



ERA-NET **SUSAN**

Sustainability in Pork Production with Immunocastration

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EUROPEAN RESEARCH AREA ON SUSTAINABLE ANIMAL PRODUCTION



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Challenge

