22 oz/A + Flexstar 12 oz/A + AMS 2% v/v	
E	Intro 2 qt/A	Flexstar 20 oz/A + Fusion 10oz/A + NIS 0.5% v/v		
F	Intro 2 qt/A + Valor 2 oz/A		Roundup WeatherMax 22 oz/A + AMS 2% v/v	
G	Valor 2 oz/A		Roundup WeatherMax 22 oz/A + AMS 2% v/v	
H	Valor 2 oz/A	Cobra 12 oz/A + Select 6 oz/A + COC 0.5% v/v		
I	Valor 2 oz/A + FirstRate 0.4 oz/A		Roundup WeatherMax 22 oz/A + AMS 2% v/v	
J	Prowl H20 1 qt/A		Roundup WeatherMax 22 oz/A + AMS 2% v/v	
K	Prowl H20 1 qt/A	Raptor 4 oz/A + Ultra Blazer 10 oz/A + COC 1% v/v		
L	Canopy 4 oz/A		Roundup WeatherMax 22 oz/A + AMS 2% v/v	
M	Boundary 34 oz/A	Flexstar 20 oz/A + Fusion 10 oz/A + NIS 0.5 v/v		
Untreated				

PRE = May 4; EPOST = May 24, 0.5" tall pigweed; MPOST = May 31, 2-5" tall pigweed; LPOST = June 22, up to 12" tall pigweed.

Test two evaluated 12 treatments for glyphosate-resistant Palmer amaranth control in soybeans. The herbicide treatments consisted of preemergence and postemergence herbicide combinations. Preemergence herbicides included Valor, Sencor® (metribuzin)¹² + Prowl H2O, Dual Magnum® (s-metolachlor)¹³, Parallel™ PCS (metolachlor)¹⁴ and Stalwart® (metolachlor)¹⁵. The postemergence herbicides included Roundup WeatherMax tankmixed with Cobra, Reflex® (fomesafen) or Ultra Blazer® (acifluorfen). The Palmer amaranth was 2 to 5 inches tall when postemergence herbicides were applied. The herbicide treatments are shown in Table 2.

Table 2. Herbicide Treatments and Timing, GR Palmer Amaranth Test 2, Macon County, GA, 2006

Treatment	Herbicide, Rate and Timing	
	PRE	POST
Untreated		
A	Valor 2 oz/A	Roundup WeatherMax 22 oz/A
B	Valor 2 oz/A	Roundup WeatherMax 22 oz/A + Cobra 8 oz/A
C	Valor 2 oz/A	Roundup WeatherMax 22 oz/A + Cobra 12.5 oz/A
D		Roundup WeatherMax 22 oz/A + Cobra 8 oz/A
E		Roundup WeatherMax 22 oz/A + Cobra 12.5 oz/A
F		Roundup WeatherMax 22 oz/A + Reflex 16 oz/A
G		Roundup WeatherMax 22 oz/A + Ultra Blazer 16 oz/A
H	Sencor 8 oz/A + Prowl H2O 1 qt/A	
I	Dual Magnum 16 oz/A	
J	Parallel PCS 16 oz/A	
K	Stalwart 16 oz/A	

^aPRE = May 4; POST = May 31, 2-5" tall pigweed.

Herbicide treatments in both tests were rated for Palmer amaranth control at 21, 39, 53 and 83 days after treatment (DAT). Palmer amaranth control ratings were obtained using a visual scale of 0 to 100 percent (0 = no control, 100 = complete control). The data were subjected to ANOVA and means separated using Duncan's Multiple Range Test (P = 0.10). Crop injury ratings and yield data were not obtained due to severe deer damage.

Results

Results from Test 1 are shown in Table 3. Treatments E, K, and M provided greater than 93 percent control at 83 DAT. Treatments D, H and I provided 88, 85 and 76 percent control, respectively. These treatments used residual herbicides to control Palmer amaranth emergence. Treatment A, which consisted of 2 postemergence applications of Roundup WeatherMax, was the least effective treatment in Test 1. This treatment consisted of no residual herbicides and the 2 postemergence applications of glyphosate do not control the glyphosate resistant Palmer amaranth population.

Results from Test 2 are shown in Table 4. Valor provided excellent residual control of glyphosate-resistant Palmer amaranth for at least 7 weeks after application. Treatments D, E, F and G were not effective in controlling glyphosate-resistant Palmer amaranth with less than 70 percent control throughout the season. Treatment H provided good control of glyphosate-resistant Palmer amaranth early but control was poor late in the season. No difference in glyphosate-resistant Palmer amaranth control was noted with Dual Magnum, Parallel PCS and Stalwart when applied at 1 pt/a and control was not acceptable late season (less than 50 percent control). Our results suggest that preemergence residual herbicides are going to be the foundation of any herbicide program designed to control glyphosate-resistant Palmer amaranth.

Table 3. GR-Palmer amaranth control in RR soybeans - I, Macon County – 2006.

Treatment	Herbicide	Rate/A	Timing ^a	Palmer Amaranth Control - %			
				May 24 ^b	June 8	June 22	July 25
A	Roundup WeatherMax + AMS	22 oz + 2% w/w	MPOST + LPOST	0 b	51 c	30 c	13 e
B	Roundup WeatherMax + Flexstar + AMS	22 oz + 12 oz + 2% w/w	EPOST EPOST EPOST	0 b	99 a	88 a	71 bc
C	Intro Roundup WeatherMax + AMS	2 qt 22 ozs + 2% w/w	PRE MPOST MPOST	99 a	98 a	77 ab	51 cd
D	Intro Roundup WeatherMax + Flexstar + AMS	2 qt 22 ozs + 12 oz + 2% w/w	PRE EPOST EPOST EPOST	99 a	99 a	98 a	88 ab
E	Intro Flexstar + Fusion + NIS	2 qt 20 oz + 10 oz + 0.5% v/v	PRE EPOST EPOST EPOST	99 a	99 a	98 a	95 a
F	Intro + Valor Roundup WeatherMax + AMS	2 qt + 2 oz 22 oz + 2% w/w	PRE PRE MPOST MPOST	99 a	99 a	93 a	69 bc
G	Valor Roundup WeatherMax + AMS	2 oz 22 oz + 2% w/w	PRE MPOST MPOST	99 a	98 a	97 a	70 bc
H	Valor Cobra + Select + COC	2 oz 12 oz + 6 oz + 0.5% v/v	PRE EPOST EPOST EPOST	99 a	99 a	98 a	85 ab
I	Valor + Firstrate Roundup WeatherMax + AMS	2 oz + 0.4 oz 22 oz + 2% w/w	PRE PRE MPOST MPOST	99 a	99 a	98 a	76 ab
J	Prowl H ₂ O Roundup WeatherMax + AMS	1 qt 22 oz + 2% w/w	PRE MPOST MPOST	99 a	78 b	65 a	38 d
K	Prowl H ₂ O Raptor + Ultra Blazer + COC	1 qt 4 oz + 10 oz + 1% v/v	PRE EPOST EPOST EPOST	99 a	99 a	98 a	94 a
L	Canopy Roundup WeatherMax + AMS	4 oz 22 oz + 2% w/w	PRE MPOST MPOST	99 a	99 a	96 a	40 d
M	Boundary Flexstar + Fusion + NIS	34 oz 20 oz + 10 oz + 0.5% v/v	PRE EPOST EPOST EPOST	99 a	99 a	98 a	93 a
Untreated		--	--	0 b	0 b	0 d	0 e

^aPRE = May 4; EPOST = May 24, 0.5" tall pigweed; MPOST = May 31, 2-5" tall pigweed; LPOST = June 22, up to 12" tall pigweed. ^bMeans in the same column with the same letter are not significantly different according to DMRT (P = 0.10).

Table 4. GR-Palmer amaranth control in Soybean - II, Macon County – 2006.

Treatment	Herbicide	Rate/A	Timing ^a	Palmer Amaranth Control - %			
				May 24 ^b	June 8	June 22	July 25
	Untreated	--	--	0 b	0 d	0 c	0 e
A	Valor Roundup WeatherMax	2 oz 22 oz	PRE POST	99 a	99 a	98 a	70 ab
B	Valor Roundup WeatherMax + Cobra	2 oz 22 oz + 8 oz	PRE POST POST	99 a	99 a	97 a	78 a
C	Valor Roundup WeatherMax + Cobra	2 oz 22 oz + 12.5 oz	PRE POST POST	99 a	99 a	98 a	80 a
D	Roundup WeatherMax + Cobra	22 oz + 8 oz	POST POST	0 b	56 c	46 b	23 de
E	Roundup WeatherMax + Cobra	22 oz + 12.5 oz	POST POST	0 b	56 c	46 b	26 cd
F	Roundup WeatherMax + Reflex	22 oz + 16 oz	POST POST	0 b	64 bc	50 b	33 cd
G	Roundup WeatherMax + Ultra Blazer	22 oz + 16 oz	POST POST	0 b	69 bc	50 b	20 de
H	Sencor + Prowl H ₂ O	8 oz + 1 qt	PRE PRE	99 a	80 b	61 b	50 bc
I	Dual Magnum	16 oz	PRE	96 a	71 bc	58 b	44 cd
J	Parallel PCS	16 oz	PRE	94 a	63 bc	44 b	30 cd
K	Stalwart	16 oz	PRE	93 a	71 bc	50 b	26 cd

^aPRE = May 4; POST = May 31, 2-5" tall pigweed.

^bMeans in the same column with the same letter are not significantly different according to DMRT (P = 0.10).

Sources of Materials

¹ Boundary®, s-metolachlor + metribuzin, Syngenta Crop Protection, Inc., P.O. Box 18300, Greensboro, NC 27419.

² Canopy®, metribuzin + chlorimuron ethyl, DuPont Crop Protection, Laurel Run Building, Chestnut Run Plaza, Wilmington, DE 19898.

³First Rate™, cloransulam-methyl, Dow AgroSciences, LLC, 9330 Zionsville Road, Indianapolis, IN 46268.

⁴Intrro®, alachlor, Monsanto Company, 800 North Lindbergh Blvd., St. Louis, MO 63167.

⁵Prowl® H₂O, pendimethalin, BASF Ag Products, P.O. Box 13528, 26 Davis Drive, Research

Triangle Park, NC 27709-3528.

⁶Valor™, flumioxazin, Valent U.S.A. Corporation Agricultural Products, P.O. Box 8025, Walnut Creek, CA 94596.

⁷Cobra®, lactofen, Valent U.S.A. Corporation Agricultural Products, P.O. Box 8025, Walnut Creek, CA 94596.

⁸Flexstar®, fomesafen, Syngenta Crop Protection, Inc., P.O. Box 18300, Greensboro, NC 27419.

⁹Fusion®, fluazifop-P-butyl + fenoxaprop-P-ethyl, Syngenta Crop Protection, Inc., P.O. Box 18300, Greensboro, NC 27419.

¹⁰Roundup WeatherMax®, glyphosate, Monsanto Company, 800 North Lindbergh Blvd., St. Louis, MO 63167.

¹¹Select®, clethodim, Valent U.S.A. Corporation Agricultural Products, P.O. Box 8025, Walnut Creek, CA 94596.

¹²Sencor®, metribuzin, Bayer CropScience, 2 T.W. Alexander Drive, P.O. Box 12014, Research Triangle Park, NC 27709.

¹³Dual Magnum®, s-metolachlor, Syngenta Crop Protection, Inc., P.O. Box 18300, Greensboro, NC 27419.

¹⁴Parallel™ PCS, metolachlor, Makhteshim Agan of North America, Inc., 4515 Falls of Neuse Road, Suite 300, Raleigh, NC 27609.

¹⁵Stalwart®, metolachlor, Sipcam Agro USA, Inc., 300 Colonial Center Parkway, Suite 230, Roswell, GA 30076.

References

Economic Research Service. (2007). "Adoption of Genetically Engineered Crops in the U.S.: Soybeans," USDA-ERS, July 2007.

Culpepper, A.S., Grey, T.L., Vencill, W.K., Kichler, J.M., Webster, T.M., Brown, S.M., Davis, J.W., and Hanna, W.W. (2006). "Glyphosate-resistant Palmer Amaranth (*Amaranthus palmeri*) confirmed in Georgia." *Weed Science*, vol 54, pg. 620-626.

Culpepper, A.S., Brown, S.M., (2005). "Glyphosate-Resistant Palmer Amaranth (*Amaranthus palmeri*) Confirmed in Georgia." University of Georgia, Crop and Soil Sciences Press Release, September 13, 2005.

Culpepper, A.S. (2008). "Glyphosate-Resistant Palmer Amaranth Update." University of Georgia, Georgia Cotton Newsletter, May 12, 2008.

Culpepper, A.S., York, A.C., Kichler, J.M., MacRae, A., Davis, A.L., Webster, T.M. (2007) "University of Georgia Herbicide Programs for Palmer Amaranth Control in Cotton." University of Georgia Cooperative Extension Circular # 906

2007 ARKANSAS CORN AND GRAIN SORGHUM RESEARCH VERIFICATION PROGRAM

Lawson, K.W. Corn and Grain Sorghum Verification Coordinator, Arkansas Cooperative Extension, Little Rock, Arkansas 72203

Guiling, P.S. Agricultural Economics Associate, Arkansas Cooperative Extension, Keiser, Arkansas 72351

Kelley, J.P. Extension Agronomist – Wheat and Feed Grains, Arkansas Cooperative Extension, Little Rock, Arkansas 72203

ABSTRACT

The Corn and Grain Sorghum Research Verification Program (CGSRVP) was conducted on five corn and three grain sorghum fields in 2007 by the University of Arkansas Cooperative Extension Service. Grain yields ranged from 171 to 218 bushels per acre for corn with an average of 200.39 bushels per acre, and 95 to 128 bushels per acre for grain sorghum with an average of 110.5 bushels per acre. Arkansas farmers harvested 590,000 acres of corn and 215,000 acres of grain sorghum with an average yield of 168 and 94 bushels per acre, respectively. The 2007 state average corn and grain sorghum yields set new state records. Agronomic and economic data for specified operating costs were collected for each CGSRVP field to evaluate the effectiveness and profitability of production recommendations. The economic analysis show total direct expenses ranged from \$304.43 to \$409.83 per acre for corn with an average of \$360.54 per acre, and \$152.77 to \$204.03 per acre for grain sorghum with an average of \$188.51 per acre. The average break-even prices needed to cover total specified operating costs averaged \$1.79 per bushel for corn and \$1.58 per bushel for grain sorghum. Total direct and fixed costs averaged \$441.47 and \$268.35 per acre with a break-even price of \$2.19 and \$2.23 per bushel for corn and grain sorghum, respectively. The CGSRVP was used to demonstrate Extension's research-based recommendations to help corn and grain sorghum growers to produce a profitable, high yielding crop. The CGSRVP is funded by the Corn and Grain Sorghum Checkoff monies and administered through the Arkansas Corn and Grain Sorghum Promotion Board.

INTRODUCTION

The 2007 growing season was the eighth year for the Corn and Grain Sorghum Research Verification Program (CGSRVP). The CGSRVP is an interdisciplinary effort between growers, county Extension agents, Extension specialists, and researchers. The CGSRVP is an on-farm demonstration of all the research-based recommendations required to grow corn and grain sorghum profitably in Arkansas. The specific objectives of the program are:

1. To verify research-based recommendations for profitable corn and grain sorghum production in all corn and grain sorghum producing areas of Arkansas.
2. To develop a database for economic analysis of all aspects of corn and grain sorghum production.
3. To demonstrate that consistently high yields of corn and grain sorghum can be produced economically with the use of available technology and inputs.
4. To identify specific problems and opportunities in Arkansas corn and grain sorghum production for further investigation.
5. To promote timely implementation of cultural and management practices among corn and grain sorghum growers.
6. To provide training and assistance to county agents with limited expertise in corn and grain sorghum production.

Each CGSRVP field and cooperator was selected prior to planting. Cooperators agreed to pay production expenses, provide crop expense data for economic analysis and implement the recommended production practices in a timely manner from seedbed preparation to harvest. Eight growers were enrolled in the CGSRVP in the spring of 2007, five corn and three grain sorghum fields. The fields were located on commercial farms

ranging in size from 59.5 to 128 acres for corn fields, and 8 to 58 for grain sorghum fields. The average field size was 82.5 and 30.1 acres for the corn and grain sorghum fields, respectively.

The 2007 CGSRVP corn fields were conducted in Crittenden, Desha, Monroe, Pulaski and Randolph Counties; and three grain sorghum fields in Lawrence, Poinsett and Prairie Counties. Five different corn hybrids (Asgrow 715, DeKalb DK64-10, DeKalb DK66-23, Dyna-Gro 58P59 and Terral TV26BR61) and two grain sorghum varieties (FFR 318 and Pioneer 84G62) were planted. Management decisions were based on field history, soil test results, hybrids, and data collected from each individual field during the growing season.

RESULTS AND DISCUSSION

The planting date, row spacing, hybrid, field size, total fertilizer and soil classification for each CGSRVP field are listed in Table 1. Hybrids for each field were selected from the past years performance in the University of Arkansas Corn and Grain Sorghum Hybrid Trials. A hybrid must have two or three year averages in the Hybrid Trials to be considered for the CGSRVP. Also, agronomic characteristics, such as relative maturity, disease and insect resistance of each hybrid is considered depending on specific situations of each field.

Preplant fertilizer was applied according to soil test recommendations. A third of the total nitrogen was applied for both the corn and grain sorghum fields preplant. The remainder of the total nitrogen was applied at approximately the 6-leaf stage for corn and grain sorghum. Most corn fields in the CGSRVP received an additional application of 45 pounds nitrogen as urea a week prior to tassel emergence. Total nitrogen applied averaged 255 lbs N/acre for corn and 141 lbs N/acre for grain sorghum.

Table 2 shows the herbicide usage, times irrigated, irrigation type, previous crop and yield for each CGSRVP field. Grain yields in the 2007 CGSRVP averaged 200.39 bu/acre with a range of 171 to 218 bu/acre for corn, and averaged 110.51 bu/acre with a range of 95.1 to 128 bu/acre for grain sorghum (Table 3). All of the corn fields and two of the three grain sorghum fields were irrigated.

ECONOMIC ANALYSIS

This section provides information on the development of estimated production costs for the 2007 CGSRVP. Records of field operations on each field provided the basis for estimating these costs. The field records were compiled by the CGSRVP coordinator, county Extension agents, and cooperators in the 2007 CGSRVP.

Using CGSRVP production data from the 8 fields (5 corn and 3 grain sorghum), operating costs, and net returns above total specified costs assuming a 25 percent land rent were estimated for each field. Break-even prices needed to cover total specified costs are also presented.

Direct Expenses

Direct expenses are those expenditures that would generally require annual cash outlays and would be included on an annual operating loan application. Actual quantities of all operating inputs as reported by the cooperators were used in this analysis. The prices used for these inputs were, for the most part, the same as those reported in the "2007 Cost of Production Estimates" published by the Cooperative Extension Service. If an input were used that did not have a published price, a price quote for that input was obtained from a supply dealer.

Fuel and repair costs for machinery were calculated using a budget generator based on parameters and standards published in the American Society of Agricultural Engineers 1993 Handbook. Therefore, the producers' actual machinery costs will vary from the machinery cost estimates that are presented in this report. However, the producers' actual field operations were used as a basis for calculations and his equipment size and type were matched as closely as possible to the existing data set used in the annual set of state crop budgets.

Direct expenses, Table 3, for the CGSRVP corn fields ranged from \$304.43 per acre for Desha County to \$409.83 per acre for Pulaski County and averaged \$360.54 per acre. The grain sorghum fields ranged from \$152.77 per acre for Lawrence County to \$204.03 per acre for Poinsett County and averaged \$188.51 per acre. Direct expenses per bushel for the corn fields ranged from \$1.52 in Desha County to \$2.12 in Crittenden County

and averaged \$1.79 per bushel. Direct expenses per bushel for the grain sorghum fields ranged from \$1.41 in Lawrence County to \$1.93 in Prairie County and averaged \$1.58 per bushel.

Fixed or Ownership Costs

Machinery ownership costs represent the capital replacement costs of owning and using equipment and can vary greatly from one farm to another depending on the farm's size, management skills, and annual use. Fixed or ownership costs presented in Table 3 include depreciation, interest, taxes, and insurance. These costs were based on the initial cost and expected useful life of the machinery and were allocated on a per acre basis using estimated performance rates and hours of annual use.

These are economic costs and may differ from short-run tax based cash accounting figures for a particular year. The economic approach spreads these costs over the entire useful life of the machinery. In the long-run the farm business must cover these costs to remain viable.

Fixed costs ranged from \$51.08 to \$115.99 per acre for the corn fields and \$33.37 to \$100.46 per acre for the grain sorghum fields, with an average of \$80.93 and \$79.85 per acre for the corn and grain sorghum fields, respectively.

Total Costs (Direct and Fixed Costs)

Total direct and fixed costs presented in Table 3 are the summation of direct expenses and fixed or ownership costs. Not included in these costs are charges for land, risk, overhead, and management. The overhead and management costs would be better addressed in a whole-farm analysis and will not be dealt with in this discussion. Total direct costs plus ownership costs ranged from \$355.51 to \$477.91 per acre for the corn fields and \$186.14 to \$253.01 per acre for the grain sorghum fields, with an average of \$441.47 and \$268.35 per acre for the corn and grain sorghum fields, respectively.

Break-even prices needed to cover total direct costs plus fixed costs ranged from \$1.78 to \$2.79 per bushel for the corn fields and \$1.72 to \$2.66 per bushel for the grain sorghum fields, with an average of \$2.19 and \$2.23 per bushel for the corn and grain sorghum fields, respectively.

Land Costs

Land costs incurred by producers participating in the CGSRVP would likely vary from land ownership, cash rent, or some form of crop share arrangement. Therefore, a comparison of these divergent cost structures would contribute little to this analysis. For this reason, a 25 percent crop share rental arrangement, with no cost sharing was assumed to provide a consistent standard for comparison (Table 3). This is not meant to imply that this arrangement is normal or that it should be used in place of existing arrangements. It is simply a constant measure to be used across all CGSRVP fields.

Net Returns Per Acre

Table 3 also presents estimated returns per acre above Total Costs plus a 25 percent crop share rent assuming a corn price of \$3.19 per bushel and a grain sorghum price of \$3.47 per bushel. The corn price used was obtained from the Grain Market Newsletter (August 1 – October 25, 2007). The grain sorghum price was the average cash price reported in the USDA, NASS reports from August, 2007 through October, 2007. Net returns ranged from -\$68.79 to \$122.99 per acre for corn and -\$5.77 to \$94.93 per acre for grain sorghum. Cost for risk, overhead, and management have also not been included. These costs must be accounted for in any further interpretation of this data.

Estimated Direct Costs

Tables 4 and 5 lists estimated direct costs per acre by field for corn and grain sorghum production. The largest specified operating cost for the corn and grain sorghum fields was the fertilization cost, averaging \$141.59 and \$81.84 per acre for the corn and grain sorghum fields, respectively. Seed, fertilizer, and diesel cost account for approximately 70% of input costs for corn, 63% for irrigated grain sorghum, and 67% of non-irrigated grain sorghum in the 2007 CGSRVP.

Table 1. County, Hybrid, Field Size, Total Fertilizer and Soil Information CGSRVP Fields 2007.

<i>County</i>	Planting Date	Row Spacing (inches)	Hybrid	Field Size (Acres)	Fertilizer (N-P-K-S-Zn pounds/acre)	Soil Classification
Corn						
Crittenden	3/15/07, 4/20/07	38	Asgrow 715 DeKalb 64-10	61.2	238-60-90	Dubbs Silt Loam/Bowdre Silty Clay
Desha	3/17/07	38	Terral 26BR61	71.5	230-0-0-0	Sharkey & Desha Clay
Monroe	4/16/07	30	Asgrow 715	92.3	274-0-0-24	Dubbs & Amagon Silt Loam
Pulaski	3/26/07	38	DeKalb 66-23	59.5	284-72-100-12	Perry Clay & Keo Silt Loam
Randolph	4/14/07	30	Dyna Gro 58P59	128	251-76-76	Bosket Fine Sandy Loam
Grain Sorghum						
Poinsett (Irrigated)	4/21/07	38	Pioneer 84G62	58	156-56-112	Mhoon Silt Loam & Sharkey Clay
Prairie (Irrigated)	4/24/07	30	Pioneer 84G62	8	158-92-60	Crowley & Calloway Silt Loam
Lawrence (Non-Irr.)	4/17/07	30	FFR 318	24.4	110-36-36-20	Beulah Sandy Loam & McCrory Fine Sandy Loam

Table 2. Herbicide Usage, Irrigation, Previous Crop and Yield, CGSRVP 2007.

County	Herbicide	Irrigation	Irrigation Type	Previous Crop	Yield (bu/a)
Corn					
Crittenden	22 oz Roundup + 1 qt Atrazine May 5 & May 21	5 times	Pivot	Cotton	171
Desha	1.5 pt Roundup + 1.5 pt Atrazine - April 27 1.5 pt Roundup + 6 oz Dicamba - May 15	3 times	Furrow	Soybeans	200
Monroe	1 qt Roundup + 1 qt Atrazine + ¾ oz Resolve - May 3 1 qt Roundup + 1 qt Atrazine May 10	7 times	Furrow	Cotton	197.2
Pulaski	1 qt Roundup + 2 qt Atrazine April 28	4 times	Furrow	Soybeans	215.7
Randolph	1 qt Roundup + 3 pt Atrazine - May 9	7 times	Pivot	Corn	218
Average Yield					200.39
Grain Sorghum					
Poinsett (Irrig.)	1.5 pt Dual at Planting, 1.6 qt Atrazine - May 5	6 times	Pivot	Cotton	128.04
Prairie (Irrig.)	1.5 pt Dual at Planting, 1.2 qt Atrazine - May 25	2 times	Flood	Soybeans	95.1
Lawrence (Non-Irr)	1 pt Parallel at Planting, 1.2 qt Atrazine - May 15	0 times	None	Soybeans	108.4
Average Yield					110.51

Table 3. Selected Economic Information for the 2007 CGSRVP.

<i>County</i>	Total Direct Expenses¹ (\$/A)	Break-even Price With Direct Costs² (\$/Bu)	Total Fixed Costs³ (\$/A)	Total Direct and Fixed Costs⁴ (\$/A)	Break-even Price With Total Costs⁵ (\$/Bu)	Break-even Price With Land Rent Costs⁶ (\$/Bu)	Returns Above Total Costs and Land Rent Costs⁷ (\$/A)
Corn							
Crittenden	\$361.92	\$2.14	\$115.99	\$477.91	\$2.79	\$3.73	-\$68.79
Desha	\$304.43	\$1.52	\$51.08	\$355.51	\$1.78	\$2.37	\$122.99
Monroe	\$370.07	\$1.88	\$63.74	\$433.81	\$2.20	\$2.94	\$37.51
Pulaski	\$409.83	\$1.91	\$56.97	\$466.80	\$2.17	\$2.89	\$47.59
Randolph	\$361.44	\$1.66	\$104.17	\$465.61	\$2.14	\$2.85	\$55.95
Average	\$360.54	\$1.79	\$80.93	\$441.47	\$2.19	\$2.92	\$43.69
Grain Sorghum							
Lawrence (Non-Irrig.)	\$152.77	\$1.41	\$33.37	\$186.14	\$1.72	\$2.30	\$94.93
Poinsett (Irrigated)	\$204.03	\$1.59	\$100.46	\$304.49	\$2.38	\$3.17	\$28.63
Prairie (Irrigated)	\$183.19	\$1.93	\$69.82	\$253.01	\$2.66	\$3.55	-\$5.77
Average	\$188.51	\$1.58	\$79.85	\$268.35	\$2.23	\$2.97	\$43.25

¹ Direct out-of-pocket, operating expenses, such as seed, fertilizer, irrigation, etc.

² Price per bushel required by the farmer to equal total direct costs. Does not include land, overhead, risk, and management costs.

³ Total fixed or ownership costs which include charges for depreciation, taxes, and insurance.

⁴ Total direct operating costs plus fixed costs which include charges for depreciation and interest on all machinery and irrigation equipment, taxes, and insurance.

⁵ Price per bushel required by the farmer to equal total direct operating and fixed costs. Does not include land, overhead, risk, and management costs.

⁶ Break-even price per bushel plus a 25 percent crop share rent. Does not include overhead, risk, and management costs.

⁷ A 25 percent crop share rent was assumed as a land charge for a renter situation. No cost sharing was assumed.

Sales price is the greater of average Arkansas market price August through October (CCC Loan Price plus LDP does not apply for this year).

Table 4. Estimated Costs per Acre for Corn Fields (all irrigated), CGSRVP 2007

	Crittenden	Desha	Monroe	Pulaski	Randolph	Weighted Average²
Acres	61	71	92	59	128	
Direct Exp.	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)
Custom Work	31.65	43.75	48.58	55.90	53.20	47.72
Fertilizer	134.11	109.00	113.43	192.10	160.18	141.59
Herbicides	18.58	22.88	24.70	12.58	11.20	17.53
Fungicides			10.44			2.34
Irrigation Supplies		10.30	10.30	10.30		5.56
Crop Seed	97.28	61.80	63.86	65.92	61.80	68.12
Operator Labor	8.31	3.74	5.34	4.39	4.98	5.26
Irrigation Labor	0.25	1.86	4.34	2.48	0.35	1.79
Hand Labor	2.17	1.43	0.66	0.41	0.61	0.97
Diesel Fuel¹	38.71	30.61	64.08	40.69	41.14	44.03
Repairs & Maint.	17.40	8.23	12.81	10.11	16.11	13.34
Interest on Op. Cap.	13.46	10.83	11.53	14.95	11.87	12.29
					Total	360.54

¹Price of diesel was taken to be \$2.33 per gallon.

²Weighted average calculations based on 411 total acres.

Table 5. Estimated Costs per Acre for Grain Sorghum Fields, CGSRVP 2007

	Lawrence Non-Irrigated	Poinsett Irrigated	Prairie Irrigated	Weighted Average²
Acres	24	58	8	
Direct Exp.	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)
Custom Work	16.20	19.20	24.28	18.85
Fertilizer	78.54	84.90	69.52	81.84
Herbicides	9.74	23.58	19.91	19.56
Crop Seed	8.04	10.72	12.60	10.17
Adjuvants	2.66	2.66	2.66	2.66
Operator Labor	6.85	5.03	5.55	5.56
Irrigation Labor		0.30	0.44	0.23
Hand Labor	1.63	1.10	0.87	1.22
Diesel Fuel¹	16.24	35.68	30.04	29.99
Repairs & Maint.	7.85	14.13	10.82	12.16
Interest on Op. Cap.	5.02	6.73	6.50	6.25
			Total	188.51

¹Price of diesel was taken to be \$2.33 per gallon.

²Weighted average calculations based on 90 total acres.

OHIO VINEYARD LABOR AND MANAGEMENT SURVEY

Marrison, D. L., The Ohio State University, Ashtabula County Extension,
39 Wall Street, Jefferson, Ohio 44047

Brown, M.V., The Ohio State University, OSU South Centers,
1864 Shyville Road, Piketon, Ohio 45661

Introduction

Ashtabula County is Ohio's top grape production area, raising 68% of the state's 2,000 acres of grapes. This survey was developed in response to two community needs. The Northeast Ohio Grape Committee determined there was a need for a more skilled vineyard workforce. At the same time, the Horticulture Department of the Ashtabula County Joint Vocational School was conducting a program review, and determined more viticulture classes should be offered in their secondary horticulture program. Both groups requested OSU Extension to develop a survey to determine the technical and soft skills desired for vineyard employees in Ohio.

A survey instrument was developed in the spring of 2005 utilizing input from the Ohio grape industry. In collaboration with Dr. Bruce Bordelon from Purdue University, Indiana grape growers helped to test pilot the survey in the summer of 2005. Recommendations for improving the survey were considered and changes were made accordingly. This project was reviewed by the Institutional Review Board at The Ohio State University and the human subjects were deemed exempt from providing signed release agreements.

Procedures

Ninety-nine grape growers in the state of Ohio were mailed the survey in the fall of 2005 asking them to participate in the Ohio Vineyard Labor and Management survey. Forty-seven growers (response rate of 47%) responded to the survey, with 26 raising primarily Concord juice grapes and 21 raising wine grapes. The total acreage of grapes grown by the respondents was 765.80 acres of grapes. Of this total, 503.55 acres were juice grapes, 256.5 wine grapes and 5.75 table grapes. Data was analyzed using the statistical program Statistical Package for the Social Sciences (SPSS). Cross tabulations were completed to examine any differences between juice grape growers versus wine grape growers.

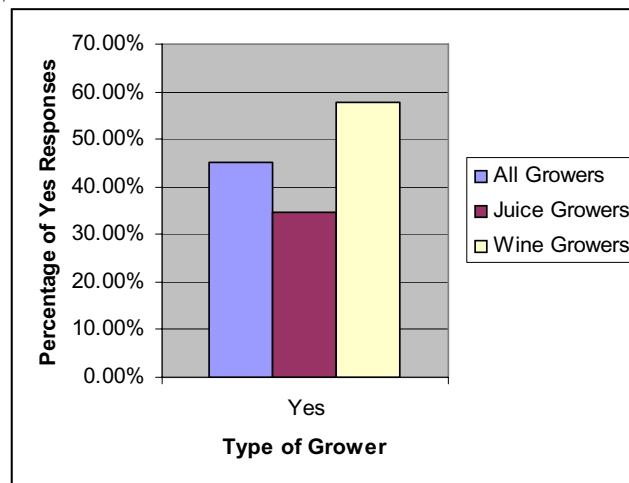
Current Labor Situation

Growers were asked a series of base line demographic questions. These questions examined existing labor needs, migrant labor and housing, labor limitations, and the vineyard tasks most commonly hired for in the State of Ohio. Growers were asked to identify their current labor needs. Thirty-six percent of the respondents hire full-time employees for vineyard work, 78% hire part-time workers, and 6% employ seasonal migrant labor.

Growers were asked if the availability of labor was limiting the size of their operations. Seventy-four percent of growers indicated available labor was not limiting their operation. Growers were also asked if the availability of federally approved migrant worker housing was limiting their operation. Only 10.9% indicated the lack of migrant housing was a limitation.

Growers were asked if there was a need for a central call-in line to secure seasonal employees. Responses from all growers indicated there was not a large need (45.2%). Nearly fifty-eight percent (57.9%) of wine growers were in favor of a call in line whereas 34.8% of juice growers were in favor (Figure 1).

Figure 1. Need for central call in line for labor



Pruning, tying, suckering, shoot positioning, spraying, and harvesting are some of the major vineyard activities which growers may hire labor to complete. Growers were asked which of these skills they hire seasonal or migrant labor to complete the vineyard work (Table 1). Juice and wine growers were significantly different for their responses to five of these labor areas. The top areas for juice growers to hire labor were pruning (65.4%) and mechanical harvesting (61.5%). The top areas for wine growers were hand harvesting (75%) and tying (60%). Wine growers indicated they were more apt to hire labor to help for hand harvesting, tying, suckering, and shoot positioning ($\alpha = 0.01$). Meanwhile juice growers were more apt to hire mechanical harvesting than their wine grower counterparts ($\alpha = 0.01$).

Table 1. Skill areas being hired for seasonal or migrant vineyard work.

Skill or Knowledge Area	All Growers	Juice Growers	Wine Growers
Pruning	59.6%	65.4%	50.0%
Hand Harvesting ^z	42.6%	15.4%	75.0%
Mechanical Harvesting ^z	36.2%	61.5%	5.0%
Tying ^z	36.2%	15.4%	60.0%
Suckering ^z	25.5%	7.7%	45.0%
Shoot Positioning ^z	17.0%	0%	35.0%
Spraying	17.4%	15.4%	20.0%

^zResponses for juice & wine growers were significantly different at the $\alpha = 0.01$ level.

Technical Vineyard Skills Desired by the Grape Industry

Growers were asked to indicate the technical job skills/competencies, which they wanted an employee to have knowledge of or training in, before they were hired (Table 2). The vineyard competencies developed were based on the common vineyard management practices as reported by Ohio State University Extension. Growers were asked to rate the knowledge on a 5-point Likert scale, where 1=Not Important, 2=Limited Importance, 3=Somewhat Important, 4=Important, and 5=Very Important.

The top five vineyard skills desired by growers were pruning, safe tractor operation, training systems, harvesting, and shoot positioning. Juice and wine growers differed in their ranking of these competencies. Juice growers rated pruning, grapevine growth, disease identification, training systems, and propagation of vines as their top five skills. Wine growers rated safe tractor operation, pruning, weed management, harvesting, and shoot positioning as the top skills desired.

The grower groups differed significantly with respect to three knowledge areas. Juice growers viewed the propagation of vines as a more desirable skill than the wine growers with a response of 3.33, as compared to 1.81 for wine growers. This was significant at the $\alpha = 0.01$ confidence level.

Two variables were significantly difference at the $\alpha = 0.05$ confidence level. Disease identification was identified as a greater need by juice growers at 3.61 versus 2.63 by wine growers. Wine growers, however, rated wildlife control as a more important skill (2.69), as compared to 1.75 for juice growers.

<u>Vineyard Knowledge</u>	All Growers (s.d.)	Juice Growers (s.d.)	Wine Growers (s.d.)
Pruning	4.24 (1.15)	4.43 (1.21)	4.00 (1.10)
Safe tractor operation	3.63 (1.16)	3.28 (1.64)	4.19 (1.38)
Training systems	3.39 (1.29)	3.58 (1.43)	3.13 (1.15)
Harvesting	3.37 (1.37)	3.17 (1.62)	3.50 (1.03)
Shoot positioning	3.37 (1.35)	3.33 (1.57)	3.38 (1.15)
Disease identification^y	3.20 (1.47)	3.61 (1.42)	2.63 (1.36)
Grapevine growth	3.12 (1.47)	3.65 (1.50)	2.69 (1.25)
Equipment maintenance	3.12 (1.45)	3.06 (1.60)	3.31 (1.25)
Insect pests	3.00 (1.61)	3.17 (1.76)	2.69 (1.40)
Weed management	2.97 (1.53)	2.59 (1.73)	3.50 (1.10)
Pesticide spraying	2.88 (1.63)	2.94 (1.78)	2.94 (1.48)
Propagation of vines^z	2.57 (1.50)	3.33 (1.50)	1.81 (1.05)
Grapevine nutrition	2.21 (1.23)	2.53 (1.51)	1.94 (0.77)
Wildlife control^y	2.18 (1.19)	1.75 (1.18)	2.69 (1.01)
Soil fertilization	1.94 (1.28)	2.33 (1.57)	1.56 (0.73)
Vineyard construction	1.71 (1.06)	1.53 (0.94)	1.94 (1.18)
Viticulture history	1.71 (1.14)	1.76 (1.25)	1.69 (1.08)
Vineyard design	1.59 (1.02)	1.82 (1.29)	1.38 (0.62)
Vineyard economics	1.53 (0.99)	1.82 (1.29)	1.25 (0.45)

^y Responses for juice & wine growers were significantly different at the $\alpha = 0.05$ level.

^z Responses for juice & wine growers were significantly different at the $\alpha = 0.01$ level.

Soft Skills Desired by the Grape Industry

Growers were asked to rate their preference for specific non-technical related skills which they want potential employees to have knowledge of or training in before they are hired. These skills, defined as “soft skills,” included the ability to work independently, positive attitude, punctuality, team work, and language communication. Growers were asked to rate the knowledge on a 5-point Likert scale, where 1=Not Important, 2=Limited Importance, 3=Somewhat Important, 4=Important, and 5=Very Important.

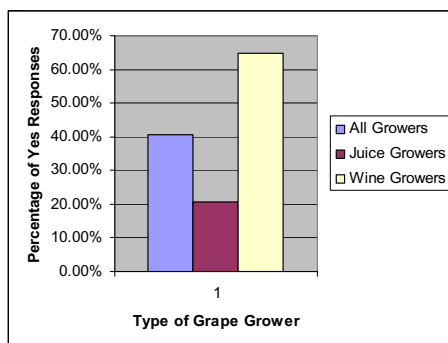
Juice and wine growers rated this skill set area almost identically (Table 3). Both groups rated the ability to work independently, possess a positive attitude, and punctuality as key soft skills. Each of these variables had a mean value of between 4=Important and 5=Very Important. The remaining soft skills were ranked in the following order: ability to work as a team member, critical thinking skills, English speaking, and Spanish speaking. The ability to speak Spanish was rated by vineyard owners as having limited importance.

Skill or Knowledge Area	All Growers(s.d)		Juice Growers(s.d.)	Wine Growers(s.d.)
Ability to work independently	4.61 (0.74)	4.59 (0.91)	4.61 (0.50)	
Positive Attitude	4.33 (1.00)	4.19 (1.21)	4.50 (0.71)	
Punctuality	4.23 (1.03)	4.19 (1.17)	4.28 (0.90)	
Ability to work as a team member	3.95 (1.20)	4.00 (1.23)	3.89 (1.18)	
Possess critical thinking skills	3.90 (1.17)	3.90 (1.18)	4.00 (1.14)	
English speaking (conversational)	3.70 (1.09)	3.86 (1.06)	3.44 (1.10)	
Spanish speaking (conversational)	2.29 (1.24)	2.00 (1.12)	2.69 (1.30)	

s.d. = standard deviation

Growers were asked if they had experienced problems with a worker who possessed good vineyard production skills but lacked the necessary soft skills. The responses were significantly different ($\alpha = 0.01$), where 64.7% of the wine growers answered yes and only 20.8% of the juice growers responded yes (Figure 2).

Figure 2. Experience with employees with good technical skills but no soft skills



Growers were then asked to determine which employee they would prefer to hire to work in their vineyard. Growers were asked to rate on a 5-point Likert scale their preference of soft versus technical skills, where 1 = knows a lot about vineyard work but has no people skills, and 5 = knows nothing about vineyard work but has outstanding people skills. Each grower group preferred to have an employee that knows more about the technical vineyard work yet possessing a small degree of aptitude for soft skills (Table 4).

Table 4. Technical skills versus soft skills

Average All Growers(s.d.)	Juice Growers(s.d.)	Wine Growers(s.d.)
2.33 (1.02)	2.17 (1.13)	2.61 (0.78)

s.d. = standard deviation

Advanced Training Needs of Growers

Growers were asked if they were interested in learning more about a select list of labor management topics. They were asked to rate their interest in these educational areas on a 5-point Likert scale, with 1=Not Interested, 2=Limited Interest, 3=Somewhat Interested, 4=Interested, and 5=Very Interested.

Growers, on average, responded they have limited interest in the management topics listed on the survey. The four highest ranked topics of interest were strategies for retaining good employees, governmental labor regulations, motivating employees, and environmental issues. There was no significant difference between juice and wine growers (Table 5).

Table 5. Advanced training needs of growers.

Knowledge Area	All Growers(s.d.)	Juice Growers(s.d.)	Wine Growers(s.d.)
Strategies for retaining good employees	2.92 (1.38)	2.85 (1.39)	3.00 (1.46)
Governmental labor regulations	2.89 (1.37)	2.81 (1.37)	3.00 (1.46)
Motivating employees	2.84 (1.37)	2.90 (1.41)	2.76 (1.39)
Environmental issues	2.82 (1.34)	2.73 (1.49)	2.94 (1.18)
Strategies for recruiting good employees	2.79 (1.36)	2.70 (1.42)	2.88 (1.36)
How to delegate responsibility effectively	2.70 (1.24)	2.55 (1.32)	2.88 (1.20)
Enhancing my communication skills as a manager	2.65 (1.38)	2.55 (1.36)	2.75 (1.48)
Providing effective employee feedback	2.49 (1.27)	2.37 (1.21)	2.60 (1.40)
Conversational Spanish speaking course	2.39 (1.48)	2.10 (1.41)	2.75 (1.57)
Techniques for interviewing potential employees	2.32 (1.11)	2.30 (1.13)	2.31 (1.14)
Risk management issues	2.32 (1.31)	2.05 (1.19)	2.63 (1.46)
Managing job related stress	2.32 (1.36)	2.40 (1.47)	2.19 (1.28)
Conducting effective performance appraisals	2.25 (1.13)	2.21 (1.13)	2.25 (1.18)
Excellence in customer service	2.22 (1.25)	2.10 (1.33)	2.31 (1.20)
Developing non-discriminatory policies	2.22 (1.27)	2.10 (1.34)	2.31 (1.25)
Effective coaching skills	2.19 (1.15)	2.05 (1.23)	2.31 (1.08)
Relationship building with vendors	2.14 (1.18)	1.90 (1.12)	2.38 (1.26)
Techniques for providing in-house employee training	2.14 (1.26)	1.85 (1.04)	2.50 (1.51)
Developing an employee manual	2.05 (1.05)	2.00 (1.08)	2.06 (1.06)
Developing job descriptions	1.81 (0.86)	1.68 (0.89)	1.88 (0.81)

s.d. = standard deviation

Summary

Ohio State University Extension conducted an Ohio Vineyard Labor and Management Survey in 2005 to determine the desired technical and soft skills of potential vineyard employees. Respondents to the survey indicated adults and youth looking for employment with a juice or wine grape vineyard operation will have a greater opportunity for employment if they possess skills in pruning, safe tractor operation, training systems, hand harvesting, and shoot positioning. It was also noted potential employees should possess a positive attitude, ability to work independently, and be punctual. The results of this study are being utilized by OSU Extension to develop educational programs to better enable adults to transition into the vineyard work force. One example of this was in 2007 a beginner pruning school was held for the Hispanic community. Secondary vocational schools are also using the information obtained from this survey to expand their horticulture curriculum to include more viticulture training. The Ashtabula County Joint Vocational School has grape vines at the horticulture complex and has conducted hands-on pruning classes at the Ashtabula County Grape Research Station of the Ohio Agricultural Research and Development Center (OARDC).

PHOSPHORUS FOR BLOOMING PLANTS

Mitchell, C.C.¹, Pinkston, C.B.², and Wheeler, E.J.²

¹ Extension Agronomist-Soils, Dept. Agronomy & Soils, Auburn University, AL 36849

² Regional Extension Agent, Alabama Coop. Ext. System, Cullman County, Cullman, AL 35055

³ Urban Regional Extension Agent, Alabama Coop. Ext. System, Marshall County, Guntersville, AL 35976

Garden centers and retail fertilizer companies often promote high P fertilizers for blooming plants with no regard to soil test P levels. Master Gardeners in Cullman and Marshall Counties in northern Alabama wanted to determine if applying a high P fertilizer to a soil that was high in P would actually improve flowering for summer annual flowers. Identical experiments were conducted in 2006 at two locations in North Alabama. Soil test prior to establishment indicated that both sites tested very high in extractable P; no additional P was recommended. Ten treatments replicated 4 times were applied that included various N:P ratios, two commercial fertilizers for blooming plants and poultry broiler litter (a 3-3-2 grade fertilizer). The highest N and P rate applied was equivalent to 120 lb. N and 120 lb. P₂O₅ per acre applied twice during the growing season. Annual blooming plants were planted in each plot and monitored during the growing season. Additional P fertilization had no effect on number of blooms, bloom quality or vegetative quality. Nitrogen fertilization alone up to 120 lb. N per acre produced healthier plants and more blooms at both locations. This applied research activity provided local Master Gardeners with a opportunity to contribute to agricultural experiment station research.

PHOSPHORUS FOR BLOOMING PLANTS

Mitchell, C.C.¹, Pinkston, C.B.², and Wheeler, E.J.²

¹ Extension Agronomist-Soils, Dept. Agronomy & Soils, Auburn University, AL 36849

² Regional Extension Agent, Alabama Coop. Ext. System, Cullman County, Cullman, AL 35055

³ Urban Regional Extension Agent, Alabama Coop. Ext. System, Marshall County, Guntersville, AL 35976

BACKGROUND

Specialty fertilizers are often promoted using the theory that high phosphorus (P or P₂O₅) is necessary to promote desirable blooms in plants. Fertilizers sold in garden centers as “bloom boosters”, “super bloom”, or “for flowering plants” always contain a higher percentage of P₂O₅ than any other primary nutrient. We know that P is involved in the biochemical pathway of energy transfer within a plant and that the process of blooming requires a lot of energy (Tisdale, et al., 1985). We also know that high N promotes vegetative growth. Excessive N may produce vegetative growth at the expense of reproduction (e.g. blooming). Plants can only use a limited amount of any nutrient. Soil samples tested by the Auburn University Soil Testing Laboratory in 2004 and 2005 from Cullman County found that 13 percent tested “extremely high” in P, 34 percent tested “very high” in P, and 21 percent tested “high” in P. In adjacent Marshall County, the values were 7 percent extremely high, 30 percent very high, and 19 percent high. High soil test P is defined as that level which is adequate for growth and production of most crops (25 mg P/kg using the Mehlich-1 extractant for loamy soils). Very high is 2 times this value and extremely high is 5 times this value (Adams et al., 1994).

Gardeners are often confused when their soil test report recommends zero P yet all the products on the market for blooming plants contain high P. Therefore, they may ask, “If a soil is already testing high or very high in P, will additional P fertilizer actually stimulate blooming?” This question is particularly relevant because of the environmental concerns with excessive P runoff into lakes, streams and waterways.

OBJECTIVES

- 1) Determine if additional P in a fertilizer will actually stimulate blooming among selective annual blooming plants when grown in a soil testing high in P.
- 2) Engage Master Gardeners in the practice of applied, small plot research.

PROCEDURES

Master Gardener volunteers in Cullman and Marshall Counties agreed to do most of the field work and data collection for experiments to address objective 1. Uniform sites existed on the North Alabama Horticulture Research Center at Cullman, AL, and at the Sand Mountain Research & Extension Center in Crossville, AL, that tested very high in P (Fig. 1). The Cullman site is a Hartsells loam and the Sand Mountain site is a Hartsells fine sandy loam (fine-loamy, siliceous, thermic Typic Hapludults). Both sites had a history of intensive fertilization and crop production.

Sites were prepared with a spader tractor implement (Cullman) or roto-tiller (Sand Mt.). Fertilizer treatments listed in Table 1 were hand applied prior to planting in April and again once during the growing season. Treatments were arranged in a randomized block design with 4 replications. Plot size was 5 feet x 5 feet with 5 feet between blocks. Treatments (Table 1) were selected to represent N rates from 0 to 120 pounds N per acre and P rates from 0 to 120 pounds P_2O_5 per acre. The high P rate is currently the highest rate recommended for a soil testing “very low” in extractable P (Adams et al., 1994). No P is recommended when soil test P is rated “high” (>25 mg/kg using M1 extractable P) or “very high” (>50 mg/kg M1 extractable P). A standard N recommendation for annual flowers is 120 pounds total N applied in split applications. Our highest N rate was 120 pounds N applied twice during the season for a total of 240 pounds total N. In the humid southeastern U.S., soils are not normally tested for plant available N and very little is assumed to be mineralized from soil organic matter. Two

commercially available fertilizer products were included in the study, Miracle Grow® brand Bloom Booster (10-52-10) and Colorburst® 15-30-15. These were applied to provide the highest rate of P, 120 lb. P_2O_5 per acre per application. Because poultry broiler litter is abundant locally, it was also included to provide the highest P rate as an organic source. The poultry litter used at Cullman and Sand Mountain had the following analysis on a fresh weight basis (N- P_2O_5 - K_2O):

Cullman: 4.2-4.6-3.5

Sand Mt.: 3.7-4.0-3.2

The litter was applied assuming a 3-3-2 grade fertilizer. Therefore, 2 tons per acre (2.3 pounds per plot) was applied to provide 120 lb. P_2O_5 per acre. The actual nutrients applied were higher than planned.

Plot size at each location was 5 feet by 5 feet. Three rows of summer annual flowering plants were planted in each plot. At Cullman, 4 plants each of celosia, marigold, and zinnia were planted in each plot after

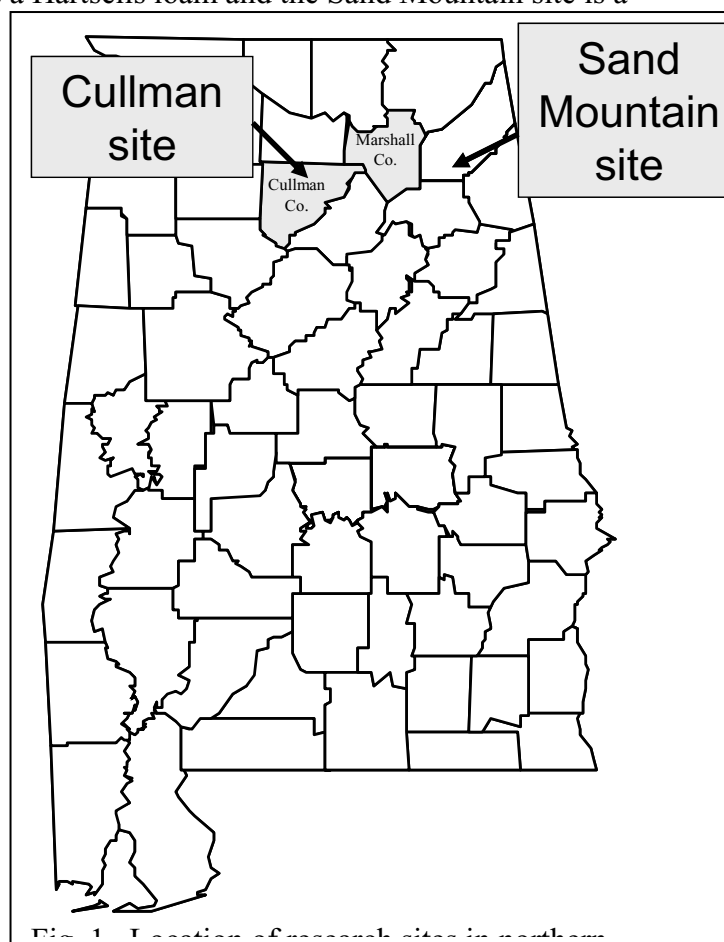


Fig. 1. Location of research sites in northern

a pine bark mulch was spread. At Sand Mountain, 5 plants of marigold, petunia, and zinnia were planted in each row with no mulch.

At Cullman, data were collected on 5 June, 19 June, 3 July, 17 July, and 31 July. At Sand Mountain, data were collected on 12 June and 19 July. Data recorded included:

- Number of open blossoms per 5-foot row
- Quality of blossoms (Rating from 0= none to 10= very high quality)
- Quality of foliage (0= dead to 10 = large healthy, vigorous, dark green plants)

RESULTS

Research with Volunteers

Objective 2 was addressed by engaging Master Gardener volunteers in field plot research. Most of those involved had no concept of replicated research and the need for applying agricultural statistics to the data. Before beginning, we met with the volunteers to describe the background, treatments, and research process. Volunteers were supervised carefully when establishing the tests and applying fertilizers but the data collection was their total responsibility. About 12 Master Gardener volunteers participated in the project at Cullman and 6 at Sand Mountain. The apparent consensus among the Master Gardener volunteers was that research was not easy; it was a very detailed and laborious process. However, once the final data was shared with them at their regular meetings, and they saw what was accomplished, most were very proud of this work and anxious to move on to a new research project.

Cullman

The effect of fertilizer treatment and plant type on the number and quality of blooms and the quality of foliage by date showed very similar trends at each of the observation dates, 5 June, 19 June, 3 July, 17 July, and 31 July. Tables 1 and 2 are mean values for the entire season. An analysis of variance indicated a significant effect of fertilizer treatment and a significant effect of type of plant on the measured variables but no interaction between type of blooming plant and fertilizer treatment. Therefore, the data indicates that all three types of blooming plants are affected similarly by the fertilizer treatments.

Because this soil tested “very high” in soil test P, no additional P would have been recommended for blooming plants. Indeed, additional P made no difference in the quantity or quality of blooms or quality of foliage (Fig. 2). On the other hand, nitrogen was the most limiting nutrient at this site. Surprisingly, the highest number and quality of blooms and the best foliage were produced at the highest N rate equivalent to 120 lb. N per acre per application. In designing the experiment, we thought that the 120-lb. N/acre rate would have been excessive but this was not the case. Among the two commercial fertilizer products compared, the Colorburst® 15-30-15 was better than the Miracle Grow® 10-52-10 when both were used at the same rate of P because (1) more total N was applied in the Colorburst and (2) part of the total N in the Colorburst product was slow-release. The only significant difference was in the quality of the foliage as would be expected from additional N.

The marigold cultivar seem to produce the largest number of blooms and the best quality foliage of the three types of annual blooming plants used in this study (Table 2, Fig. 2).

Sand Mountain

Data were collected at Sand Mountain on two dates, 12 June and 19 July (Tables 3, 4, and 5). Fertilizer treatment had no significant effect on the number of blooms and the quality of blooms on 12 June. There was a significant effect of treatment on the quality of the foliage by 19 July but this difference cannot be explained. There were some complications at the Sand Mountain location that do not show up in the statistics. Different cultivars of petunia had to be used in some plots because of a lack of the same variety at planting. Most plots had 5 plants of each cultivar but some plots had random plants to die resulting in only 3 or 4 plants. Japanese beetles were also found in some plots. No attempt was made to control insect pests. All these variables may have masked any treatment effect. Regardless, neither N or P seemed to have a significant effect on flowering at the Sand Mountain location. This site also had very high soil test P and was on a site that had been heavily fertilized in past years.

SUMMARY

Additional P is not needed for blooming plants if the soil test is already very high. General observations and the data suggest that any commercial fertilizer including a high N fertilizer is satisfactory for blooming plants as long as at least 60 lb. N per acre (1.4 lb. N per 1,000 sq. ft.) is applied. Nitrogen rates as high as 120 lb. N per acre (2.8 lb. per 1,000 sq. ft.) applied twice during the growing season were not excessive for best performance of summer annual blooming plants. Poultry broiler litter (chicken litter) at a rate of 2 tons per acre (92 lb. per 1,000 sq. ft.) will provide at least 120-120-60 lb. N-P₂O₅-K₂O per acre and was adequate for optimum number of blooms and quality of blooms but produced slightly inferior foliage quality. At Cullman, the marigold cultivar produced the highest number of blooms and best foliage quality compared to the celosia and zinnia cultivars selected.

REFERENCES

- Adams, J.R., C.C. Mitchell, and H.H. Bryant. 1994. Soil test fertilizer recommendations for Alabama crops. Agronomy & Soils Dep. Ser. No. 178. Ala. Agric. Exp. Stn., Auburn University, AL.
- Tisdale, S.L., W.L. Nelson, and J.D. Beaton. 1985. Soil fertility and fertilizers. 4th ed. Macmillan Co., New York, NY.

ACKNOWLEDGEMENTS

This applied research was conducted with the help and supervision of Arnold Caylor, Superintendent, North Alabama Horticulture Research Center, and Tony Dawkins, Superintendent, Sand Mountain Research & Extension Center. Most of the physical work and data collection were done by Cullman County Master Gardeners and Marshall County Master Gardeners.

Table 1. Effect of fertilizer rate of N and P fertilization on the number and quality of blooms and quality of foliage over the entire blooming season in 2006 at **Cullman** .

Treatment number & description	Fertilizer Rate N-P ₂ O ₅ -K ₂ O	Number of blooms per 5-foot row	Quality of blooms†	Quality of foliage†
	---lb/acre---			
1. no N/no P	0-0-60	27 b	6.7 c	6.3 d
2. no N/high P	0-120-60	26 b	6.7 c	6.5 d
3. medium N/medium P	60-0-60	36 ab	7.7 ab	7.8 ab
4. medium N/high P	60-120-60	34 ab	7.7 ab	7.7 ab
5. high N/no P	120-0-60	40 a	7.6 ab	7.8 ab
6. high N/medium P	120-60-60	41 a	8.0 ab	8.0 ab
7. high N/high P	120-120-60	41 a	8.1 a	8.2 a
8. chicken litter	~120-120-60	40 a	7.8 ab	7.5 bc
9. Miracle Grow® 10-52-10	23-120-23	32 ab	7.5 b	7.1 c
10. Colorburst® 15-30-15	60-120-60	38 a	8.0 ab	8.0 ab

† Scale 0-10 with 10 being the highest quality; values followed by the same letter or not statistically different at the 5% level of probability.

Table 2. Number and quality of blooms and quality of foliage over the 2006 growing season for the three types of blooming plants at **Cullman**.

Type of Flowering Plant	Number of blooms per 5-foot row	Quality of blooms†	Quality of foliage†
Celosia	26 c	7.3 b	7.2 b
Marigold	49 a	7.7 a	7.8 a
Zinnia	32 b	7.8 a	7.4 b

† Scale 0-10 with 10 being the highest quality; values followed by the same letter or not statistically different at the 5% level of probability.

Table 3. Effect of N and P fertilization on the number and quality of blooms and quality of foliage on **12 June at Sand Mountain.**

Treatment no. & description	Fertilizer Rate N-P ₂ O ₅ -K ₂ O -----lb/acre-----	Number of blooms per 5-foot row	Quality of blooms†	Quality of foliage†
1. no N/no P	0-0-60	78	5.8	5.8
2. no N/high P	0-120-60	67	5.5	5.0
3. medium N/medium P	60-0-60	97	5.8	5.8
4. medium N/high P	60-120-60	93	6.0	6.0
5. high N/no P	120-0-60	104	6.3	6.3
6. high N/medium P	120-60-60	83	5.5	5.5
7. high N/high P	120-120-60	68	6.0	5.8
8. chicken litter	~120-120-60	95	5.8	5.8
9. Miracle Grow® 10-52-10	23-120-23	64	5.3	5.3
10. Colorburst® 15-30-15	60-120-60	81	5.3	5.3
L.S.D. $p < 0.10$		NS	NS	NS
MEAN		83	5.7	5.6

† Scale 0-10 with 10 being the highest quality

Table 4. Effect of fertilizer rate of N and P fertilization on the number and quality of blooms and quality of foliage on **19 July at Sand Mountain.**

Treatment number	Fertilizer Rate N-P ₂ O ₅ -K ₂ O ---lb/acre---	Number of blooms per 5-foot row	Quality of blooms†	Quality of foliage†
1. no N/no P	0-0-60	146	8.3	8.0
2. no N/high P	0-120-60	182	8.3	8.2
3. medium N/medium P	60-0-60	223	8.7	8.7
4. medium N/high P	60-120-60	224	8.9	8.8
5. high N/no P	120-0-60	202	8.8	8.4
6. high N/medium P	120-60-60	180	8.6	8.5
7. high N/high P	120-120-60	212	8.7	8.5
8. Chicken litter	~120-120-60	176	8.3	7.6
9. Miracle Grow® 10-52-10	23-120-23	165	8.3	7.7
10. Colorburst® 15-30-15	60-120-60	210	8.7	8.7
L.S.D. $p < 0.05$		NS	NS	0.8
MEAN		192	8.5	8.3

† Scale 0-10 with 10 being the highest quality.

Table 5. Overall mean values for the three cultivars used at **Sand Mountain on 19 July.**

Type of Flowering Plant	No. of Blooms per 5 feet of row	Quality of Blooms	Quality of Foliage
Petunia	169	8.5	8.2
Marigold	130	8.5	8.4
Vinca	277	8.6	8.3



Miracle Grow®
Bloom Booster
10-52-10 @
23-120-23

0-120-60

No N



Colorburst®
15-30-15 @
60-120-60

120-0-60

No P



Poultry litter @
120-120-80

120-120-60

N + P



Fig. 2. A comparison of selected treatments at Cullman on 3 July 2006 showing celosia, marigold, and zinnia. Rates are pounds per acre of N-P₂O₅-K₂O. (photos by Shirley McEwen, Cullman County Extension Agent Assistant and Master Gardener.)

GARDEN TILLAGE AND SOIL COMPACTION

Mitchell, C.C.¹, Pinkston, C.B.², Caylor, A.³, and Elkins, C.B.⁴

¹ Extension Agronomist-Soils, Dept. Agronomy & Soils, Auburn University, AL 36849

² Regional Extension Agent, Alabama Cooperative Extension System, Cullman County, Cullman, AL 35055

³ Superintendent, North Alabama Horticultural Research Center, Cullman, AL

⁴ Soil Scientist (retired), USDA-ARS Soil Dynamic Laboratory, Auburn, AL 36849

ABSTRACT

Farmers on sandy, Coastal Plain soils of the southeastern U.S. are aware that tillage can create traffic pans or plow pans. These compacted soil layers can prevent deep rooting of crops. Tillage may also destroy soil structure in soils low in organic matter. The objective of this study was to determine if garden tillage techniques would create similar problems in small vegetable gardens. A series of replicated experiments were conducted over several years at 3 Alabama locations. Master Gardener volunteers in Lee County and Cullman County, Alabama, did most of the work. On sandy, Coastal Plain soils of Central Alabama, intensive soil tillage such as disking, rototilling with a tractor or a garden-type rototiller either created severe traffic pans and/or destroyed soil aggregates which led to surface soil crusting. These techniques resulted in greatly reduced yields of all vegetable crops. Techniques that disrupted or cut through plow pans such as subsoiling, double-digging, or slit tillage increased yields on Coastal Plain soils. On a deep, loamy soil of the Appalachian Plateau in Cullman County (Hartsells loam), we found no differences in vegetable yields due to tillage. No plow pans were detected in these soils.

GARDEN TILLAGE AND SOIL COMPACTION

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¹ Extension Agronomist-Soils, Dept. Agronomy & Soils, Auburn University, AL 36849

² Regional Extension Agent, Alabama Cooperative Extension System, Cullman County, Cullman, AL 35055

³ Superintendent, North Alabama Horticultural Research Center, Cullman, AL

⁴ Soil Scientist (retired), USDA-ARS Soil Dynamic Laboratory, Auburn, AL 36849

BACKGROUND

Soils have traditionally been tilled and cultivated to (1) prepare a seed bed and (2) control weeds. Heavy equipment used for tillage and other purposes may compact soil, increase soil bulk density, and reduce yields (Brady, 1990). Therefore, a third reason for tillage may be to breakup compacted soils that may have resulted from previous soil activities. Traffic pans or plow pans are a common problem in field crops on the sandy soils of the southeastern U.S. Coastal Plain region (Camp and Lund, 1964). Traffic pans are a thin layer (2 to 4 inches) of compacted soil resulting from the downward force of tillage equipment on the soil just beneath the plow layer. The problem is particularly serious on soils with a sandy topsoil (Ap horizon) just above a finer textured subsoil (Bt horizon). This compacted soil layer can restrict water and air movement through the soil and limit root growth.

Commercial farmers have employed several techniques to overcome or prevent the development of plow pans and soil compaction. These include no-till or reduced tillage farming, in-row subsoiling or paratilling to break hardpans, high residue management to protect surface soils and increase water use efficiency, and slit tillage. Slit tillage was proposed in the 1980s to accomplish the same thing as subsoiling but with less energy. Instead of disrupting a plow pan, a thin slit is cut through it for root growth (Elkins, 1980. Elkins and Hendrick, 1983, Allen, 1984).

Slit tillage uses a blade to cut a narrow slit through the traffic pan. Roots can follow the slit into the subsoil. Root channels through this slit persist from year to year if the soil is not drastically disturbed. Unfortunately, abrasion caused by coarse textured, sandy soils tend to rapidly wear away a blade. Therefore, slit tillage has not become a practice for large scale farmers.

Traffic pans or tillage pans may also be a problem for gardeners and small-scale vegetable producers. These growers probably don't have access to large equipment necessary for deep tillage and subsoiling. Often they depend on small tractors with disks and/or garden tillers that may create traffic pans as serious or worse than those created by field cropping practices. In fact, estimates of soil compaction by common activities rank tillers among the most serious. Values in Table 1 were calculated based upon the mass x acceleration and the surface area in contact with the soil.

Table 1. Estimates of forces of compaction from typical sources of soil activities.

<u>Source of Compaction</u>	<u>Estimated compaction</u> -----lb/inch ² -----
Man walking	6
Crawler-type tractor	12
Wheel-type tractor	20
Cattle	23
Horse	40
Garden rototiller	107-750

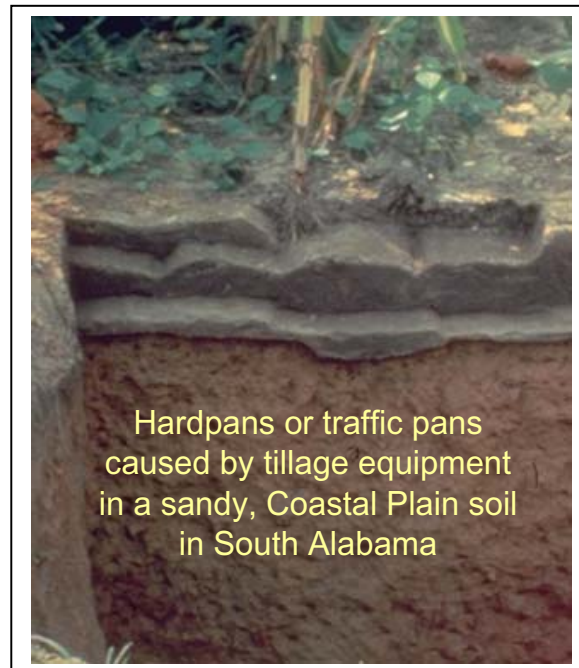
The faster the tines of a tiller rotate, the more energy is transferred into the soil just beneath the tines. This rapid rotation of a rear-tined tiller has the potential to create traffic pans more severe than a large tractor and disk. The fast spinning tines may also destroy soil structure by crushing soil aggregates. This can potentially result in soil crusting and increased soil bulk density.

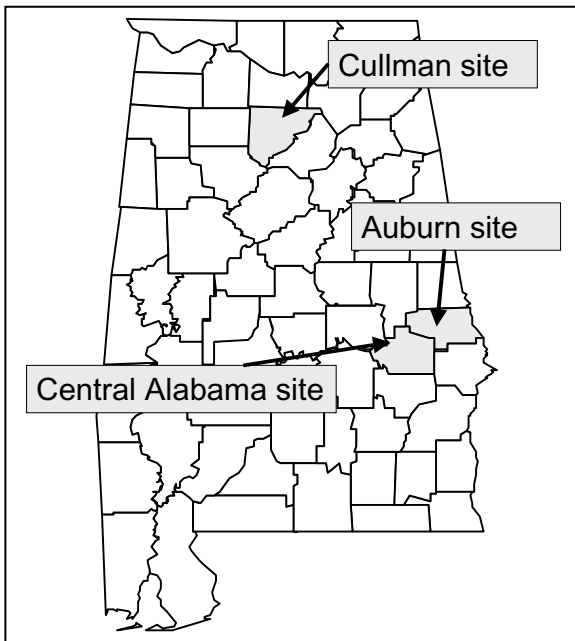
OBJECTIVE

The objectives of these experiments and demonstrations are to apply what we have learned about tillage and soil compaction in field crops for small gardens and small-scale vegetable producers. We wanted to (1) demonstrate the effects of soil compaction and (2) determined the best techniques to overcome compactions negative effects of soil compaction. We were able to involve Master Gardener volunteers in conducting applied research thus providing Extension training through hands-on experience.

METHODS

Since the early 1990s, experiments and demonstrations with garden tillage techniques have been conducted with Master Gardeners at three Alabama sites. At all three sites, soil was tested and lime applied to the appropriate crop to maintain a soil pH 6.0 to 6.5. All sites tested high or very high in P and K according to the Auburn University Soil Testing Laboratory and no P or K was applied. Nitrogen was applied based upon





standard recommendations for vegetable crops for Alabama (Adams et al., 1994). Insect and weed control were managed using IPM for that particular crop and site (<http://www.aces.edu/pubs/docs/A/ANR-0500-B/>).

Auburn Site. One of the first experiments was located on the campus of Auburn University on a Marvyn loamy sand (fine-loamy, siliceous, thermic Typic Kanhapludults), a typically sandy, Coastal Plain soil with a sandy clay loam subsoil (Bt horizon) approximately 10-12 inches deep. These soils are known to develop traffic pans about 8 inches deep.

Soil was prepared just prior to spring planting using four tillage treatments (Fig. 1):

(1) Front-tine garden tiller. A 5 hp garden tiller; soil was prepared with multiple passes of tiller just prior to planting; tillage depth was approximately 6 inches.

(2) Slit tillage. Using the same 5 hp, front-tined, garden tiller adapted with a modified drag bar to cut a slit 12 inches beneath the row; soil was prepared as in the above treatment as

the slit was being cut directly beneath the row.

(3) Rear-tine garden tiller. Using a 10-hp rear-tine, BCS garden tiller; soil was prepared to a depth of 6 inches with multiple passes of tiller just prior to planting.

(4) In-row subsoiled. Using a small tractor and a conventional subsoil shank to a depth of 14 inches directly beneath the row. Final seedbed preparation was made with the rear-tined tiller as in treatment 3 to a depth of 4 inches.

All tillage treatments were replicated 4 times in a RCB design. Plot size was 12-feet wide (4, 36-inch rows) by 15 feet long. Crops planted during the 3-year experiment were:

- Sweet corn (*Zea mays L.* var. silver queen) -- every year
- Okra (*Abelmoschus esculentus (L.) Moench* var. Clemson spineless) -- 2 of 3 years
- Southern peas (*Vigna unguiculata (L.) Walp* var. Pinkeye Purplehull) -- 1 of 3 years

These crops were selected to represent crops with a fibrous root system (corn), a deeply rooted crop (okra), and a deeply rooted legume (peas).

Soil penetrometer measurements were taken in early fall of year 1 and year 3 to determine relative compaction of the soil. Penetrometer measurements were taken after a saturating rainfall when soil moisture was above field capacity. All measurements were taken in the treated row. Each year, the site of this experiment was moved to a different location within the same soil series. Crops were not irrigated.

Cullman Site. The Cullman County Master Gardeners assisted in conducting a similar experiment with additional tillage variables at the North Alabama Horticulture Research Center at Cullman, Alabama, in 2001 through 2003. The soil at this site is a Hartsells loam (fine-loamy, siliceous, thermic Typic Hapludults). There was only a slight increase in clay with depth. These soils generally do not respond to deep tillage as do the sandier soils of the Coastal Plain. Eight treatments were used with the first four treatments being the same as described in the previous experiment (Fig. 1, 2):

- (1) Front-tine garden tiller.
- (2) Slit tillage with front-tine tiller.
- (3) Rear-tine garden tiller. (An 8-hp Troy Bilt was used).
- (4) In-row subsoiled with tractor.
- (5) Hand tilled using the "double-digging" technique under the row.
- (6) No tillage using a spade or blade to cut a slit into subsoil under the row..
- (7) Conventional disking with a small tractor
- (8) Rototilling using a 4-foot wide, tractor-mounted rototiller.

The "slit-tillage" treatment (no. 2) was replaced in 2003 with a completely no-tillage treatment because of difficulty cutting the slit in these soils. "Double-digging" is a popular garden tillage technique that is very labor intensive. It involves digging a trench the depth of a garden shovel along the length of the row. Another shovel depth is dug into the subsoil and this is inverted thus disrupting a tillage or traffic pan. The topsoil is then placed back over the trench and the crop is planted over the double-dug row (<http://www.communitycrops.org/doubledig>).

Sweet corn was planted on this site in mid April and harvested in late July each year. Plot size was 12 feet by 20 feet (4, 36-inch rows 20 feet long) and treatments were replicated four times in randomized blocks. The two center rows were harvested for yield. Following sweet corn harvest, the stalks were cut and cabbage and broccoli were hand planted as a fall crop with no additional tillage in 2001. In 2002, southern peas (cowpeas) were planted immediately following sweet corn harvest. In 2003, we had difficulty getting a stand of sweet corn (bird damage) so southern peas were the only crop grown. Tillage treatments were repeated each spring prior to planting. Crops were not irrigated.

Central Alabama Site. The same experiment conducted at Cullman was repeated as a non-replicated demonstration at E.V. Smith Research Center in Central Alabama on a Norfolk fine sandy loam (fine-loamy, siliceous, thermic Typic Kandudults) in 2002. This soil is known to develop pronounced traffic pans. This demonstration was conducted as part of the Southern Conservation Tillage Field Day held on 26 June 2002, and was viewed by several hundred participants from throughout the South. Two rows of sweet corn and two rows of wax beans were planted in each tillage treatment on 1 April and harvested 17 June. For the purposes of comparing yields, each row was harvested separately and handled as a replicate.

RESULTS

Auburn Site. Moisture stress showed dramatic, visual, growth responses to the 4 tillage practices. The degree of stress, of course was dependent on soil moisture. Total marketable yields reflect rainfall distribution as well as tillage practice. None of the crops were irrigated. There were significant and consistent yield differences due to tillage for every crop and every year of the test. Slit tillage increased total marketable yield of sweet corn, okra, and southern peas (Fig. 3, 4, 5). The rear-tine tiller resulted in lowest yield, presumably due to soil compaction resulting in moisture stress during short-term droughts. In general, yields were of the order: Subsoiled=Slit tilled > Front-tine tiller > Rear-tine tiller.

Recording soil penetrometer measurements made in the row by depth at the end of the cropping season. There was pronounced soil compaction following the rear-tine tiller and the front-tine tiller (Fig. 6). Subsoiling and in-row slit tillage effectively disrupted the plow sole at 20-30 cm.

Central Alabama Site (Table 2). Tillage treatments had the most dramatic effect on both corn and bean growth at this location compared to either the Auburn or Cullman sites. Because this was a demonstration, crops were harvested only once. Each row was treated as a replicate in order to run a Duncan's Multiple Range test (Table 2). In fact, surface compaction from rainfall following either disking with a tractor or tilling with a tractor-mounted rototiller resulted in very poor stands of both corn and beans. These plots were replanted but still failed to achieve an adequate stand. This is reflected in the yields.

While harvesting the plots, one of the Master Gardener volunteers made the statement, "Double dig, double yield." Double digging resulted in the highest yield of both beans and corn. This technique apparently effectively disrupted any subsurface compaction yet did not destroy soil structure as the tractor-mounted rototiller and disking. The front-tine tiller with the slit and the no-till with the manual slit under the row were only marginally effective in improving yields.. We dug under plants and observed roots growing through the manual slit. Since this site had a history of cultivation, we assumed that the old plow layer had a rather high bulk density but this was not measured.

Cullman Site (Table 3). An extremely wet summer and severe summer thunderstorms damaged the corn crop in the first year of this study. We also believe that the very wet season reduced the expected responses to the tillage variables. Problems with weeds and insects masked any tillage variables we may have had in the fall crop. However, the second year of this experiment, 2002, was almost ideal with timely rainfall and excellent

growing conditions. Yields of sweet corn followed by southern peas were very good. However, in contrast to the Auburn and Central Alabama experiments, no yield differences were observed due to tillage in this loamy, Sandstone Plateau soil (Table 3). We suspect that the lack of response to tillage is due to the soil texture and depth at his location in addition to ideal growing conditions. The soil series is a Hartsells loam with about 12 inches of loam over a clay loam subsoil. Repeated, qualitative measurements with a soil penetrometer failed to indicate the presence of traffic pans in these soils in contrast to the two Coastal Plain soils that developed pronounced traffic pans.

SUMMARY

The method used for garden tillage in sandy, Coastal Plain soils can have a dramatic effect on non-irrigated crop yields primarily due to soil compaction both on the surface and in the formation of traffic pans or plow pans. Techniques resulting in major soil disruption such as roto-tilling and disking have the most damaging effects. Techniques that disrupt traffic pans without destroying soil structure such as double-digging, subsoiling, and slit tillage have the most positive effect on yields. Slit tillage using a modified, 5-hp, garden tiller in a sandy, Coastal Plain soil significantly increased yields of sweet corn, okra, and southern peas over more conventional tillage practices such as using a standard, front-tined or rear-tined garden tiller. Slit tillage disrupted traffic pans, reduced in-row soil compaction, and resulted in yields as high or higher than traditional subsoiling. Slit tillage may offer the home gardener and small farmer a low-cost solution to a soil compaction problem created by conventional tillage practices. On a deeper, finer textured, loamy soil near Cullman with adequate rainfall, no tillage differences in crop yields were observed during a 3-yr experiment. Reduced tillage practices produced yields as high as conventional tillage. Reduced tillage may offers gardeners and small-scale vegetable producers opportunities to save on production costs while reducing erosion potential.

ACKNOWLEDGEMENTS

These tests were accomplished through the dedication and hard work of Master Gardener volunteers. Members of the Cullman Co. Master Gardener Association were responsible for all three years of the test in Cullman and members of the Lee County Master Gardener Association helped with the Central Alabama demonstration in 2002.

REFERENCES

- Adams, J.F., C.C. Mitchell, and H.H. Bryant. 1994. Soil test fertilizer recommendations for Alabama crops. Alabama Agric. Exp. Stn. Agron. & Soils Dep. Ser. No. 178. Auburn University, AL.
- Allen, D. 1984. Slit your soil for higher yields. (Jan., 1984) *Successful Farming* 82:28-29.
- Brady, N.C. 1990. *The nature and properties of soils*. 10th ed. Macmillan Pub. Co., New York, NY.
- Camp, C.R., and J.F. Lund. 1964. Effect of soil compaction on cotton roots. *Crops and Soils*. 17:13-14.
- Elkins, C.B. 1980. A slit-plant conservation cropping system. *Agron. Abstracts*. 1980 Annual Meeting, Amer. Soc. Agron., Madison, WI.
- Elkins, C.B., and J.G. Hendrick. 1983. A slit plant tillage system. *Amer. Soc. Agric. Eng. Trans.* 26:710-712.

Table 2. Sweet corn and wax bean yield from Central Alabama demonstration on a Norfolk fine sandy loam in 2002.

Tillage treatment	Wax bean yield* (cwt/acre)	Sweet corn yield* (cwt/acre)
Double-digging	76a	98a
Subsoiled with tractor	65 b	60 c
Front-tine tiller with slit	46 c	95a
No-till with manual slit under row	40 c	68 bc
Rear-tine tiller	28 d	84ab
No-tillage at all	25 de	36 d
Front-tine tiller	20 e	75 bc
Tractor-mounted rototiller	1 f	29 d
Disked with tractor	0 f	0 e

*Values followed by the same letter are not statistically different using Duncan's MRT at P< 0.05.

Table 3. Crop yields in Cullman tillage test, 2001-2003.*

Tillage treatment	2001 Sweet corn	2002 Sweet corn	2002 Southern peas	2003 Southern peas
	-----CWT/acre-----			
Front-tine garden tiller	287	235	62.9	35.8
Front-tine tiller with slit	310	232	71.3	34.7
Rear-tine garden tiller	275	244	62.5	37.0
No-till with manual slit under row	277	229	68.2	35.2
Double Dug	289	210	66.5	39.6
Tractor mounted roto-tiller	266	249	71.6	34.8
Subsoiled under row	246	222	68.6	38.4
Disked with tractor	207	241	69.0	35.5
No tillage at all	--	--	--	34.7

*There were no significant differences in any of the treatments by year at P<0.10 level.

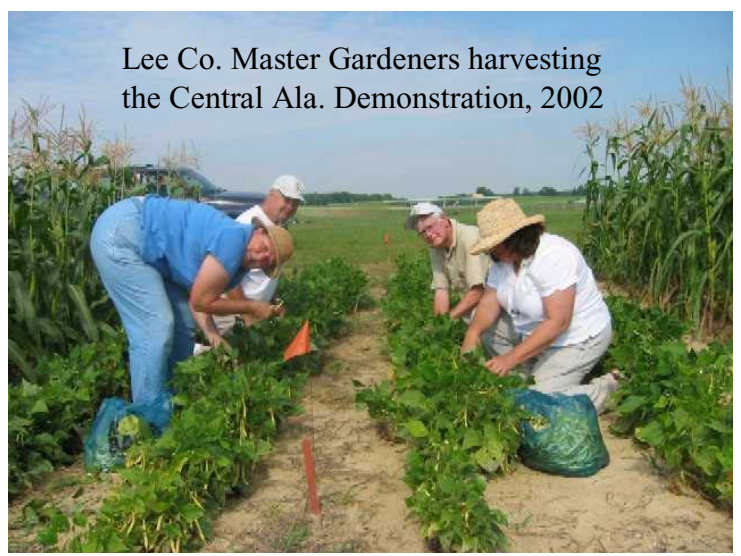
Cullman Co. Planting Crew, 2002



Cullman Co. Planting Crew, 2003



Lee Co. Master Gardeners harvesting the Central Ala. Demonstration, 2002



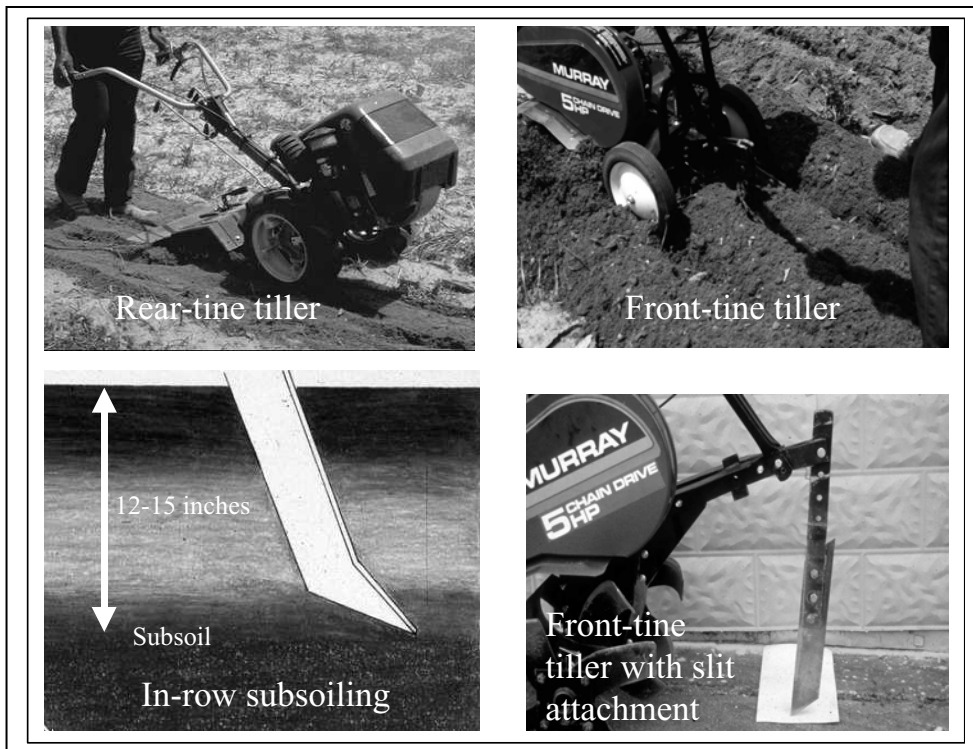


Figure 1. Treatments used in the Auburn experiment.



Figure 2. Additional treatments used in the Cullman experiment and in the Central Alabama demonstration.

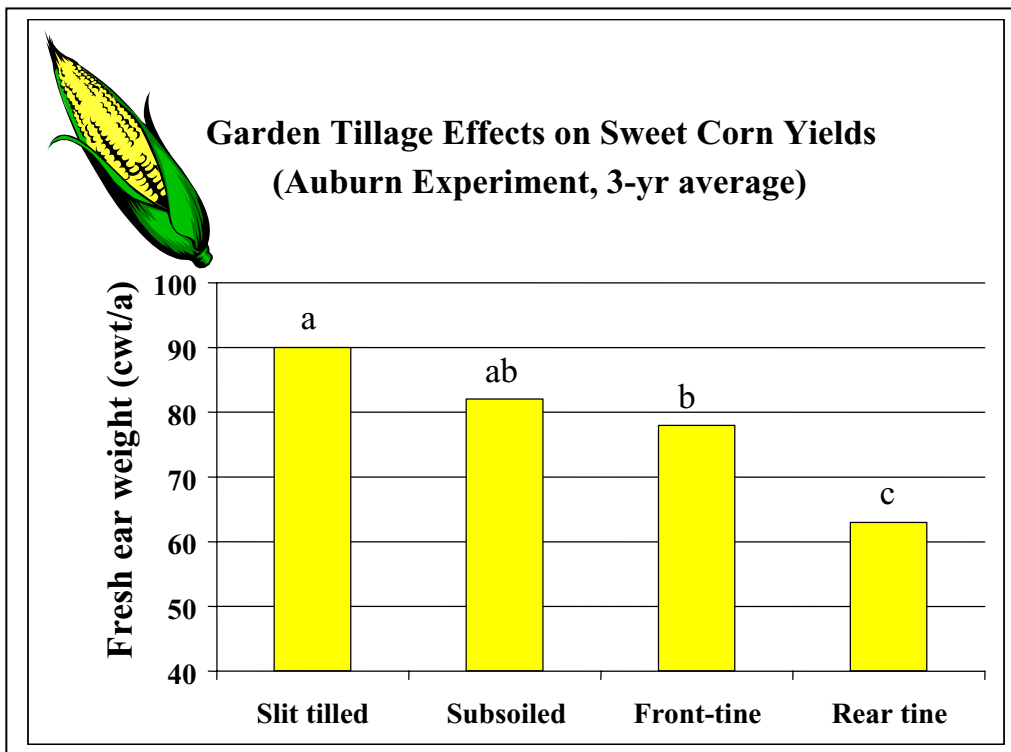


Figure 3. Three-yr average marketable yields of sweet corn as affected by the type of tillage system used in the Auburn experiment. Yields followed by the same letter are not significantly different ($P < 0.05$).

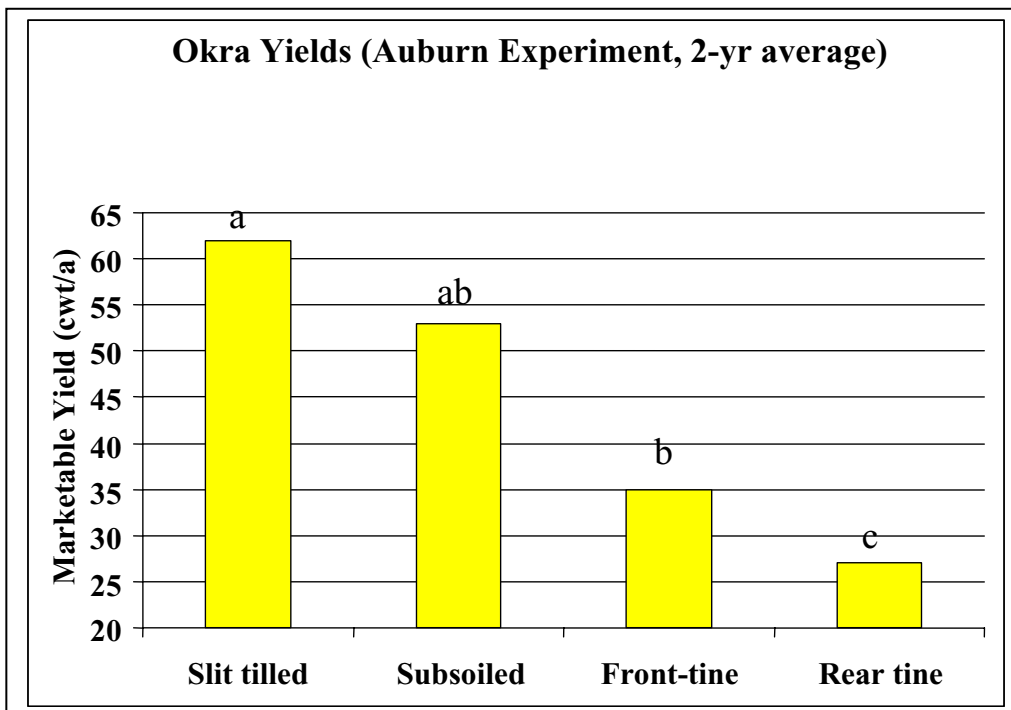


Figure 4. Two-yr average marketable yields of okra as affected by the type of tillage system used in the Auburn experiment. Yields followed by the same letter are not significantly different ($P < 0.05$).

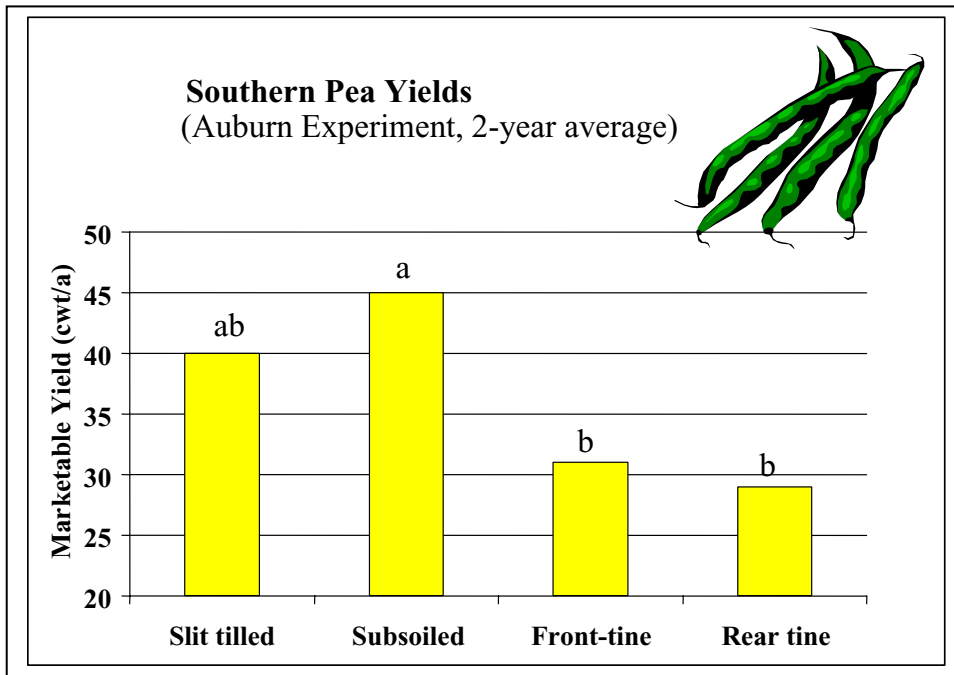


Figure 5. Average marketable yields of southern peas as affected by the type of tillage system used in the Auburn experiment. Yields followed by the same letter are not significantly different ($P < 0.05$) from others.

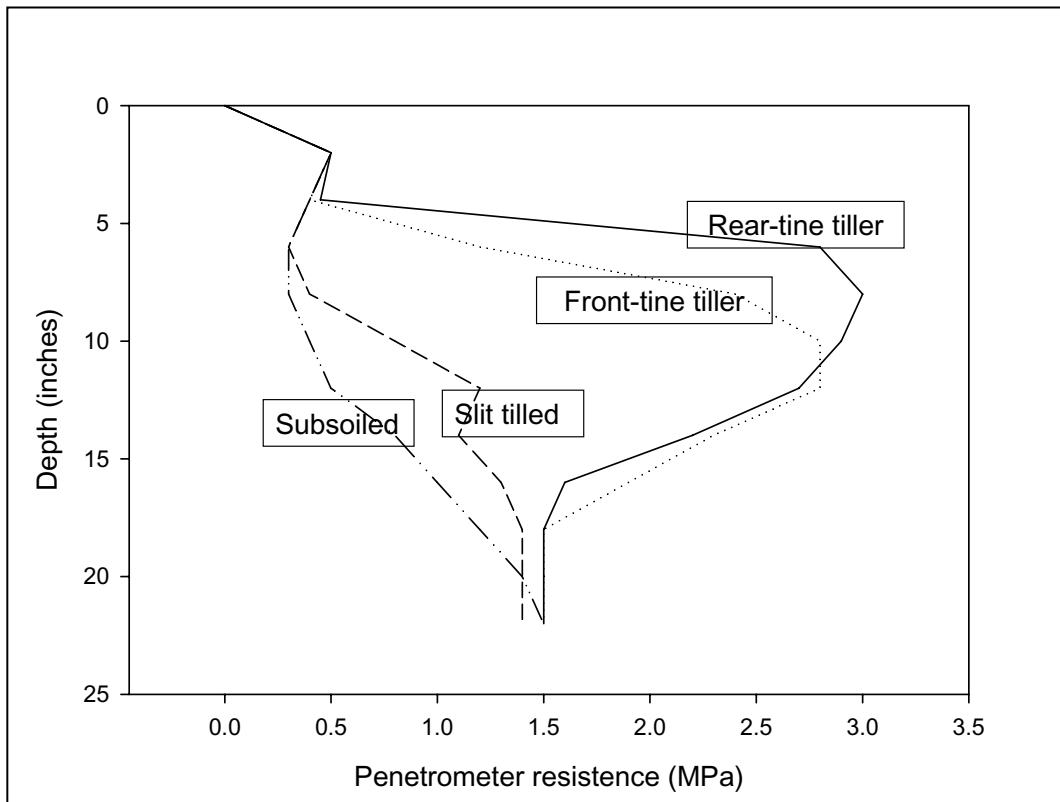


Figure 6. Mean penetrometer resistance (relative soil compaction) taken under the row after the first and third growing seasons following sweet corn and southern peas in the Auburn experiment.

STREET TREE RESOURCE EVALUATION AND EDUCATION TRUST (STREET)

Prochaska, * S.C.¹, Hoffman, M.²

¹ Extension Educator, Ohio State University Extension–Crawford County, Bucyrus, Ohio 44820

² Student, Ohio State University, 110 St. Rt. 4, Marion, Ohio 43302

Inappropriate selection, planting and care of municipal street trees can be a source of significant property damage, a threat to human health and result in added property maintenance expense. An educational and applied research project, Street Tree Resource Evaluation and Education Trust (STREET), was conducted to train Master Gardener volunteers to identify, and inventory Bucyrus street trees; educate city government on need for an innovative street tree program; to secure funding for citizen tree planting; to educate citizens on street tree planting and to compare citizen tree planting to landscape contractor planting by tree survival and tree planting depth. Educational outcomes of STREET included: strong city government support for innovative tree program (including the transfer of \$4000 dollars to tree acquisition); identification, evaluation, and inventory of Bucyrus street trees by Master Gardener volunteers; grant written and funded at \$5000 for street trees; and education of citizens on appropriate street tree placement and planting. Trees planted by citizens and contractors were analyzed for new growth, depth of planting and survival. Applied research outcomes included: citizen planted trees were higher above grade than the landscape contractor, and citizen tree survival was equivalent to the professional contractor. This study suggests citizens are able, after education, to plant trees with survival rates equivalent to landscape contractors.

STREET TREE RESOURCE EVALUATION AND EDUCATION TRUST (STREET)

Prochaska, Steven, C., Extension Educator, Ohio State University Extension
112 E. Mansfield Street. Suite 303, Bucyrus, Ohio 44820

Hoffman, Melinda, Ohio State University Student
110 St. Rt. 4, Marion, Ohio 43302

Introduction

Benefits of street trees include climate modification, energy savings, improvement of air, soil and water quality, mitigation of storm water runoff, reduction of carbon dioxide and increased property values (Maco and McPherson, 2002). Trees are estimated to have a significant environmental value. The value for a small tree is estimated from \$160 (if planted along a street or roadway) to \$600 (if planted in a yard or street lawn near the house) and a large tree can have net benefits over \$2,320 when planted in a street lawn (McPherson et al., 2006). These values do not include aesthetic, social, or wildlife benefits.

Street tree planting programs also provide social benefits including increased feelings of community involvement and environmental awareness (Thompson et al., 2004). Trees planted along roadways can provide enough shade to extend the life of road pavement. In an area that is well shaded pavement life can be significantly extended. For example, areas in California were able to prolong repaving shaded areas an additional 10 to 25 years (McPherson & Jules, 2005).

It is imperative to plant trees that are appropriate for the location to reduce conflicts between the tree growth patterns and obstacles such as power lines and traffic signs. (McPherson, 2003).

Citizens of Bucyrus, Ohio essentially select, plant, and care for trees in the city tree lawns. This arrangement can be thought of as “trust” in that this land is managed for the benefit of others. However, this “trust” has often been violated by poor tree selection, poor selection of the planting area and incorrect tree maintenance. Street Tree Resource Evaluation and Education Trust, (STREET), was an educational and research project of Ohio State University Extension staff and Master Gardener Volunteers to mitigate negative effects of poor tree species and site selection in Bucyrus, Ohio.

It was hypothesized that through education of homeowners and the example of new tree planting done by homeowners, a very positive change could be made not only in the city tree forest, but also on city tree maintenance costs, esthetics, and property values. (New Westminster Parks and Recreation, 2007).

Purpose and Objectives

The purpose of the Street Tree Resource Evaluation and Education Trust (STREET) program was to improve the selection and planting of trees in city street tree lawns and to compare citizen tree planting to professional landscaper tree planting over planting depth and tree survival.

Street Tree Resource Evaluation and Education Trust (STREET) objectives were:

To train Master Gardener volunteers to identify, and inventory Bucyrus street trees; to inventory into an electronic database street trees (trees growing in the Bucyrus city tree lawn) by location, species, and size; to write a grant to obtain funding for purchase of street trees; to educate citizens on street tree planting by site selection, planting depth and species; to survey new tree planting over survival, planting depth, and twig growth (length) by citizen and professional landscape contractor.

Methods

Presentations were made to the Bucyrus City Council with the purpose of educating legislators to the benefits of improved selection, placement and care of city trees and to obtain permission to survey city trees.

Master Gardeners were trained through lectures and street walks to identify common trees and record the data into a spread sheet. The Master Gardeners surveyed sites at 2102 street addresses recording tree species, size, and location as well as identifying approximately 200 potential tree planting sites.

A grant was written to a local foundation that was funded at \$5,000 to purchase trees to be planted by both city residents and commercial firms at approved sites. Additional funding of \$4,000 was provided by the city of Bucyrus after educational sessions were made to city administrators.

A list of potential street trees was compiled via a review of the literature, a tree planting fact sheet, and a site selection form were created for the program. The program was advertised through local media and applications were disseminated to citizens by the city of Bucyrus. Only citizens willing to fill out the educational tree site selection form were eligible for trees.

The STREET tree application was used both as an educational aid to citizens and a tree site selection tool. It included the following items to be answered by applicants:

Overhead utility lines located above the street tree lawn; utility poles present in the street tree lawn; stop signs located in the street tree lawn; street tree lawn(s) on a corner lot (intersection of two streets); street tree lawn(s) wider than 4 feet; locations of underground gas and water lines known; existing trees growing in the street tree lawn.

Tree planting site measurements were recorded for the first two years of the program. A Microsoft Excel Spreadsheet was created to organize and record data on the tree plantings. In the late summer of 2006 and in August 2007 new tree planting sites were visited. Data collected included:

Depth of planting measured where the root flare was in inches below or above grade; tree growth measured by averaging the new growth on 3 branches; tree condition (survival) was measured using the following scale.

A tree's condition was rated on a scale from 0 to 4. Scores of 4 indicated the tree was in excellent condition (6" or more new growth), 3 indicated good condition (new growth present but less than 6"), 2 indicated fair condition (no new growth, nearly all leaves present on tree), 1 indicated poor condition (no new growth, less than 50% of the tree's leaves present), and 0 indicated that the tree had died.

Results

Surveys were conducted by the Master Gardeners on 2102 street addresses approximately 200 potential tree planting sites were identified. Silver Maples, which are prohibited by Bucyrus's city ordinance, accounted for 27.7% of the trees planted in the street tree lawn. There were 54 species of woody plants growing in the street tree lawn. The most common tree species located in the Bucyrus street tree lawn were silver maple (27%), norway maple (17%), sugar maple (15%), crabapple (8%), and callery pear (4%).

During the programs first year (2006) 98 trees were planted with an additional 96 trees planted in 2007. The trees planted were selected based on their appropriateness for the Bucyrus sites, soils, cold and heat hardiness, and drought tolerance. Small trees such as crabapple and serviceberry were utilized for sites with overhead utility lines. Sites with no obstructions and an adequate tree lawn were planted to larger trees such as sugar maple and hybrid elm cultivars.

In both 2006 and 2007 tree losses have been low. However, up to 5% of trees are expected to be lost due to being planted too deep. The overall survival rate of all STREET trees planted in 2006 and 2007 was 97.9% (Table 1).

Table 1

Tree survival rate (%) for 2006 and 2007 plantings

	Homeowner Planted	City/Tree Service Planted
Total Number of Trees Planted	129	65
Number Lost	2	2
Percent Survival	98.4	96.9
Total Percent Survival	97.9	

There is a significant statistical difference between the planting depths of the trees when comparing citizen verses professionally planted trees, however both groups planted trees correctly (Table 2, 3, and 4).

Table 2

Comparison of tree planting depths for citizen and professionally planted trees in 2007

Planted By	Number of Trees Planted	Mean Above Ground Level (Inches)	Standard Deviation (Inches)	t-Test
Citizens	68	0.78	1.44	0.04576*
Professional Tree Planting Service	23	0.20	1.34	

*significant at alpha <.05

Table 3

Planting depth frequencies for 2007 trees planted by citizens

Planting Depth	Frequency	Percent %
Greater than 2" above grade	24	35.30
1" above grade	20	29.41
At grade	13	19.12
1" below grade	7	10.29
Greater than 2" below grade	4	5.88
Total Trees Planted	68	100

Table 4

Planting depth frequencies for 2007 trees planted by professional landscape contractor

Planting Depth	Frequency	Percent %
Greater than 2" above grade	5	21.74
1" above grade	6	26.09
At grade	3	13.04
1" below grade	7	30.43
Greater than 2" below grade	2	8.70
Total Trees Planted	23	100

Table 5

Average of new tree growth in 2006 and 2007

Year	Number of trees planted	Growth (in.)
2006	98 trees planted	4.34 inches

2007	96 trees planted	3.02 inches
Average growth for all trees over 2 years 3.68 inches		

Conclusions and Implications

Nearly 200 trees have been planted along the Bucyrus city streets over a period of two years, increasing the community's natural beauty, improving the quality of the city tree forest, while at the same time improving property values.

Educational outcomes of STREET included: strong city government support for innovative tree program (including the transfer of \$4000 dollars to tree acquisition); identification, evaluation, and inventory of Bucyrus street trees by Master Gardener volunteers; grant written and funded at \$5000 for street trees; and education of citizens on appropriate street tree placement and planting. Trees planted by citizens and contractors were analyzed for new growth, depth of planting and survival. Applied research outcomes included: citizen planted trees were higher above grade than the landscape contractor, and citizen tree survival was equivalent to the professional contractor. This study suggests citizens are able, after education, to plant trees with survival rates equivalent to landscape contractors and strong city government support can be obtained for programs such as STREET that empower citizens to improve property values and decrease public maintenance expense.

References

Maco, S., & McPherson, G.E. (2002). Assessing canopy cover over streets and sidewalks in street tree populations. *Journal of Arboriculture*, 28(6).

McPherson, G.E. (2003). A benefit-cost analysis of ten street tree species in Modesto, California, U.S. *Journal of Arboriculture*, 29(1).

McPherson, G.E., Jules, M. (2005). Effects of Street Trees on Asphalt Concrete Pavement Performance. *Journal of Arboriculture*, 31(6).

McPherson, G.E., Simpson, J.R., Peper, P.J., Maco, S.E., Gardner, S.L., Cozad, S.K., Xiao, Q. (2006). Midwest Community Tree Guide: Benefits, Costs, and Strategic Planting. United States Department of Agriculture

New Westminster Parks and Recreation; Benefits of Street Trees. (2007). Available at: <http://www.nwpr.bc.ca/parks%20web%20page/trees.html>

Thompson, J.R., Nowak, D.J., Crane, D.E., & Hunkins, J.A. (2004). Iowa, U.S., communities benefit from a tree-planting program: characteristics of recently planted trees. *Journal of Arboriculture*, 30(1).

NITRATE AND WATER USE EFFICIENCY IN ONION PRODUCTION UNDER DRIP AND FURROW IRRIGATION

Reddy, S.¹, Neufeld, J.², Klauzer, J.³

¹. Extension Educator, University of Idaho Extension, Washington County, Weiser, Idaho 83672

². Extension Educator, University of Idaho Extension, Canyon County, Caldwell, Idaho 83605

³. Field Representative, Clearwater Supply, Inc., Malheur County, Ontario, Oregon 97914

An applied research and demonstration project was installed in onion fields that used furrow or drip irrigation. Fields were not replicated but were installed for five consecutive years to reveal seasonal influences. Production inputs, based on Southern Idaho Fertilizer Guide for Onions (CIS 1081) and Nutrient Management for Onions in the Pacific Northwest (PNW 546) were measured, and soil, water, and onion tissues were sampled for nitrogen (N). Onion yields and bulb sizes were recorded and the fields then compared for water and N use efficiency (WUE and NUE). Beginning in 2005, a Furrow Treatment was introduced into the project that allowed for N fertilizer applications based on the soil sample recommendations in CIS 1081 and PNW 546. This treatment continued through 2007. WUE and NUE were calculated and compared for all fields. Yields were high throughout the project and were often very close among the fields within a season. The Furrow Treatment fields used approximately 40% less N fertilizer than the Furrow Control and produced yields that were only 4.1% to 5.2% less than the control. The Drip field produced the best WUE and NUE when compared to the Furrow Control. Furrow Treatment yield for 2007 fit close to the high range of the Preplant Yield Response Curve in PNW 546 indicating sufficient N availability. The project showed that high onion yields can be produced with reduced N fertilizer applications. Demonstration of efficiency through this project can help growers keep production costs down, maintain high yields, and minimize N leaching into water supply.

NITRATE AND WATER USE EFFICIENCY IN ONION PRODUCTION UNDER DRIP AND FURROW IRRIGATION

Reddy, Steven¹, Neufeld, Jerry², Klauzer, Jim³

¹. Extension Educator, University of Idaho Extension, Washington County, Weiser, Idaho 83672

². Extension Educator, University of Idaho Extension, Canyon County, Caldwell, Idaho 83605

³. Field Representative, Clearwater Supply, Inc., Malheur County, Ontario, Oregon 97914

Introduction

Groundwater sampling in Canyon County, Idaho indicates that nitrate nitrogen (NO₃-N) concentrations are currently within health standards, but are on the rise. Groundwater sampling in Washington County, Idaho indicates that NO₃-N concentrations are frequently above health standards and increasing. Deep percolation of irrigation water containing nitrogen from cropland is recognized as a contributor to groundwater contamination. Onion production has been determined to have one of the highest NO₃-N leaching potentials. Some reasons include historically heavy fertilizer application, and numerous irrigations due to the shallow rooted nature of onions. Approximately 9,000 acres of onions are grown annually in Treasure Valley, Idaho.

Beginning in 2003, an applied research and demonstration project was installed within commercial onion fields that used either furrow or drip irrigation. The fields were sampled and compared each year until project completion in 2007.

The objective of this project was to demonstrate research based onion production practices (recommended in CIS 1081 and PNW 546) for increased water and fertilizer use efficiency, reduced potential for nitrate-nitrogen groundwater contamination, and maintenance of high yields.

Methods

At the start of each production season (April), Watermark soil moisture sensors were installed at 8 and 15 inch depths in the seed row of furrow and drip irrigated onion fields in both Canyon and Washington Counties. The soil sensors were connected by communication cable to Hansen data loggers which recorded and archived soil matric potential (in centabars) every 8 hours. Soil moisture data were then used to compare irrigation efficiencies of furrow and drip fields. Soil sensors and data loggers were also used to help schedule irrigations in the drip irrigated fields to keep soil moisture within recommended levels (-20 to -25 centabars for silt loam soil).

Through the growing season, additional data were collected including soil nitrate, onion tissue nitrate, water application, fertilizer application, soil nitrate mineralization, and crop yield. Water Use Efficiency (WUE) and Nitrate Use Efficiency (NUE) were calculated for the furrow and drip irrigated fields and then compared each season. WUE is defined as the hundred-weight (Cwt) of onions produced per inch of water applied, including rainfall. NUE is defined as the Lbs of nitrogen used per hundred-weight (Cwt) of onions produced. Research estimates that a Cwt of onion bulbs requires 0.19 Lbs nitrogen (with 100% uptake efficiency). However, nitrogen uptake efficiency for furrow irrigated onions is only about 40%. Consequently, it takes 0.475 lbs N/Cwt for furrow irrigated onions to get the required 0.19 lbs N/Cwt. With drip irrigation and an estimated uptake efficiency of 60%, only 0.317 lbs N/ac is needed to get 0.19 lbs N/ac to the onions.

The fields in this project were not replicated within a growing season so statistical comparisons were not made. In addition to the crop input comparisons, specific treatments were introduced during the last three years. These treatments included:

1. Furrow irrigation (Furrow Control) using the grower's customary fertility and irrigation practices. These practices included a fall fertilizer application (35N, 150P, 60K) and two fertilizer side dressings in the spring. Fertilizer applications were not based on soil sample analysis. Irrigation decisions were based on water availability rather than on a measure of crop need or soil moisture.
2. Furrow irrigation (Furrow Treatment) using research based fertility recommendations (PNW 546 and CIS 1081). Cultural practices here included the same fall fertilizer application and one spring fertilizer side dressing. A second fertilizer side dressing was applied if soil sample analysis indicated it was necessary.
3. Drip irrigation (Drip) using research based fertility recommendations (PNW 546 and CIS 1081), and irrigation scheduling recommended in Irrigation Criteria for Drip-Irrigated Onions (Shock 2000). Cultural practices included a fall fertilizer application (40N) and preseason soil sample analysis. Beginning in spring, nitrogen fertilizer was injected into the drip irrigation lines based on preseason soil sample recommendations as well as monthly soil sampling through the growing season.

Annual nitrogen fertilizer recommendations for all fields and treatments were estimated through the use of early season soil samples along with estimated yield, nitrate mineralization, and nitrogen uptake efficiencies. For example, in 2006, onion yield goals of 950 Cwt/ac were estimated and nitrogen uptake efficiencies of 40% and 60% were assumed for furrow and drip irrigated onions respectively (PNW 546).

Results and Discussion

Water Management

The soil moisture status and applied irrigation of the fields differed greatly by irrigation system. Furrow irrigated onions used on average 17 inches/ac more water than the drip irrigated onions (Figure 1). Soil moisture status oscillated to a greater extent on the furrow irrigated fields, especially in summer, compared to the drip irrigated fields. Examples of Washington County soil moisture graphs are shown in Figures 2 & 3.

Figure 1. Seasonal water applications to onion plots by irrigation system vs. ET

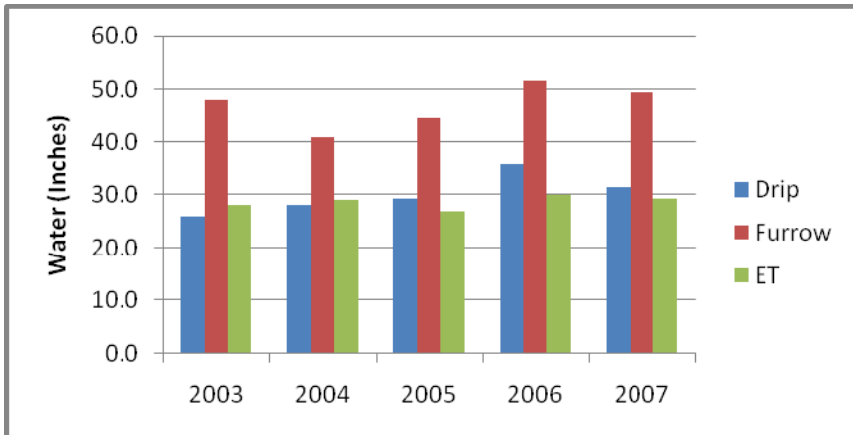
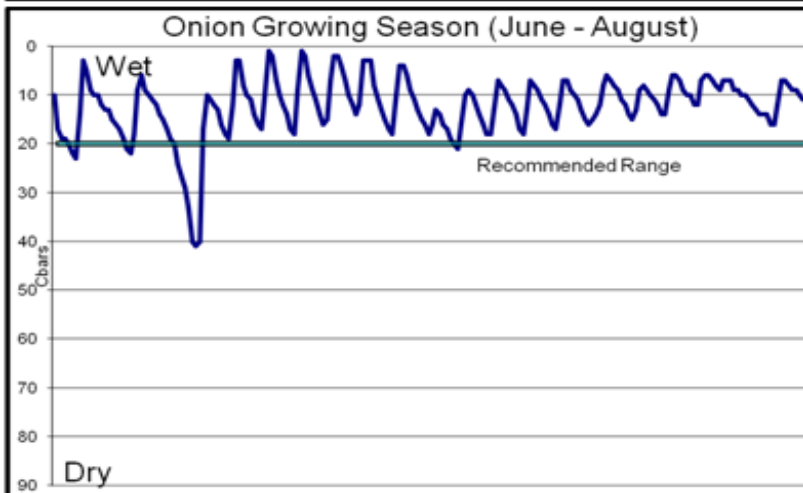
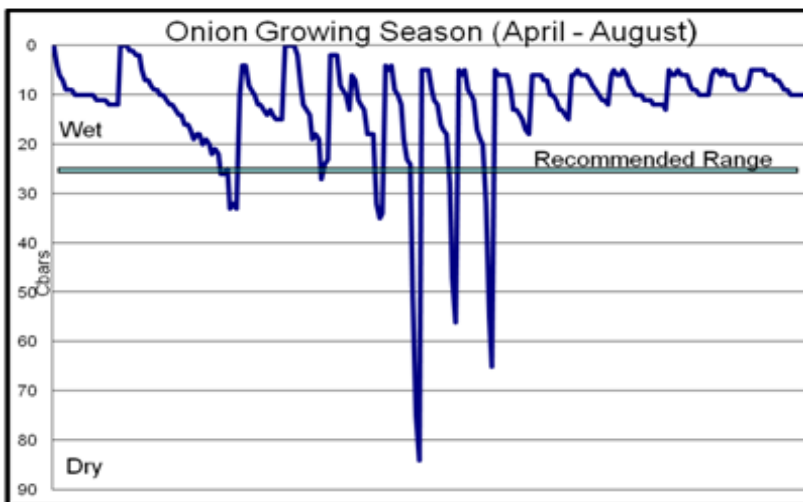


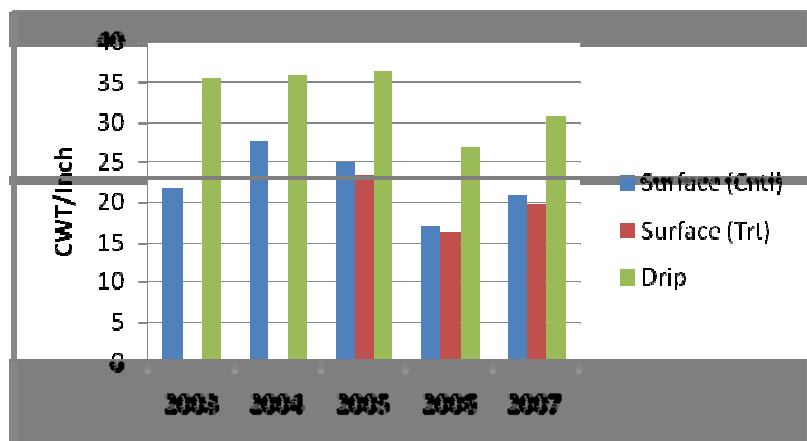
Figure 2. Soil graph (cbars) of furrow irrigated onions showing great moisture variation.

Figure 3. Soil graph (cbars) of drip irrigated onions showing small moisture variation.



Water Use Efficiency (WUE) of the fields under differing irrigation systems and treatments were compared and are shown in Figure 4. The Drip fields consistently showed the highest WUE while the Furrow Control and Furrow Treatment WUE's were similar, but much less.

Figure 4. WUE of onion plots by irrigation system.



Nitrogen Management

The preseason nitrogen recommendations and actual nitrogen fertilizer applications are shown in Table 1. The actual nitrogen applications for furrow irrigated fields are totals of fall applications and either one or two side dressings. In the drip irrigated fields, the actual nitrogen application totals include a small fall application and numerous drip line nitrogen injections.

Table 1. N recommendations and actual N applications

	Lbs N Recommended	Lbs N Applied	Lbs N Applied	Lbs N Recommended	Lbs N Applied
	Surface Control	Surface Control	Surface Treatment	Drip	Drip
Year					
2003	226	258		54	165
2004	226	255		81	150
2005	250	285	160	110	150
2006	325	283	159	171	155
2007	267	295	165	128	190
Avg	259	275	161	109	162

The average actual nitrogen applied to the Furrow Control fields exceeded the recommendations. The Furrow Treatment fields, however, had substantially less applied nitrogen than the Furrow Control and less than the preseason recommendations. The large reductions in actual applied nitrogen in the Furrow Treatments resulted from soil sample analysis indicating that additional applications were not necessary. Soil mineralization through the growing season could also explain the reduced need for nitrate fertilization. For example, during 2006, soil mineralization analysis revealed approximately 120 lbs of nitrogen became available from May through August.

The Drip field recommendations and actual applications were much less than those estimated for the furrow fields. Despite these reduced production inputs, the Drip fields produced yields very close to the furrow fields.

This is consistent with research that shows nitrogen can be applied in frequent, small amounts to produce high yields.

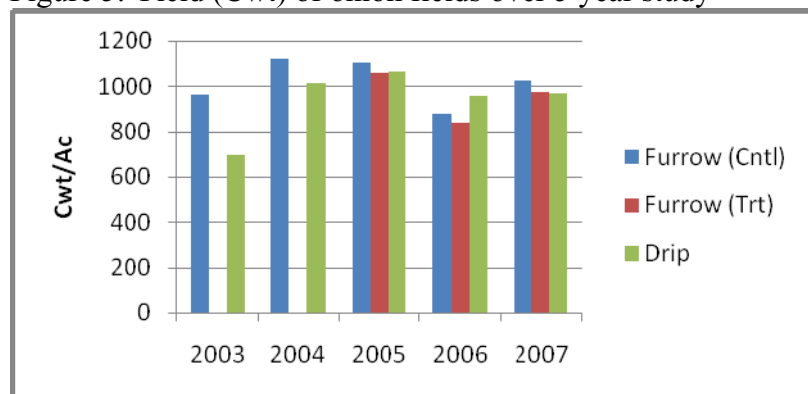
High nitrogen fertilizer recommendations were anticipated in 2006 due to wet weather and expected nitrogen leaching. However, actual nitrogen fertilizer applications were similar to 2005. In both 2005 and 2006, soil testing indicated adequate nitrogen (>20 ppm) in the Furrow Treatment field and a second fertilizer application was not made. In 2007, the Furrow Treatment did receive two side-dressings, but each was only 62.5 Lbs nitrogen. In 2007, the Drip field received 62 lbs nitrogen fertilizer above the recommendation due to extreme inconsistencies in soil sample results.

Yield

Yields for all fields were consistently high and were reasonable considering the irrigation systems used and inputs applied (Figure 5). The 2006 Furrow Control and Furrow Treatment yields were down 20 percent from the previous year due to hot summer weather. During this same period, yield from the Drip field was down only 10 percent. The smaller yield reduction in the Drip field was probably due to the grower using soil sensors to maintain soil moisture closer to the optimum range (-20 to -25 cbars) through the growing season (Figure 3).

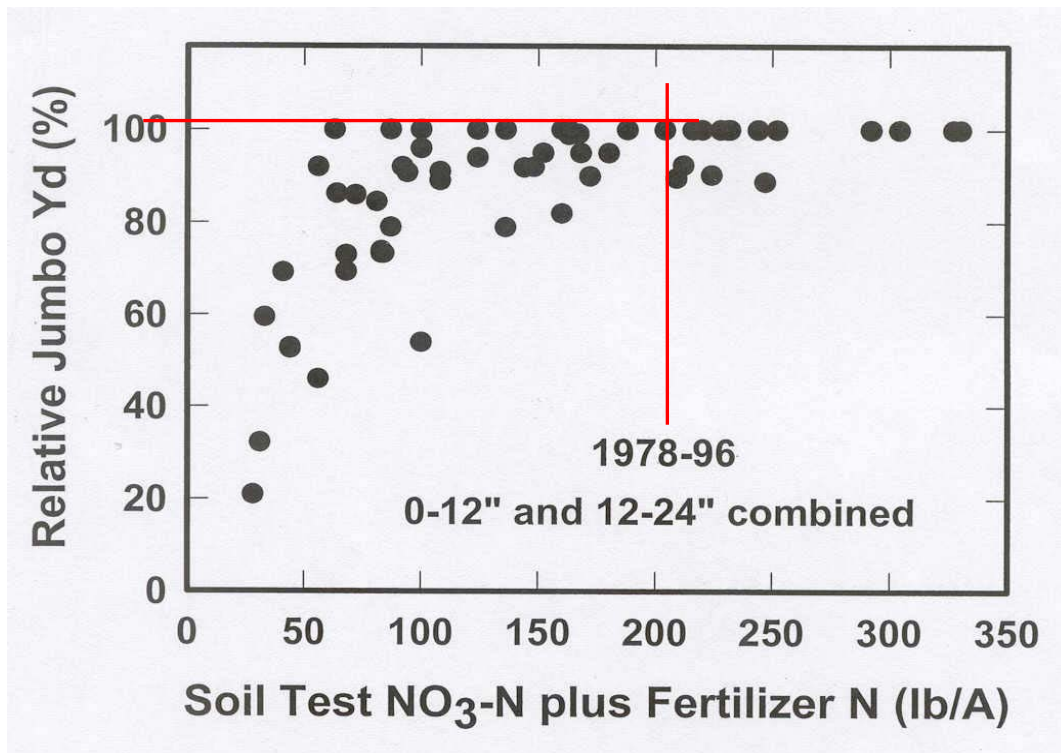
In 2005 and 2006, the Furrow Treatment yields were 4.1% less than the Furrow Control yields. This slightly lower yield resulted despite 41% less nitrogen fertilizer applied to the Treatment than the Control. In 2007, the Furrow Treatment yield was 5.2 % less than the Furrow Control. This yield resulted despite 44% less nitrogen fertilizer applied to the Treatment than the Control. Root tissue nitrogen analysis from 2005 through 2007 showed both Furrow Treatment and Furrow Control to be within, or close to, adequate levels.

Figure 5. Yield (Cwt) of onion fields over 5 year study



In addition, the 2007 Furrow Treatment nitrogen and yield data was applied to the Preplant Yield Response Curve shown in PNW 546 (Figure 6). The intersection of the red lines within Figure 6 shows the location of the 2007 Furrow Treatment data in the Yield Curve. The location of these lines indicates nitrogen was not limiting and yield was not reduced in the 2007 Furrow Treatment field.

Figure 6. 2007 Furrow Treatment yield compared to research based Preplant Yield Response Curve.

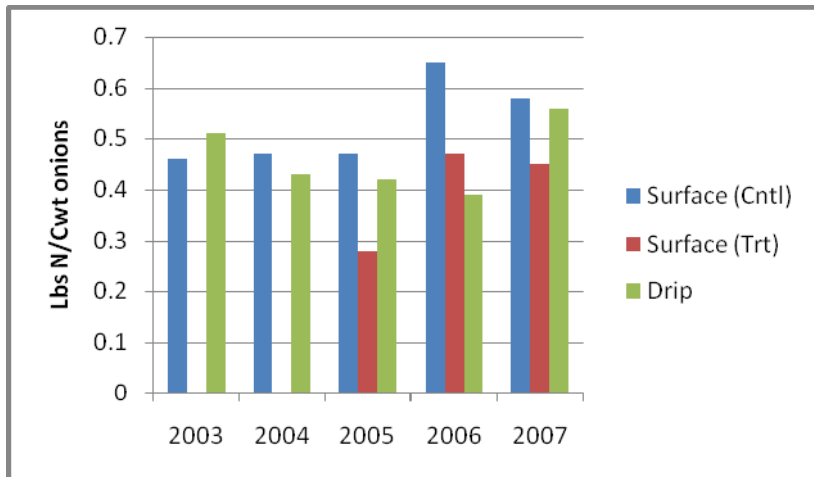


Nitrogen Use Efficiency

In 2006, the NUE of the Furrow Control was 0.65 lbs N/Cwt onions indicating inefficient use of nitrogen (Figure 7). This was the poorest NUE recorded during the project and was the result of high nitrogen fertilizer application in combination with a comparatively low yield. The Furrow Treatment NUE was 0.47 lbs N/Cwt, and the Drip was 0.39 lbs N/Cwt of onion bulbs. Both the Furrow Treatment and Drip fields had NUE calculations that came very close to research predictions.

The Drip field NUE was slightly poorer than values mentioned in the literature, so opportunities may remain for these growers to further reduce their nitrogen inputs. In 2007, the NUE of the Drip field was poorer than the Furrow Treatment. This aberration is explained by the grower's decision to add more nitrogen fertilizer due to unusual and inconsistent soil sample results. The best NUE was produced by the 2005 Furrow Treatment field. A possible explanation includes a combination of sufficient soil nitrogen, reduced nitrogen fertilizer, well timed nitrogen application, and high yield.

Figure 7. NUE (Lbs N/cwt onions) for all fields



Conclusion

Onion production under different irrigation systems was compared over a five year period. Production inputs were measured and soil, water, and root tissues were sampled for nitrogen content. Application of nitrogen fertilizer on Furrow Control, Furrow Treatment and Drip fields were determined from preseason and monthly soil samples. Finally, onion yields from different irrigation systems were compared.

It was shown that nitrogen fertilizer applications can be reduced in commercial onions fields, while maintaining high yields, when recommendations are based on the Southern Idaho Fertilizer Guide for Onions (CIS 1081) and Nutrient Management for Onions in the Pacific Northwest (PNW 546). This information is important to growers who want to improve nitrogen efficiency of furrow irrigated onions and to growers who may be transitioning from furrow to drip irrigation.

With more efficient use of irrigation water and nitrogen fertilizer, production costs can be held down, yields can be maintained, and leaching of nitrogen into water resources can be minimized.

Literature Citation

- Brown, B. 2000. Onions. Southern Idaho Fertilizer Guide. CIS 1081. University of Idaho. Moscow, ID.
- Shock, C.C., Feibert, E.B.G., and Saunders, L.D. 2000. Irrigation Criteria for Drip Irrigated Onions. HortScience. 35:63-66.
- Sullivan, D.M., Brown, B.D., Shock, C.C., Horneck, D.A., Stevens, R.G., Pelter, G.Q., Feibert, E.B.G. 2001. Nutrient Management for Onions in the Pacific Northwest. PNW 546. Oregon State University. Corvallis, OR.

THE EFFECT OF NITROGEN FERTILIZER ON TREE GROWTH OF SELECTED NURSERY TREES.

Gill, S.A.¹, Schuster *, C.F.²

¹ Regional Extension Specialist, University of Maryland Cooperative Extension, Central Maryland Research and Education Center, 11975 Homewood Road, Ellicott City, MD 21042, USA

² Extension Educator, University of Maryland Cooperative Extension, 18410 Muncaster Road, Derwood, MD 20855, U.S.A.

Nursery managers, arborist and landscape managers play an important role in creating and maintaining a healthy environment in urban and community forests. Determining the correct amount of nitrogen fertilizer to be applied to maintain the health of the trees and be environmentally conscious is the question most nursery managers, arborist and landscape managers are asking. Ongoing research being completed in Maryland is starting to provide answers to these questions. A 2-year field trial was conducted at Ruppert Nursery, Laytonsville, Maryland on nursery plants to determine optimum fertilization rates for *Acer rubrum* (American red maple). A manager's goal is to increase caliper size rapidly and sell the plants into the market place. The quicker the plant material reaches a specified trunk caliper (usually 2"-6" caliper is the market goal) the production field can be turned to another crop. The primary objective of this trial is to determine the appropriate nitrogen fertilizer rate to optimize tree growth and not increase the potential of nutrient loss and pollution.

EFFECT OF NITROGEN FERTILIZER ON TREE GROWTH OF SELECTED NURSERY AND LANDSCAPE TREES.

Gill, S.A.¹, Schuster *, C.F.²

¹ Regional Extension Specialist, University of Maryland Cooperative Extension, Central Maryland Research and Education Center, 11975 Homewood Road, Ellicott City, MD 21042, USA

² Extension Educator, University of Maryland Cooperative Extension, 18410 Muncaster Road, Derwood, MD 20855, U.S.A.

The green movement in the United States has forced examination of past practices to determine whether they are environmentally sound and based on scientific research. Fertilization practices by the green industry needs to be examined closely to insure that growers are using nutrients in the most efficient and environmentally friendly method. With the desire to determine the appropriate amounts of nitrogen fertilizer to prevent pollution issues, yet maintain proper tree growth and development, nursery managers, arborist and landscape managers are seeking information to keep in step with the regulations but not limit tree growth. Green industry professionals who wish to be proactive and not wait for restrictive nutrient management legislation are interested in science based answers to the most efficacious fertilization rates and timing. A new incentive to maximize fertilizer efficiency applications has risen in the green industry. For years fertilizer has been relatively inexpensive. With recent increases in petroleum fuel costs, which are used as an energy source in the production of chemical fertilizers, the cost of producing fertilizer has risen which has been passed along to the users. Other factors include the strong export market that was not previously a major concern.

Nursery managers, arborists and landscape managers see the future involving a prescriptive plan for fertilization of shade trees based on analysis of the site, soil testing, species of plant and desired growth of the plant. Landscape managers often seek to invigorate and maintain older trees or improve vigor of young trees in poor quality soils. A nursery manager's goal is to increase caliper size of younger trees quickly, increase height and width of shrubs and evergreen plants and increase plant color in a cost-effective manner that keeps them

competitive in the marketplace. The American National Standards Institute (ANSI) states that the reason for the fertilization of plants is to supply nutrients to achieve a defined objective (Smiley, et al 2002) (American National Standards Institute (ANSI), 1998). Optimizing fertilizer applications serves the market objective of supplying healthy trees with a specified trunk caliper (usually 2"-6") as quickly as possible without waste.

The need for a prescriptive program is further highlighted by negative impacts of high nitrogen applications, as published by Miller (1998, 2000). Herms and Mattson suggested that high nitrogen applications reduce the concentration of defensive compounds, increasing the trees' susceptibility to certain pests (Herms and Mattson, 1992). Plants with damaged foliage may reduce the vigor of the plant and herbivore feeding injury can reduce or delay salability of the summer-dug stock for in-leaf sales.

After market implications, of obligatory concern to industry professionals, is compliance with laws enacted to preserve water quality by regulation of soil-applied nutrients. The strongest documentation of correct timing and rate of fertilization has been conducted in turfgrass research. When reviewing the effect of spring application of nitrogen and its potential run-off, one study noted that N leaching was less in a lawn situation than on bare soil. Bluegrass sod was shown to absorb 31% of the labeled N fertilizer within 18 days of application. If clippings were removed, labeled N was lost, but if grass clippings were returned to the turf, then the N in the thatch represented a slow release source of N which became increasingly available as the season progressed and the thatch decomposed (Rose 1999). Over-application of nitrogen is not only expensive, but also detrimental to the environment, potentially contaminating ground water and surface water sources.

Nitrogen is typically the limiting nutrient that must be replaced on an annual basis for plants in general. (Struve, 2002). Most fertilizer recommendations range from 1 to 6 pounds / 1000 sq. ft. (Rose, 1999) (Struve, 2002) (Smith 1991). Struve notes that the N fertilizer type (organic/ inorganic) does not appear to be a key factor in plant health and growth. He also notes that little difference has been found among fertilizer application methods. Broadcast is as effective as subsurface applications (Struve, 2002). Smiley (personal conversation, 2003) feels that the most absorptive place on a tree is at the tree trunk flare and that fertilizer applications should be directed at the area.

Elton Smith (1991) conducted a multi-year study of fertilization of two tree species. Smith noted that tree growth improvement based upon fertilizer treatment after yearly application of nitrogen based fertilizers found a decrease in response by the ninth year of a study using both *Tilia cordata*, littleleaf linden and *Acer saccharum*, 'Sentry' sugar maple. The results of his 18-year study provide the basis for many of the currently used guidelines today: the nitrogen rate of between 1 and 6 pounds per square foot; surface application and early spring timing.

Nitrogen use by trees is also related to timing of application. In a trial by Weinbaum, et al (1978), it was determined that N-labeled fertilizer applied in the spring accounts for 25% of the total foliage nitrogen. The trees used in this study were Almond (*Prunus dulcis*) field grown in both light and heavy soils. The remaining 75% of the total N was absorbed from the previous growing season. A positive correlation was found between the advancement of the growing season and the greatest Nitrogen Utilization Efficiency (NUE). The greatest NUE was found after leaf bud when trees had leaves, showing a range of 30-39% between April and September 30. November applications produced 16% NUE; December a mere 4%.

MATERIALS AND METHODS

This was a 2-year field trial conducted at Ruppert Nursery, Laytonsville, Maryland. The purpose of this trial was to:

Obtain information on optimum nitrogen fertilization rates for a selected nursery and landscape tree, in this case *Acer rubrum* (American red maple).

Study Site

The trial site is an established nursery in Laytonsville Maryland. For this trial, the tree species studied was the red maple, *Acer rubrum* 'October Glory'. The trees were established in the Ruppert nursery in the spring of 2001 and were started in the trial in 2002 and continued through 2003. The soil is a Brinklow Blocktown Channery Silt Loam, and has a 3 to 8 percent slope. The surface soil is noted to be moderate to good for the raising of trees, bedrock is found at 25 to 35 inches. The greatest limitation for this soil is that the surface soils tend to be droughty during periods of below average precipitation. Permeability is moderate to moderately slow. Soil tests were performed to determine phosphorus and potassium levels. The soil analysis of the site showed that phosphorus and potassium were in the moderate range based on the Maryland Fertility Index Value (FIV). The phosphorus and potassium were then adjusted to industry acceptable standards to an FIV in the optimum range. Available soil nitrogen is not measured in soil tests, as the nitrogen cycle is highly dynamic and no soil test will provide an accurate measure of the available nitrogen for a single growing season for soils in the humid east. Nitrogen is highly mobile and volatile in these soils. The main goal of the study was to determine the impacts of nitrogen fertilization on tree growth. Four fertilizer treatments were assigned randomly with 10 replicates/blocks (one replicate of each treatment within each block). Blocking was by location of trees in the field. The trees were grouped in 3's down the row for their assigned treatment. The trees received only a single treatment and only the center tree of the three tree clusters was used for data collection to prevent contamination.

Red maple 'October Glory'

The trees were planted in the spring of 2001 as branched bare root liners, with 6 rows of 50 to 60 trees per row spaced 7 feet apart, and a grass strip 10 feet wide between rows. Drip irrigation was installed at the time of planting. There is a buffer row of trees on either side of the trial rows. The secondary goal of this study was to look at the impact of Nitrogen on pest populations. The insect pests monitored were the potato leaf hopper (*Empoasca fabae*), the maple twig borer (*Proteoteras aesculana*) and the maple spider mite (*Oligonychus aceris*) Buffer rows were treated separately.

Treatments

Fertilizer rate: An area of 4 feet by 4 feet under the canopy was standardized for the basis of our calculations and fertilizer application. This area was used as it has been shown by previous research that a majority of the roots would be found within that area. The fertilizer was a 43-0-0 with 50% water insoluble nitrogen (W.I.N.). Gill, Klick, and Schuster made the applications on April 24, 2002 and were repeated on April 14, 2003.

Three fertilizer rates were compared to an untreated control

Treatment	Application Rate	Rate per Tree
Treatment 1	0 Kilograms of nitrogen per 92.903 square meter (0 pounds per 1000 square feet)	0 grams per tree (0 ounces)
Treatment 2	0.9072 Kilograms per 92.903 square meters (2 pounds of nitrogen per 1000 square feet)	33.3 grams per tree (1.1745 ounces)
Treatment 3	1.8144 kilograms per 92.903 square meters (4 pounds of nitrogen per 1000 square feet)	66.6 grams per tree (2.349 ounces)
Treatment 4	2.7216 kilograms per 92.903 square meters (6 pounds of nitrogen per 1000 square feet)	99.9 grams per tree (3.524 ounces)

The granular N material was broadcast at the base of each treatment tree. At the time of application the area around each tree was raked, the fertilizer applied and then raked again to incorporate the fertilizer into the soil. Trees were watered by drip irrigation with a .5 acre inch equivalent applied.

Treatment of buffer rows

Red maple buffer rows were fertilized with 1.8144 kilograms per 92.903 square meters (4 Pounds of nitrogen per 1000 square feet) rate and received imidacloprid applied as soil drench to the root zone to control potato leafhopper.

Monitoring of tree caliper

The impact of fertilizer treatments on tree growth was evaluated by measuring tree caliper using industry established standards, on each tree in the trial. Measurements were taken in the fall of 2001 (preliminary), 2002 and 2003. The measurements were taken 6 inches from the grade (necessary to take the measurement beginning above the understock) and the data was recorded in Excel. A Digimatic[®] Caliper instrument was used to take the measurements.

Monitoring of insect populations

How?

RESULTS

Red Maple Caliper Measurements:

Caliper measurements were taken in the fall (December) of 2001 to establish pre-treatment trunk calipers. Uniform trunk calipers of 33-35mm were recorded. Caliper measurements were taken on October 31, 2002, as a post-treatment measurement. (Chart 1). The range was 46-48mm with little or no detectable difference noted between treatments. Measurements taken on October 30, 2003, showed an increase in trunk caliper for all of the treatments with a range of 64-67mm. The greatest caliper increase was noted from 0 kilogram and 0.9072 kilogram per 92.903 square meter rates (0 and 2 pounds of nitrogen per 1000 square foot) (mean caliper of 63.877 mm for control and 66.768 mm for two pound rate). It was further noted that additional fertilizer did not create the growth response expected. The addition of fertilizer from the 0.9072 kilograms per 92.903 per square meter rate (2 pound per 1000 square foot) to the 1.8144 kilograms per 92.903 square meter rate (4 pound per 1000 square foot) showed a mean difference in caliper of -1.429 mm as compared with the first incremental increase. This trend was also noted in the first year of the trial with a similar difference in mean caliper size of -

0.33 mm. While mean caliper size did show increases from the 1.8144 kilograms to the 2.7216 kilogram per 92.903 square meter rate (4 pound rate to the 6 pound per 1000 square foot) (0.62 mm in year 2002 and 1.6 mm in 2003) it was not in the same incremental rate as found in the change from control to 0.9072 kilogram (2 pounds per 1000 square foot).

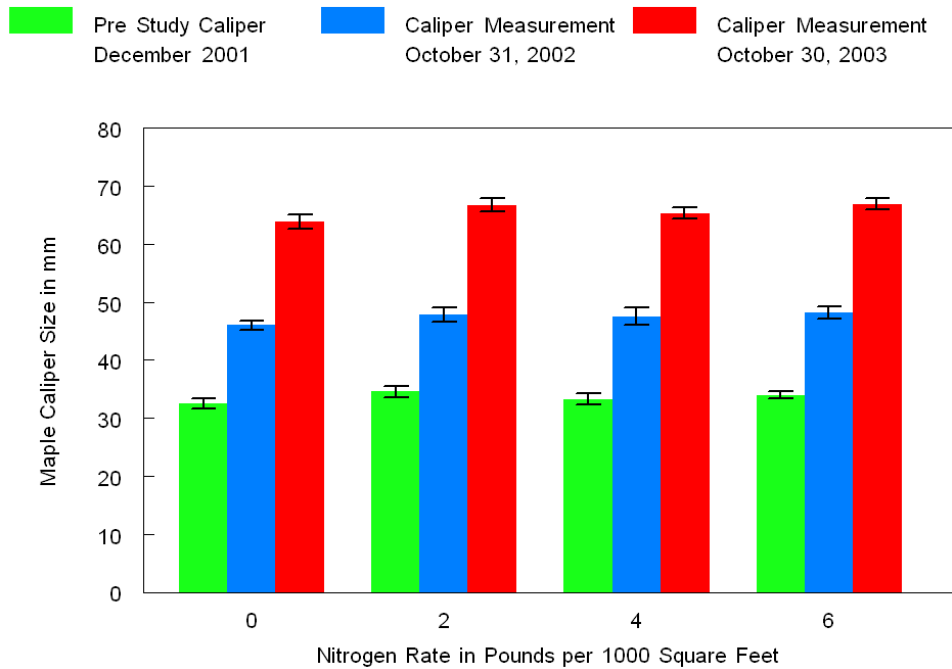


Chart 1

Potato Leafhopper Damage Measurements:

Potato Leafhopper (*Empoasca fabae*) and Maple Spider Mite (*Oligonychus aceris*) damage was evaluated and scored using a team of three (Shrewsbury, Gill and Schuster) and charted (Chart 2). No statistical difference was noted at any of the different nitrogen rates for the Potato Leafhopper, and the Maple Spider Mites population showed an inverse relationship to fertilizer treatments.

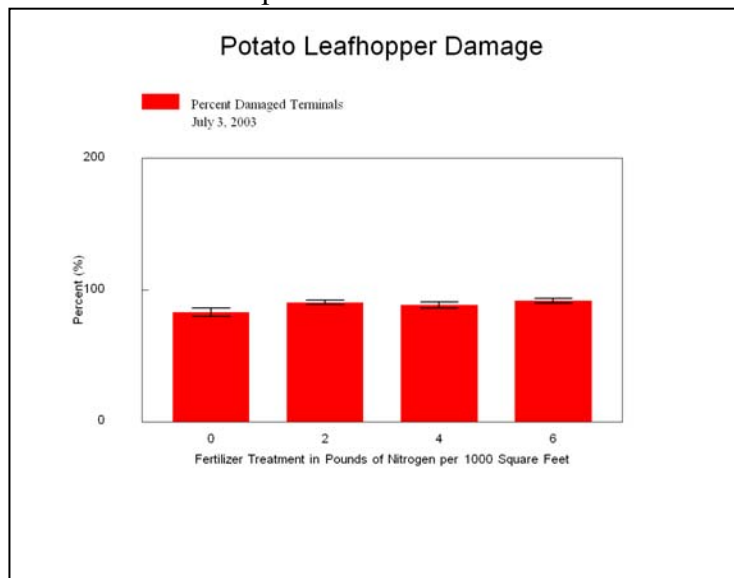


Chart 2

CONCLUSION

A great amount of determining the fertilizer that nursery and

interest has been expressed in appropriate amount of nitrogen should be applied for both landscape trees. This

information is useful to decrease pollution, decrease costs and prevent potential herbivore feeding. The rate of nitrogen applied to trees varies for optimum tree growth. To optimize caliper growth each species must be evaluated to determine the appropriate amount needed so unneeded nitrogen is not applied. This will prevent the loss of nitrogen through leaching and volatilization and prevent applications that do not generate a positive response in tree growth. In this trial it can be noted that application of nitrogen fertilizer to the maples maximized growth at no more than 0.9072 kilograms per 92.903 square meters (2 pounds of actual nitrogen per 1000 square feet). Beyond this application input level it was observed that average tree caliper increase was smaller as application rates moved from the 0.9072 kilograms per 92.903 square meter (2 pound to the 4 pound per 1000 per square foot) rate, but showed a small incremental increase when approaching the 2.7216 kilogram per 92.903 square meter (6 pounds per thousand square foot) rate. This was actually a smaller increase in caliper than the trees that were in the control block which received no additional nitrogen fertilizer.

Applications of nitrogen fertilizer beyond the 0.9072 kilogram per 92.903 square meter (2 pound per 1000 square foot) rate do not generate the change in caliper which would lead to faster nursery tree sales and field turning.

In the landscape industry, where nitrogen fertilization may be used to improve plant health and vigor, it will not see an increase in herbivore activity on maples as shown in this trial.

SOIL QUALITY COMPARISON OF ORGANIC AND CONVENTIONAL FARMING SYSTEMS IN NORTHWEST OHIO

Sundermeier, A.P.

Extension Educator, Ohio State University Extension, Wood County, Bowling Green, OH 43402.

In 2001, a replicated farming system experiment was established in Northwest Ohio to gain a better understanding of what occurs with crop production and soil changes when farmers transition from one management system to another. The treatments chosen for this experiment represent a range of conditions experienced by farmers transitioning either to organic or other more diversified crop management systems. Overall, the experiment is addressing ways to maintain production and economic viability while building soil quality. Five replicate blocks were established of each of five farming systems: #1 – No-till conventional corn, soybean, wheat rotation; #2 – Integrated reduced input tilled corn, soybean, wheat rotation; #3 – Organic corn, soybean, wheat rotation; #4 – Organic forage and grain rotation; #5 – Organic multi-crop rotation. Five years of multiple site soil sampling were analyzed for soil quality properties. Soil pH measurements in the 1-6 inch deep #1 No-till system was 5.36 which was significantly lower than the Organic #3 system at pH 6.15. Active carbon sampled in the 6-12 inch deep #1 No-till system was 1047 lb/acre which was significantly less than the Organic #3 system at 1224 lb/acre active carbon. Soil microbial biomass was not significantly different among all systems at the surface 1-6 inch depth, however #1 No-till at 6-12 inch depth was 114 lb/ac, significantly less than Organic #3 at 220 lb/acre. Soil data indicate that the organic systems are shifting to greater biological activity compared to no-till.

SOIL QUALITY COMPARISON OF ORGANIC AND CONVENTIONAL FARMING SYSTEMS IN NORTHWEST OHIO

Sundermeier, A.P.

Ohio State University Extension,
Wood County, Bowling Green, OH 43402.

A Farming Systems Experiment has been managed by the Extension Educator.

Introduction:

To gain a better understanding of what occurs with crop production and soil changes when farmers transition from one management system to another. The treatments chosen for this experiment represent a range of conditions experienced by farmers transitioning either to organic or other more diversified crop management systems. Overall, the experiment is addressing ways to maintain production and economic viability while building soil quality. Farmers in this region have been working with these types of management systems, in some cases for many years. With this experiment, we are gaining a more detailed understanding of the changes occurring under controlled conditions, with the objective of using this information to help farmers with transition in their operations.

Methods:

Baseline values at beginning of experiment: Total organic matter = 3.2%, Phosphorus = 43 lb/acre, Potassium = 164 lb/acre. Soil type = Hoytville clay loam.

Established spring 2001 in five replicate blocks, each system 30' x 900'

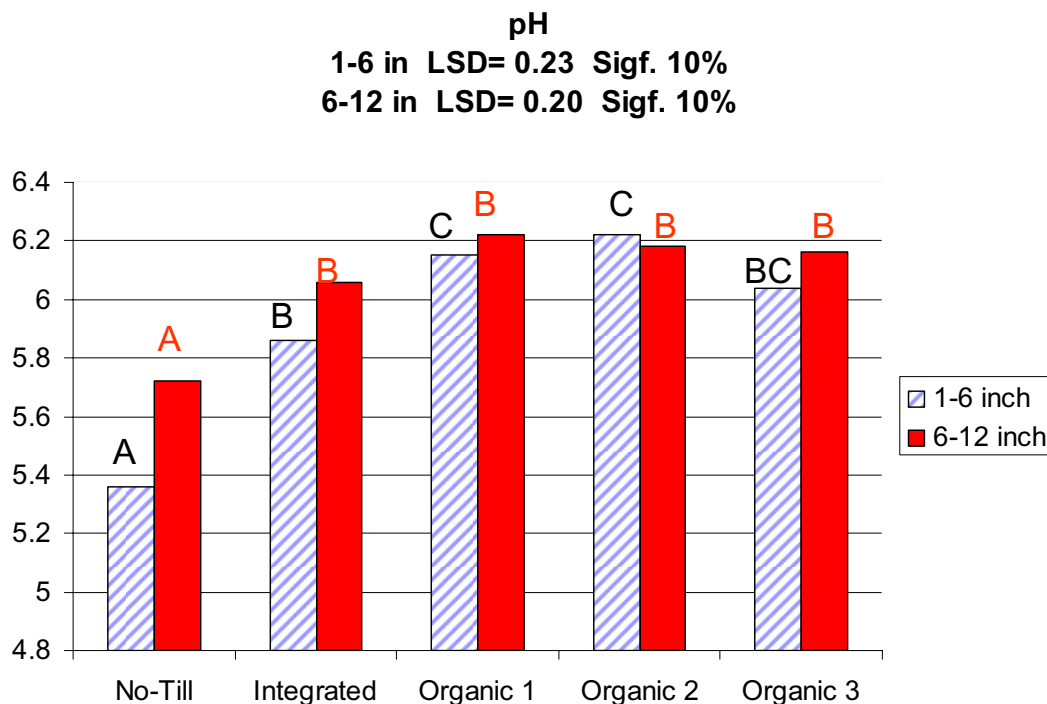
Compares the following five farming systems:

- **Farming System 1 Conventional Corn – Soybeans – Wheat (No-till)**
No-till, inorganic fertility, pesticides, conventional commodity marketing.
- **Farming System 2 Integrated Corn – Soybeans – Wheat (Integrated)**
No- and reduced-till, mixture of inorganic and organic fertility, manure, cover crops
- **Farming System 3 Organic Corn – Soybeans – Wheat (Organic 1)**
Reduced tillage, poultry compost fertility, cover crops, mechanical weed control, organic commodity marketing.
- **Farming System 4 Hirzel Organic Grains (Organic 2)**
Oats-Alfalfa-Alfalfa-Alfalfa-Corn-Soybeans-Wheat/Clover-Corn-Soybean-
Reduced-till, duck manure/leaf refuse compost fertility + other soil amendments, mechanical weed control, organic niche marketing.
- **Farming System 5 Organic Multi-Crop Grains (Organic 3)**
Oats/Clover –Sunflower–Soybeans–Spelt/Hay–Corn: Reduced till, green manure fertility, mechanical weed control, local and international organic marketing.

Results:

Soil pH

The no-till treatment was statistically different from all the other treatments at both the 1-6 and 6-12 inch levels. The integrated treatment at the 1-6 inch level was statistically different from the Organic 1 and Organic 2 treatments at the 1-6 inch level. Systems management affected pH significantly across all systems and soil sampling depths. Farmers should be aware of changes in pH as they transition to organic systems.



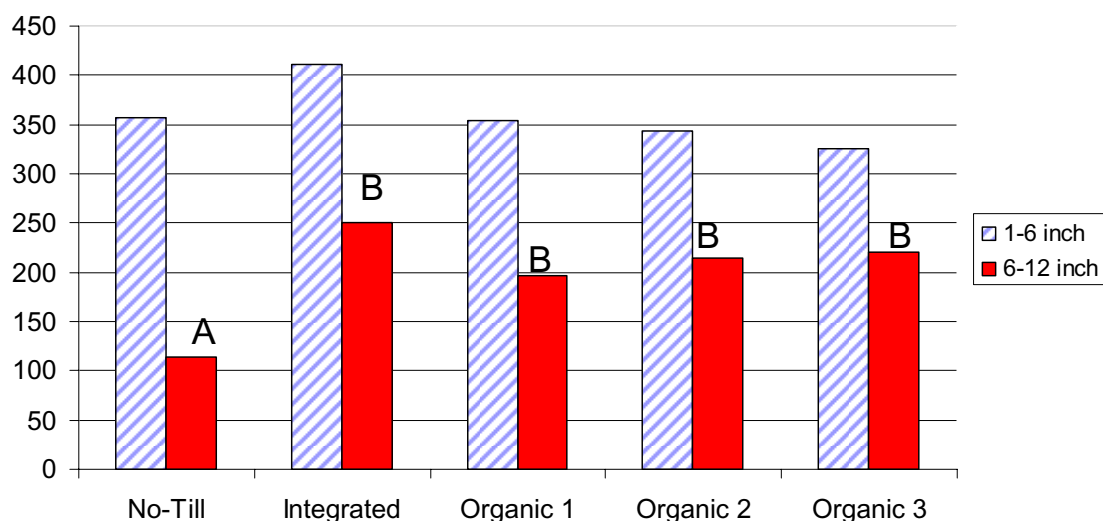
Values with the same colored letter in the graph above are not statistically different.

Microbial Biomass

We measured the amount of nitrogen contained in the sum of soil bacteria and fungi. This evaluation gives an indication of what proportion of the nitrogen cycle is being controlled by biological activity and how management affects soil biology.

The no-till 6-12 inch level was significantly different from all other soil biomass treatments at the 6-12 inch level. At the deeper soil sample depth in no-till, biological activity is significantly reduced due to absence of tillage which introduces oxygen and organic matter.

Soil Microbial Biomass
lb/acre 1-6 inch NS
6-12 in LSD= 61 Sigf. 10%



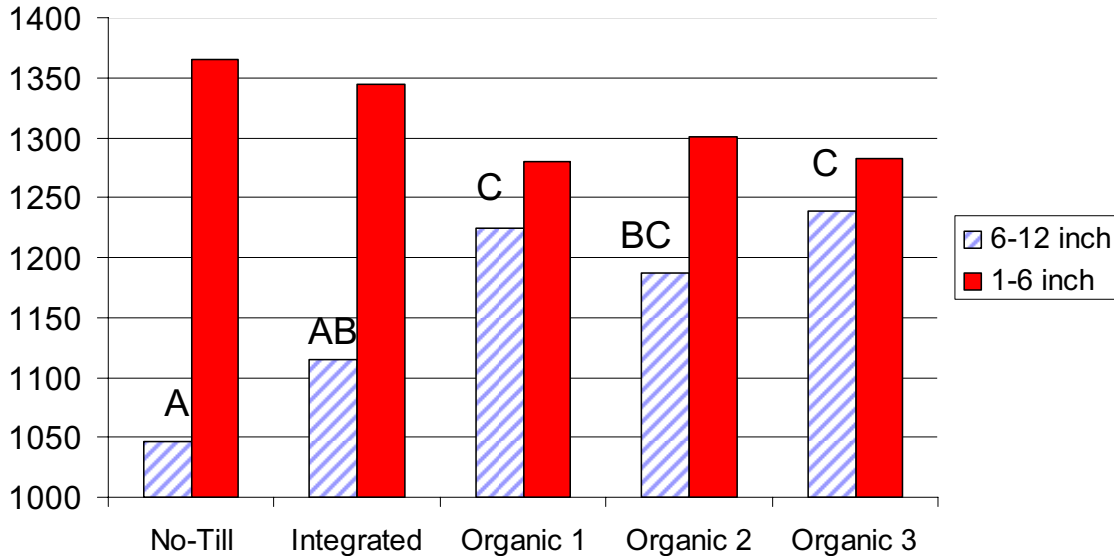
Values with the same letter in the graph above are not statistically different.

Active Carbon

Active Carbon is a measure of the fraction of soil organic matter that is readily available as a carbon and energy source for the soil microbial community. Active carbon is a leading indicator of soil health responses to changes in crop and soil management.

The active carbon sampling in the no-till and integrated system were both statistically different from the Organic 1, Organic 2, and Organic 3 treatments, at the 6-12 inch depth. Organic systems introduce soil amendments such as manure and compost which significantly increase active carbon in the deeper soil profile.

Active Carbon Ib/acre
6-12 inch LSD = 74 , significance at 10%
1-6 inch NS



Values with the same letter in the graph above are not statistically different.

Discussion:

- Soil data indicate that the organic systems, especially the Organic 2 and Organic 3 systems, are shifting to greater biological control of the nitrogen cycle.
- Of the organic systems, the Organic 2 system has very high initial economic costs, but showed a relatively rapid response in soil quality improvement. The Organic 3 system was the most profitable of all the systems on a variable cost basis and also showed marked improvements in some soil quality indicators, but a decrease in soil structure.
- The no-till system showed significant differences in pH, soil microbial biomass, and active carbon when compared to the integrated and organic systems. After five years of applying high amounts of commercial fertilizer and pesticides, the no-till system pH was 5.36 in the 1-6 inch deep zone. This compares to 5.8 in the integrated system and over 6.0 in the organic systems. The addition of lime would be recommended more often in the no-till system. Also the no-till system had lower levels of soil microbial biomass and active carbon due to the absence of cover crops, manure, or compost which the other systems received. These results indicate that tillage along with soil amendments can successfully maintain soil quality when compared to no-till without these amendments. Soil quality indicators in the no-till system might also improve if given more years of testing.

FACTORS CONTRIBUTING TO EMPLOYEE RESIGNATION (PERCEIVED & ACTUAL) AMONG GEORGIA COOPERATIVE EXTENSION AGENTS

Skaggs, W. D.

County Extension Coordinator & ANR Agent
UGA Cooperative Extension – Hall County
734 East Crescent Drive, Suite 300
Gainesville, Georgia 30501
bskaggs@uga.edu

Agent retention has been a problem within the Cooperative Extension System for many years. In Georgia, the turnover rate among Extension agents has been as high as 40% in recent years. The purpose of this study was to examine the factors contributing to employee resignation (perceived and actual) among Cooperative Extension Agents in Georgia. This study began in the fall of 2005 and was completed in the summer of 2006. The study was qualitative in nature, utilizing in-depth interviews with five former Extension Agents and five currently employed Extension Agents. Significant factors leading to employee resignation among those in the study were time demand / time away from family, salary, lack of leadership and support, and unrealistic job expectations.

FACTORS CONTRIBUTING TO EMPLOYEE RESIGNATION (PERCEIVED & ACTUAL) AMONG GEORGIA COOPERATIVE EXTENSION AGENTS

Skaggs, W. D.

County Extension Coordinator & ANR Agent
UGA Cooperative Extension – Hall County
734 East Crescent Drive, Suite 300
Gainesville, Georgia 30501
bskaggs@uga.edu

Purpose

The purpose of this study was to examine the factors contributing to employee resignation among Cooperative Extension Agents in Georgia. This study sought insight into why Extension Agents resign and what factors lead to job dissatisfaction. Specifically, this study utilized interview data from former Extension Agents who willfully left the organization and currently employed Extension Agents in order to compare actual and perceived factors leading to employee resignation, job satisfaction, and job dissatisfaction. This study also sought recommendations from both former and current Agents as to how Cooperative Extension might increase employee retention among Agents.

Procedures

This study used a qualitative approach to data collection, utilizing open-ended interview questions with five former Extension Agents who willfully left the organization and five currently employed Extension Agents. Interview subjects were purposefully selected from a list of former Agents who resigned within the last five years and a list of current Agents. The researcher selected former Agents who were willing to participate and were thought to be informaton-rich. Regarding the selection of current Agents, the researcher discussed

participant selection with District Extension Directors in order to achieve a representative cross-section of Extension Agents, based on gender, years of experience, and diversity of program area.

Subjects were contacted via telephone to schedule a convenient time and location for the interviews. During the interview, subjects were asked four open-ended questions and were encouraged to comment on any subject related to their employment with Cooperative Extension. After the interviews were transcribed, the researcher conducted a member check by allowing interviewees to read the transcript before proceeding with data interpretation. Following the member check, the researcher reviewed and coded the data for emerging themes.

Descriptive Data

During the interview process, the following information was collected from the study participants: (a) program area, (b) gender, (c) position, (d) years of experience, (e) degree held, (f) county, and (g) marital / family status. Of the five former Extension Agents interviewed, three had primary responsibility in Agriculture and Natural Resources, one had primary responsibility in 4-H / Youth Development, and one had a split Agriculture / 4-H appointment. Four of the former Agents were male and one was female. Regarding years of experience, four had been employed with Cooperative Extension less than five years, and one had been employed between five and ten years. Highest degrees obtained by the former agents were three master's degrees and two bachelor's degrees. Marital status included two married without children, two married with children, and one single with no children.

Among the current Extension Agents interviewed, two had primary responsibility in Agriculture and Natural Resources, two had primary responsibility in 4-H / Youth Development, and one had primary responsibility in Family and Consumer Sciences. Two of the current Agents were male, and three were female. Years of experience of the current Extension Agents included two with five to ten years, one with eleven to twenty years, and two with more than twenty years. Highest degrees obtained were four master's degrees and one bachelor's degree. Marital status included three married with children at home, one married with no children at home, and one single with no children.

Findings

The following four research questions provided the focus for the study:

- What characteristics of the profession, Cooperative Extension Agent, provide the most satisfaction?
- What characteristics of the profession, Cooperative Extension Agent, lead to job dissatisfaction?
- What factors lead to employee resignation among Cooperative Extension Agents?
- What can Cooperative Extension, as an organization, do to increase retention among Extension Agents?

Research Question 1:

What characteristics of the profession, Cooperative Extension Agent, provide the most satisfaction?

The characteristics of the profession, Cooperative Extension Agent, providing the most satisfaction as stated by former Extension Agents included interaction with people, sharing information and solving problems, continuing education offered, support from coworkers, and job flexibility. The characteristics stated by currently employed Extension Agents are almost identical and included interaction with people, working with young people, sharing information and solving problems, relationships with coworkers and getting to know other agents from around the state, and job flexibility.

Research Question 2:

What characteristics of the profession, Cooperative Extension Agent, lead to job dissatisfaction?

When asked what characteristics lead to job dissatisfaction, the responses of the former and current Extension Agents were also very similar, with a few notable exceptions. Former Cooperative Extension Agents listed the following factors as leading to job dissatisfaction: night and weekend work / trying to balance work and family, uncertainty regarding job responsibilities, paperwork, lack of support at the county level, and low number of female Agriculture & Natural Resource Agents. Factors leading to job dissatisfaction as provided by current Extension Agents included night and weekend work / trying to balance work and family, paperwork, too many trainings, the promotion process, and uncertainty regarding job responsibilities.

Research Question 3:

What factors lead to employee resignation among Cooperative Extension Agents?

The next question asked of the participants examined the factors leading to employee resignation among Cooperative Extension Agents. The factors noted by the former and current Extension Agents interviewed were also similar, but were ranked differently in order of significance. Former Agents listed the following as major factors leading to employee resignation: salary, time away from family / family problems, lack of leadership and support from County Extension Coordinator, and returning to school to work on advance degree. Current Extension Agents stated that time demand on new agents (especially 4-H agents), unrealistic expectations / feelings of frustration, salary, and time away from family were the most significant factors leading to resignation.

Regarding factors leading to resignation, the most notable difference was in the area of leadership. Former Agents expressed concern over a lack of leadership at the county level, and in particular, they did not believe that they received adequate support from their County Extension Coordinator. The current Agents interviewed did not make mention of county-level leadership. Also interesting was the issue of salary. Former Agents and currently employed Agents with less than ten years experience felt that low salary was an issue, while more experienced agents, those having worked more than twenty years, believed salaries to be sufficient.

Research Question 4:

What can Cooperative Extension, as an organization, do to increase retention among Extension Agents?

Finally, in the area of recommendations to Extension administration, the responses provided by the former and current Extension Agents interviewed varied widely. Former Extension Agents made the following recommendations to improve employee retention: increase salaries, provide better leadership/support at the county level, training on how to better balance work and family, and have a more effective mentoring program. The currently employed Agents recommended reinforcing the current mentoring program and creating an internship program, providing good leadership and being more engaged with Agents, reducing out-of-county travel for new agents, and streamlining the hiring process. In the area of leadership, former Agents stressed the need for better leadership from County Extension Coordinators, while current Agents focused on improving leadership and increasing engagement at the District level.

Conclusions

After further analyzing the data, the researcher offers the following four conclusions:

1. Among former and currently employed Cooperative Extension Agents, the common characteristics of the profession providing the most satisfaction included interaction with people, sharing information and solving problems, coworker relationships and support, and job flexibility.

2. The former and current Extension Agents interviewed reported night and weekend work / trying to balance work and family, paperwork, and uncertainty regarding job responsibilities as leading to job dissatisfaction. Notable differences included former agents reporting dissatisfaction with the support they received at the county-level and current agents reported dissatisfaction with the public service promotion process.

3. Regarding factors leading to employee resignation, former and current Agents both cited time demand / time away from family and salary as important. Notable areas in which the two groups did not agree included lack of leadership and support from County Extension Coordinator as stated by former Agents and unrealistic expectations / feelings of frustration as stated by current Agents.

4. Recommendations to increase employee retention were varied. The only similar recommendations given by both former and current Agents were to improve current mentoring programs and provide better leadership and support to new Agents. Former agents stressed improving salaries and better leadership from County Extension Coordinators, and current Agents felt strongly about reinforcing the current mentoring program and creating an internship program.

Concerns related to employee retention and job satisfaction cited in the pertinent literature facing today's Extension Agents include low compensation, difficulty in working with administrators, lack of support, long hours, and conflicting expectations from students, the community, local supporters, and state administrators. The following two paragraphs include findings in the relevant literature in support of the study conclusions.

Regarding factors leading to job satisfaction among Extension Agents, similar findings have been noted by several other studies. Purcell (2003) found relationships with clientele and coworkers and flexibility in planning one's schedule as leading to job satisfaction (p. 98). Ensle (2005) noted flexible scheduling and educating clientele as providing much job satisfaction. Ensle also noted a 1995 Kansas study that identified "teamwork" and "the opportunity to be self-directed" as key factors leading to job satisfaction among Extension Agents (p. 1-3).

This study's findings also reflect some of the factors leading to job dissatisfaction found in the pertinent literature. Manton and van Es (1985) found that Illinois Extension agents who voluntarily resigned reported "dissatisfaction with administration and too much time away from family" as factors leading to job dissatisfaction (p. 4). Fetsch and Kennington (1997) identified long work hours, including nights and weekends, and conflicting demands from clientele and administrators as factors leading to job dissatisfaction among Extension Agents.

Recommendations

While the concerns related to employee resignation found in the pertinent literature are important, the findings of this study point toward increasing administrative leadership and support and improving the current mentoring program as steps which are financially feasible to address. Many of the recommendations made by study participants and researchers in the area of employee retention and job satisfaction highlight the need for improved administrative support, clarification of expectations from administrators, providing opportunities for recognition, being proactive in the evaluation process, and encouraging agents to take time off for family and personal development.

Specifically, the researcher would like to offer the following recommendations to Cooperative Extension administration:

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1. Examine Extension Agent salaries and identify those employees whose compensation is markedly lower than their peers with similar qualifications and experience. Once identified, administration should make the necessary adjustments, over time if necessary, to bring those employees' salaries up to that of their peers. Also in the area of compensation, examine the salary levels of those professions to which Agents turn upon leaving Cooperative Extension, specifically agricultural education, private industry, and other government agencies.
 2. Evaluate the current mentoring program to determine its effectiveness. This evaluation should include interviews with agents who were mentored and agents have served as mentors and a review of the current mentor training program. In addition, Extension administration should examine what Cooperative Extension is doing in other states in the area of new Agent orientation and mentoring.
 3. Investigate internship programs being conducted in other states, if any currently exist. Explore the options for creating an Extension internship program with UGA's College of Agricultural & Environmental Sciences, Warnell School of Forestry & Natural Resources, and other related colleges and departments.
 4. Continue the existing County Extension Coordinator orientation and training program. Create an evaluation of this training to be administered approximately one year after completion of the program in an effort to determine strengths and weaknesses of the current training program. In addition, survey current County Extension Coordinators as to what information and/or education is needed in new Coordinator training.
 5. Survey current Extension Agents regarding the effectiveness of Extension leadership, including County Extension Coordinators, Program Development Coordinators, District Extension Directors, and upper-level administrators. The findings of this survey would be helpful in identifying the strengths and areas needing improvement in the leadership hierarchy of the organization.

REFERENCES

- Ensle, K.M. (2005). Burnout: How Does Extension Balance Job and Family? [Electronic version]. *Journal of Extension*, 43(3). Retrieved July 22, 2005 from www.joe.org/joe/2005june/a5.shtml.
- Extension Foundation Rosters. (1997-2001). University of Georgia, Athens, GA.
- Fetsch, R.J. & Kennington, M.S. (1997). Balancing Work and Family in Cooperative Extension: History, Effective Programs, and Future Directions. [Electronic version]. *Journal of Extension*, 35(1). Page 1. Retrieved July 19, 2005 from <http://www.joe.org/joe/1997february/a2.html>.
- Manton, L. N., & van Es, J. C. (1985). Why do Extension agents resign? [Electronic version]. *Journal of Extension*, 23(3). Retrieved February 22, 2006 from <http://www.joe.org/joe/1985fall/a4.html>.
- Purcell, L.E. (2004). Factors that Lead to Job Satisfaction and Dissatisfaction of County Extension Agents in Georgia. (Dissertation).

STRATEGIES FOR DEVELOPING SOUND VALUE-ADDED ENTERPRISES FOR SMALL FARMERS

Tubene,* S.L.¹

¹ Associate Professor and Small Farm Specialist, University of Maryland Eastern Shore (UMES), Princess Anne, Maryland 21853

The competitive nature of the U.S. agriculture coupled with the concentration of large agribusiness firms, have pressured small farmers to explore innovative agricultural business ventures. Innovative enterprises could include high-value crops, dried flowers, processed dried herbs, goat cheese, and smoked fish. In addition to supplying fresh and high-quality produce to the market, adding value to agricultural commodities could increase farm income by improving product differentiation. These strategies for developing value-added enterprises are discussed in this paper. Strategies are mostly determined by the market structure in which the firm operates as well as the goal and objectives of the firm. To be successful in developing sound innovative enterprises, small farmers should develop a business plan, acquire an appropriate technology, secure financial and human resources, and develop products with consumers in mind. In addition, farmers should consistently test current strategies, and establish criteria for changing strategies in the future.

STRATEGIES FOR DEVELOPING SOUND VALUE-ADDED ENTERPRISES FOR SMALL FARMERS

Tubene,* S.L.¹

1. Associate Professor and Small Farm Specialist, University of Maryland Eastern Shore (UMES), Princess Anne, Maryland 21853

Introduction

Since the last decade, U.S. Agriculture has experienced major structural changes which include a decrease in the number of small farmers, an increase in acreage of large farms; and an increasing concentration of processing firms, and vertically integrated agribusiness firms (Tubene, 2001). As discussed by Cowan (2002), vertically integrated agribusiness firms have, in the last decade, synchronized most stages of production from seed production to food supply. In fact, eating away from home, modernization, and convenience have shifted the bulk of food processing from home to food processing facilities, affecting somehow the U.S. agricultural structure.

While small farmers are still competing for available markets, large farmers, and agribusiness firms enjoy a lion share of the marketing margin. As price-takers, small farmers have to become creative. They have to create new strategies that could increase marketing margin. The development of innovative enterprises (such as the production and marketing of high-value crops, dried flowers, processed dried herbs, goat cheese, and smoked fish) is influenced by various parameters including a well-designed business plan, the adoption of an appropriate technology, access to financial, and human resources, the knowledge of the market and consumers' tastes and preferences.

This paper explores strategies small farmers, agricultural entrepreneurs and professionals could utilize to develop value-added enterprises. In addition, it provides valuable information aimed at starting an intelligible conversation which could eventually lead to practical solutions for small farmers. This information encompasses a wide range of topics ranging from factors affecting the development of innovative ventures to efficient strategies for developing and managing value-added enterprises. Research methods used to conduct this study include literature review, farmers' focus group discussion, and researcher's experience.

Factors Affecting the Development of Innovative Ventures

Value-added enterprise is defined as an activity that enhances value to a commodity or product as a result of change in its physical state. Factors that affect the development of innovative ventures include U.S. agricultural and demographic changes, small farmers' market structure, product creation, starting capital, and consumers' tastes and preferences. These factors, which are discussed below, serve as a guideline for developing innovative business concepts.

U.S. Demographic and Agricultural Trends

Since 1990, U.S. has experienced significant agricultural and demographic trends. Tubene (2005) argues that U.S. population has become more diverse since 1990, showing a significant increase in ethnic and minority groups. While the Native American population has more than doubled (110%) since 1990; American Asians, Hispanics, and African-Americans have increased by 64 percent, 55 percent, and 22 percent respectively.

In terms of U.S. agriculture, changes have occurred along states and regions line. For instance, mid-Atlantic farms and farmland, agriculture cash patterns, and crop production have experienced significant trends. While the number of farms and farmland has declined since 1987, agricultural cash sales have increased in the past 10 years in the mid-Atlantic region. In addition, agricultural industries such as nurseries and greenhouses have experienced the fastest growth whereas crops such as tobacco have drastically declined (Tubene, 2001 and 2005).

Additional U.S. agricultural trends are related to food and marketing bills. According to Drummond, and Goodwin (2002), American consumers spent \$925 billion on food in 2000. This food bill accounted for approximately 47 percent, 53 percent, and 10 percent away from home, food at home, and alcoholic beverage expenditures respectively. Most importantly, the food marketing bill, which is the portion of the food bill that is created by the marketing system accounted for \$537.8 billion in 2000. This implies that out of \$925 billion representing the food bill, only \$387 billion went to farmers.

Small farmers could capitalize on demographic and agricultural structural changes to develop new ideas could be translated into innovative value-added business opportunities.

Farm Typology and Market Structure

U.S. small farmers struggle to keep up with economic and technological changes that have affected the U.S. agricultural industry since the last decade. According to Hoppe and MacDonald (2001), small farms, on average, are less viable business than large farms. In fact, high-sales small farms and large family farms receive a larger share of government payments than small farmers. Additionally, small farm household rely heavily on off-farm income.

Since small farmers operate in a purely competitive market, they are price takers and have no market power as opposed to large farmers who might be monopolistically competitive or oligopolists. Being price takers, small farmers could set themselves apart from other (typical) farmers by differentiating their products through appropriate grading, packaging, and labeling. Product differentiation would require some innovation and creativity from farmers.

Demand for Value-Added Products

Demand can be defined as the quantity of products consumers are willing and able to purchase at various prices. The demand for a product is determined by various factors including consumer's income, price of related products (i.e., complements and substitutes), consumers' tastes and preferences, number of buyers, and expectation of the future.

In general, food is an inferior good; meaning that as people's income increases, their demand for food does not increase substantially. Value-added products are however, normal goods. By definition, as income increases, consumers buy more of normal goods.

Demand for value-added products could be significantly influenced by consumers' income; and tastes and preferences such as lifestyle, health concern, and demographic diversity. A positive trend in these variables will positively influence the demand for value-added products.

Product Creation

A successful entrepreneur researches consumer and market preferences and responds to the needs. As less food is processed at home, adding value to agricultural commodities could be rewarding for small farmers. U.S. consumers have drastically changed their lifestyle since the turn of the century. Changes range from long working hours to long commute, and demand for convenience and service.

Food processors, agribusiness, and marketing firms command a large share of the food bill whereas farmers receive a smaller portion of the food bill. By creating new products, small farmers could increase their marketing margin potential and thus, increase their income.

To become successful, small farmers are to use these consumers' attributes and preferences and design products which fit the twenty first century's life style.

Value-Added Starting Capital

Small farmers face many challenges in the areas of production, marketing, finance and business management. Starting small and expanding business operations over time could help alleviate some challenges. Financial challenge could be overcome by developing a business plan. A business plan will help the business owner think and write on mission, vision, goals, and objectives of the firm. In addition, a business plan will specify funding resources, production and marketing plans.

Starting capital can be raised in various ways including business owner's personal savings, loans and grants. While loans have to be paid back with interest, grants are not repaid. Grants could be a significant source of funds in the early stage of business implementation.

Government Regulation and Food Safety

Local, state and federal laws on food safety are intended to protect food producers and consumers. U.S. States have rules and regulations that govern food handling and processing. Federal, state, and municipal laws can be complex and frustrating. Business owners should avoid costly law suits by complying with federal and state laws and by purchasing adequate liability insurances.

Developing Innovative Ventures

How to Develop New Ideas

Strategies used to generate new ideas for value-added business opportunities are trade shows, county fairs, Cooperative Extension seminars, focus groups, field trips, and own research.

- **Trade Shows.** Trade shows constitute a good opportunity for small farmers to network with other farmers and learn latest discovery and inventions in the industry.

- **County Fairs.** County fairs display new products and innovations that the county has to offer. By visiting and interacting with display owners, small farmers will be exposed to new ideas and may discover new business opportunities.
- **Cooperative Extension Seminars.** Workshops and seminars organized by local Cooperative Extension offices in collaboration with Extension Specialists and County Agents could be a valuable education tool for small farmers. In fact, by talking and asking questions directly to the experts, new ideas can be generated and possibly turned into real value-added business opportunities.
- **Focus Groups.** Value-added enterprise ideas can be gathered through focus groups. Farmers, friends, lenders, and other experts in the field meet to brainstorm on new ideas conducive to potential value-added business opportunities.
- **Field Visits.** Field visits allow small farmers to travel to the sites where products are produced and/or sold. Examples of field visits could be traveling to the farm where goat cheese is produced, or simply visiting a specialty grocery store in town. Potential sites can be discovered by surfing the Internet or by looking into a phonebook. New ideas will be generated by visiting these facilities and exchanging ideas with the business owners.
- **Own Research.** Reading relevant literature such as agricultural and food magazines, trade journals, and local newspapers could help generate new ideas. In addition, new ideas could be gathered by surfing the Web where success stories could be inspiring for small farmers seeking for innovative value-added business opportunities.

Potential Value-Added Products

As described in Table 1, value-added products encompass a wide variety of products including processed flowers, dried fruits and herbs, decoration products, meat and fish products.

Table 1. Value-Added Products

Product	Value-added product
Flowers	Cut flowers, dried flowers, diverse decorative flower baskets, derived flower products
Herbs	Whole and processed dried herbs; Value-added products engineered from herbal products (i.e., soaps, lotions, and oils)
Wine grapes	Wine and wine grape products such as jam, jelly, and wine-flavored chocolates
Fruits and vegetables	Dried, canned, and frozen fruit and vegetable products
Mushrooms	Dried mushrooms
Tree and wood	Decorative crafts made from trees and woods
Decorative products	Dried decorative products including fruits, gourds, and wreaths.
Various farm products	Farm products that can be produced as value-added enterprises are free range chicken and eggs; pastured lamb and beef.

Fish and meat

Dried, smoked, salt fish; dried and smoked beef and poultry; caned fish and beef; and sausages.

Source: Adapted from Kantor (19990). www.agroforestry.net/overstory/overstory63.html

Strategies for Value-Added Enterprises

An efficient entrepreneur must not only be willing to take risk but also be able to manage risk. Risk in agriculture arises mainly from the biological nature of the agricultural production. Additional risks encountered by farmers include marketing, financial, human resource, and legal risks.

It is almost impossible to eliminate risk. However, risk can be minimized by implementing adequate strategies encompassing five main areas. These areas include the implementation of a business plan, the knowledge of the industry's market structure, the knowledge of current food regulations, the ability to secure customer loyalty, and networking.

Business Plan

Before developing a business plan, the main question that needs to be asked is "Why develop a business plan?" In this paper, the business plan is developed to determine whether adding value to agricultural commodities is profitable.

According to DiGiacomo, et. al. (2003), new and experienced business owners, regardless of history or current situation, can benefit from business planning. Business planning is an on-going, problem-solving process that can identify business challenges and opportunities that apply to production, marketing, human resources and finances, and develop strategic objectives to move the business beyond its current situation toward your future business vision.

A typical business plan has eight major components including a cover page, an executive summary, a farm description (i.e., type, location, and history), a strategic plan (i.e., mission, goals, business strategy, and implementation plan), a production and operations plan (i.e., crop system, value-added enterprises, etc.), a marketing plan, a human resources plan, and a financial plan (i.e., balance sheet, profitability, cash flow, etc.).

Mission statement, vision, measurable goal(s) and objectives are important components of the business plan. Measurable goal(s) and objectives are instrumental for evaluating expected outcomes and hence, monitoring business progress. By recording business milestones, an entrepreneur will be able to review business progress and react accordingly.

Funds are always needed when establishing new ventures. However, very often new ideas and dreams are not implemented due to the lack of adequate financial resources. Developing a detailed business plan with an appropriate financial strategy is crucial to the business success. Funds could be secured from various sources including personal and borrowed funds, loans and grants.

New products and markets are developed with customers in mind. Product differentiation, innovative market techniques based on consumers' preferences and current trends will help farmers increase farm marketing margin.

Since the business plan is one of the most important strategies for developing value-added enterprises, small farmers are strongly advised to contact specialized offices such as Small Business Development Centers and business professionals for further assistance.

Industry's Market Structure

Market structure refers to the number of sellers in the market, information availability, nature of the product; and market exit/entry conditions. There are four market structures, namely perfect competition, monopolistic competition, oligopoly, and monopoly. Knowing the market structure in which a business operates helps entrepreneurs strategize.

Most farmers operate in a highly competitive market known as perfect competition. However, the appropriate strategy is to move small farmers from pure competition to monopolistic competition where they might enjoy some market power. This is done through product differentiation, packaging, grading, or advertisement. By selecting an appropriate value-added business activity, farmers will be able to sell their products at a higher price and make some profit.

Updated Food Regulation and Safety

Food regulations could change over the course of the business operations. To stay current and in compliance with local, state, and federal laws, small farmers are advised to consistently check food regulations and legislations that might affect their businesses.

Customer Loyalty

Once a new product has been developed, tested and accepted by customers, it should be retested continually to ensure its quality. Very often, a new product attracts consumers. If the producer does not keep up with the quality of the product, he may end up losing customers in the long run. Thus, consistently surveying customers might help the entrepreneur keep customer loyalty by responding to consumers' complaints and making necessary changes.

Concluding Remarks

Small farmers face numerous problems including competition from their counterparts and from foreign farmers; production, marketing, financial, human resource, and legal risks. Product differentiation is the key for small farmers' survival. Niche market discovery will make each small farmer unique moving him from pure competition to monopolistic competition where he might enjoy some market power. Niche markets are value-added business opportunities generated through various means including focus groups, professional meetings, trade shows, and own research. Well-thought strategies must be implemented to ensure a profitable value-added business. These strategies comprise five main areas including the implementation of a business plan, the knowledge of the industry's market structure, the knowledge of current food regulations, the ability to secure customer loyalty, and networking.

References

- Cowan, Tadlock. *Value-Added Agricultural Enterprises in Rural Development Strategies*. Report for Congress. Congressional Research Service, the Library of the Congress. 2002. Washington, DC.
- DiGiacomo, Gigi; Robert King; and Dale Nordquist. 2003. *Building A Sustainable Business. A Guide to Developing A Business Plan for Farms and Rural Businesses*. SARE Handbook Series Book 6.
- Drummond, Evan H., and John Goodwin. 2002. *Agricultural Economics. Second Edition*. Prentice Hall. New Jersey.

-
- Hoppe, Robert and J. MacDonald. 2001. *America's Diverse Family Farms: Assorted Sizes, Types, and Situations*. USDA-ERS, Agricultural Information Bulletin Number 769. Washington, DC.
- Kantor, Sylvia. 1999. *Value-Added Enterprises for Small-Scale Farmers*. Agriculture and Natural Resources Fact Sheet #518. Washington State University Extension Service. www.agroforestry.net/overstory/overstory63.html
- Tubene, Stephan. 2001. *Agricultural and Demographic Changes in the Mid-Atlantic Region: Implications for Ethnic and Specialty Produce*. Fact Sheet 793. University of Maryland Cooperative Extension.
- Tubene, Stephan and J. Hanson. 2002. "The Wholesale Produce Auction: An Alternative Marketing Strategy for Small Farms". *American Journal of Alternative Agriculture*. Volume 17, Number 1, 2002.
- Tubene, Stephan. 2005. Niche Market Opportunities: A Consumer-Driven Approach." *Fourth National Small Farm Conference Proceedings*. USDA-CSREES. Washington, DC.

NORTH GEORGIA APPLE INTEGRATED PEST MANAGEMENT PROGRAM IMPROVES PRODUCERS' CONFIDENCE

Wheeler, M.J., University of Georgia Cooperative Extension, Gilmer County, Ellijay, GA 30540

Apple production in north Georgia has a long and productive history. Many of today's apple producers are second and third generation farmers. Their knowledge about producing high quality fruit is almost second nature. Over the years, as the apple industry in north Georgia has transitioned from an early, wholesale market to a roadside, retail market, the number of producers has reduced by 90%. Another factor that has caused this sharp reduction in apple producers has been the switch from easy-to-use pesticides to more environmentally friendly, species specific pesticides. In general, these pesticides require extensive knowledge of how and when to apply them. Beginning in 2003, the Gilmer and Fannin County Cooperative Extension offices developed an intensive integrated pest management (IPM) program for the apple producers in this two county region. The North Georgia Apple IPM program provides information to the producers about fire blight, *Erwinia amylovora*, prediction and tracking the life stages of three different moth insects throughout the growing season using degree-day models (Smith, 2002; Steiner and Lightner, 1996; NCSU AG-572). The three moth species targeted by the IPM program are Oriental fruit moth, *Grapholitha molesta* Busck, codling moth, *Laspeyresia pomonella* (L), and tufted apple budmoth, *Platynoda idaeusalis*. In a recent evaluation of the IPM program, all of the growers said the program is worth the effort because of the data and other information they gain from the program.

NORTH GEORGIA APPLE INTEGRATED PEST MANAGEMENT PROGRAM IMPROVES PRODUCERS' CONFIDENCE

Wheeler, M.J., University of Georgia Cooperative Extension, Gilmer County, Ellijay, GA 30540

Background

Producing apples in the north Georgia area has been practiced for at least 150 years. The relatively cool summers and abundant rainfall of the region makes it ideal for pome fruit production. In addition, north Georgia apple producers begin harvest in mid-August, which puts them first to supply their produce on the wholesale apple market. Beginning in the late 1980's, the number of apple producers has fallen by almost 90% due to the advent of controlled atmosphere storage technologies and significant changes to the pesticides available for commercial pome fruit production. Due to these changes in the fruit industry, many producers have chosen to retire from apple production. Many use the old orchard sites for cattle or poultry production, or sell their land as the price of land in north Georgia has increased. As the early season market advantage slipped away from north Georgia, the remaining producers have chosen to focus upon the retail, roadside market. As of today, roughly 95% of the apples produced in the region are sold at the retail level. In addition, a significant evolution in labeled pesticides for pome fruits has also occurred. The remaining producers have adapted their marketing strategies to the new retail market. These producers have also improved their ability to make decisions in the orchard by embracing IPM concepts.

The use of apple IPM in north Georgia is not intended to replace how the producers make day-to-day management decisions about their orchards. If desired, producers take what the program is indicating and incorporate the information into their management decision making process. Overall, the apple IPM program has improved the relationship between the county agents of Gilmer and Fannin Counties and the apple producers. This program has reduced communication gaps between the county agents and the producers. The

producers now have a higher level of confidence with UGA Cooperative Extension as a source of vital and relevant information.

North Georgia Apple IPM Program

In 2003, the current apple IPM program was developed. From the beginning of the program, disease and insect management were the main focuses of the program. The bacterial disease, fire blight, *Erwinia amylovora*, is very common in Southeastern orchards. If not properly controlled, it could devastate Southeastern apple production. Degree-day models have been developed for three main insect pests of apple (NCSU AG-572). These models allow producers to track the life stages of each insect throughout the growing season. Oriental fruit moth, *Grapholitha molesta* Busck, codling moth, *Laspeyresia pomonella* (L), and tufted apple budmoth, *Platynoda idaeusalis* are the three insects that are targeted by the IPM program. To assist in data collection, an apple scout was recruited and funded by the participating producers. Insect trapping supplies were bought by the producers in bulk, which saved them approximately 30% of the cost of the supplies. In addition to farm visits and phone calls, communication between the producers and the county agents is accomplished through two main sources, a newsletter and a website.

The largest issue with fire blight control is predicting the initial preventative, antibiotic spray. The accumulation and spread of the fire blight bacterium in an orchard is highly dependent upon the weather conditions during bloom (Smith, 2002; Steiner and Lightner, 1996). Warm, rainy conditions, which define Southeastern growing conditions, are ideal for the spread of the disease. The county agents of the IPM region use fire blight prediction models to predict the initial onset of the disease. The tools used to predict fire blight are *Cougarblight* and *Maryblyt* (Smith, 2002; Steiner and Lightner, 1996). Both of these programs use weather conditions and other risk factors to track the potential growth of the disease in the orchards. When conditions are ideal for a fire blight infection, these programs will prompt the producers to spray a protective antibiotic to reduce the chances of an infection. Once the initial spray has been timed, many of the producers are able to rely upon their own level of experience to continue with an antibiotic spray program throughout the bloom period. Every year, the timing of the initial spray has been the most challenging aspect of controlling fire blight in north Georgia orchards.

A pheromone based trapping program is used throughout the growing season to monitor the population levels of Oriental fruit moth, codling moth and tufted apple budmoth (NCSU AG-572). Traps for each insect are set in early spring and are used to set a biofix date for each insect species. The biofix is determined when a sustained catch of the male moths is observed. In general, biofix dates for an insect are within a week to 10 days of each other depending upon a given orchard's history and location (NCSU AG-572). A decision to spray is based upon weekly insect trap counts and the use of the degree-day model for that particular insect, which helps to predict adult emergence or percentage of egg hatch. These models are critical because they allow the producers to make an insecticide application that will target the particular species when the adult or larvae populations are at their highest and most vulnerable.

Program Communication and Funding

A periodic newsletter is released to the producers and specialists involved in the program throughout the growing season. The newsletter, written by the author, summarizes conditions across the region, and suggests management scenarios for the producers. The North Georgia Apple IPM website, <http://newsletters.ces.uga.edu/ngapples>, is the primary source of information to the producers and specialists. All of the insect trap count data and degree-day information is available on the website. This conveniently allows producers to compare the current year to past years. In addition, all newsletters are archived on the website for collective data comparisons. The current season's fire blight risk data is posted to the website as well. The most significant aspect about the website is the dissemination of information between the author and specialists at the University of Georgia. As a consequence, this allows a more efficient response to the needs of the apple producers by University of Georgia Cooperative Extension.

In 2005, the IPM program picked up partial funding from the Upper Coosawatee Watershed 319 Program. The 319 program, which received funding through the Georgia Environmental Protection Division, and administered by Georgia Soil and Water Conservation Commission, Limestone Valley District, has paid the

apple scout's time and travel from 2005 through 2008. Trapping supplies are still paid for by the participating producers. With the funding from the 319 program, which is focused on reducing nutrient-loading from agricultural practices within the Upper Coosawattee Watershed, the apple IPM program expanded its scope to include orchard nutrient management. A mid-season leaf and soil sampling regime was incorporated into the program. This has allowed the producers to monitor the nutrient status of the trees and overall soil productivity.

Orchard Nutrient Management

Since the soil and leaf samples have been tested year after year, producers have tracked changes of the nutrient status of their orchards, and make critical changes to their nutrient management programs. For many of the orchards, soil pH has been continually low, which is partially due to their disease management spray programs. The low soil pH has affected the availability and concentration of certain key elements such as calcium and potassium in the soil and within the trees. Many summer rots, like bitter rot are less likely to affect the tree's overall health if these elements are at adequate levels within the tree. In addition, the nutrient management program has revealed that many of the orchards are high in nitrogen within the tree. With this new insight to the nutrient status of the trees, many producers have restructured their fertilization program. Many have shifted focus away from nitrogen fertilization to maintaining the proper soil pH and adding more calcium and potassium in their orchards.

Summary

The North Georgia Apple IPM Program has been serving the north Georgia apple producers since 2003 with 70% of the region's producers participating, which represents 98% of the region's acreage. In a recent survey of the producers, 91% said the IPM program is worth the effort. In their opinion, the program gives them the ability to better time pesticide applications in the orchard. Also, it gives the producers a stronger degree of confidence in the effectiveness of the pesticide applications. The use of either the fire blight prediction models or the insect degree-day models, coupled with the apple scout's weekly collect insect count data has greatly contributed to this improved confidence. Beginning in 2009, the 319 program will no longer support the IPM program. When asked whether or not the producers themselves were willing to pay for the apple scout's travel and time to maintain and collect data from the traps beginning in 2009, 88% of the producers responded they are willing to pay the scout in order to continue the IPM program. This response confirms the success of the program and solidifies the relationship between Extension and the producers.

References

2008 *Integrated Orchard Management Guide for Commercial Apples in the Southeast*, North Carolina Cooperative Extension Service, Publication Number AG-572.

Smith, T.J., *Cougar Blight 2002 Fire Blight Risk Assessment Model*.

<http://www.ncw.wsu.edu/treefruit/fireblight/2000f.htm>. Washington State University, Wenatchee, Washington, 98801, USA.

Steiner, P.W, and Lightner, G.W. 1996. *Maryblyt 4.3: A Predictive Program for Forecasting Fire Blight Disease in Apples and Pears*. University of Maryland, College Park, Maryland, 20742, USA.

Speaker Profiles

2008 NACAA

**93rd
Annual Meeting
and
Professional Improvement Conference
Greensboro, North Carolina**

General Henry H. Shelton

General Henry H. Shelton was born in Tarboro, North Carolina where he was an exemplary 4-H member particularly active in livestock projects and livestock judging. He has received the North Carolina 4-H Lifetime Achievement Award.



General Shelton received a bachelor's degree in textiles from North Carolina State University and was commissioned as a second lieutenant in the Infantry through the Reserve Officer Training Corps.

General Shelton spent the next 38 years in a variety of command and staff positions in the continental United States, Hawaii, and Vietnam. He served two combat tours in Vietnam, the first with the 5th Special Forces Group and the second with the 173rd Airborne Brigade. Also, he commanded the 3d Battalion, 60th Infantry in the 9th Infantry Division at Fort Lewis, Washington; served as the 9th Infantry Division's Chief of Staff for operations; commanded the 1st Brigade of the 82nd Airborne Division at Fort Bragg, North Carolina; and, was the Chief of Staff of the 10th Mountain Division at Fort Drum, New York.

General Shelton became the 14th Chairman of the Joint Chiefs of Staff on October 1, 1997, and served two two-year terms, retiring on September 30, 2001. Throughout his tenure as chairman, U.S. forces were in heavy demand and participated in numerous joint operations around the globe.

During his tenure, General Shelton worked tirelessly on behalf of service members, their families, and military retirees by championing a number of landmark quality of life initiatives, including the largest military pay raise in 18 years, pay table and bonus reform, and critical improvements in both retirement and healthcare programs. He made great strides in improving the readiness and retention of the current force while simultaneously crafting Joint Vision 2020-the roadmap for the Future Joint Force. General Shelton established Joint Forces Command to consolidate joint experimentation efforts and guide the transformation of the U.S. Armed Forces for the 21st Century.

Among his many military awards, General Shelton has received four Defense Distinguished Service Medals, two Army Distinguished Service Medals, the Legion of Merit, the Bronze Star Medal for Valor, and the Purple Heart. He has been decorated by 16 foreign

governments. In 2001, he was knighted by Queen Elizabeth II. Highlights of his civilian awards include the Charlotte (NC) World Affairs Council World Citizen Award for 2002, North Carolina's highest Award for Public Service, the Eisenhower Award from the Business Executives for National Security, the American Academy of Achievement's Golden Plate Award, Intrepid Freedom Award, and recognition as National Father of the Year, among others.

For his exemplary service to his country, the 107th Congress bestowed the Congressional Gold Medal on General Shelton on September 19, 2002.

Currently, General Shelton serves as Executive Director of the General Hugh Shelton Leadership Center at North Carolina State University and as Director of the Hugh and Carolyn Shelton Military Neurotrauma Foundation.

Dr. James Zuiches



Dr. James Zuiches is the Vice Chancellor for Extension, Engagement, and Economic Development at North Carolina State University, Raleigh, NC, effective March, 2006. In this role, he leads and coordinates all extension, engagement and economic development programs of the university, including the Cooperative Extension Service, Industrial Extension Service, Small Business and Technology Development Center, non-credit programs of the Jane S. McKimmon Center for Extension and Continuing Education, the Economic Development Partnership, and the General H. Hugh Shelton Initiative for Leadership Development. Prior to joining NC State, Zuiches served as dean of the

College of Agriculture and Home Economics at Washington State University, 1995-2003, and concurrently as director of Cooperative Extension and the Agricultural Research Center for four years and professor in the Department of Community and Rural Sociology. He had previously served as director of the Agricultural Research Center (the State Agricultural Experiment Station), 1986-1994, and associate dean of the college.

As a W. K. Kellogg Foundation program officer in 1994-95, Zuiches funded many community and rural development projects. The Kellogg Foundation and other foundations are funding his current project to create the National Coalition for Rural Entrepreneurship and increase support for job creation and economic growth in rural areas. Prior to his appointment at Washington State, Zuiches served at Cornell University (1982-86), the

National Science Foundation (1979-82), and Michigan State University (1971-79). His research specializations include demography, rural sociology and research administration. He has more than 70 publications, including edited books, professional journal articles, book chapters, bulletins and editorials. He received his Ph.D. and M.S. in sociology from the University of Wisconsin, Madison, and his B.A. in philosophy and sociology from the University of Portland, Portland, OR.

Dr. James H. Johnson

Dr. James H. Johnson Jr. is the William R. Kenan Jr. Distinguished Professor of entrepreneurship and director of the Urban Investment Strategies Center.



His research interests include community and economic development, the effects of demographic changes on the U.S. workplace, interethnic minority conflict in advanced industrial societies, urban poverty and public policy in urban America, and workforce diversity issues. With support from the Russell Sage Foundation, he is researching the economic impact of Sept. 11 on U.S. metropolitan communities.

Dr. Johnson's research focuses on the causes and consequences of growing inequality in American society, particularly as it affects socially and economically disadvantaged youth; entrepreneurial approaches to poverty alleviation, job creation, and community development; interethnic minority conflict in advanced industrial societies; and business demography and workforce diversity issues. Fast Company profiled Dr. Johnson and his work in "Hopes and Dreams."

He has published more than 100 scholarly research articles and three research monographs and has co-edited four theme issues of scholarly journals on these and related topics. His latest book is "Prismatic Metropolis: Inequality in Los Angeles".

He received his PhD from Michigan State University, his MS from the University of Wisconsin at Madison and his BS from North Carolina Central University.

Commissioner Kirk Perkins

Kirk Perkins, a Democrat, is serving his first term on the Guilford County Board of Commissioners. He was elected to serve District 4 in 2004. Commissioner Perkins is a native of Guilford County and a graduate of



Northeast High School. He earned a Bachelor of Arts in Administration of Criminal Justice from Guilford College.

Commissioner Perkins is a real estate appraiser with Perkins and Associates. He is a member of the Greensboro Builders Association and the Greater Greensboro Association of Realtors. Commissioner Perkins serves as a liaison for the Board of Commissioners on the Agricultural Advisory Board, Greensboro Transportation Advisory Committee, and the Parks and Recreation Commission. He also serves on the Board's Economic Incentive Committee and Jail Construction Advisory Committee.

He is a member of number of civic and volunteer organizations including the Sierra Club and the N.C. Nature Conservancy and is an active member of Bethel Presbyterian Church. Commissioner Perkins currently resides in McLeansville with his wife, Nancy.

Johnny C. Wynne, Ph.D.

Dean and Executive Director for Agricultural Programs Johnny Wynne became Dean of the College of Agriculture and Life Sciences at NC State on December 1, 2004 after serving as Interim Dean since May 2003. The College of Agriculture and Life Sciences is one of the largest colleges at NC State University with more than 5,000 students in two-year, four-year and graduate programs. The college is also the home of the North Carolina Cooperative Extension Service and the North Carolina Agricultural Research Service.



From 1992 until being named Interim Dean in 2003, Dean Wynne served as Associate Dean and Director of the NC Agricultural Research Service. He has been on the faculty at NC State University since 1968. He taught undergraduate and graduate plant breeding and conducted peanut breeding research until 1989 when he was appointed Head of the Crop Science Department.

Dean Wynne is a North Carolina native with BS, MS and Ph.D. degrees from NC State University.

Dr. Jon F. Ort

Dr. Jon F. Ort is Assistant Vice Chancellor for Extension and Engagement, and Associate Dean of the College of Agriculture and Life Sciences at North Carolina State University as well as director of the North Carolina Cooperative Extension Service. As Associate Dean, Dr. Ort participates in setting policy for the college's three divisions—Academic Programs, the Agricultural Research Service and the Cooperative Extension Service. As Extension Director, Dr. Ort provides leadership for statewide comprehensive programs in agriculture and natural resources, family and consumer sciences, 4-H youth development and community and rural development. And, as Assistant Vice Chancellor for Extension and Engagement, he works collaboratively with his colleagues on campus to facilitate creation and implementation of new outreach opportunities for NC State University.



Dr. Ort is a native of Ohio with three degrees (B.S., M.S., and Ph.D.) from Ohio State University in Zoology and Poultry Nutrition, respectively. His professional career has been at NC State University where he has served as a faculty member in Poultry Science, Assistant Director for Academic Programs in the College, Director of the Agricultural Institute, Assistant Dean of the College and, since 1995, as Associate Dean and Extension Director. He was granted the additional title of Assistant Vice Chancellor for Extension and Engagement in 2002.

NACAA

Future Meeting Dates

2009	Portland, Oregon	September 20-24
2010	Tulsa, Oklahoma	July 11-15
2011	Overland Park, Kansas	August 7-11

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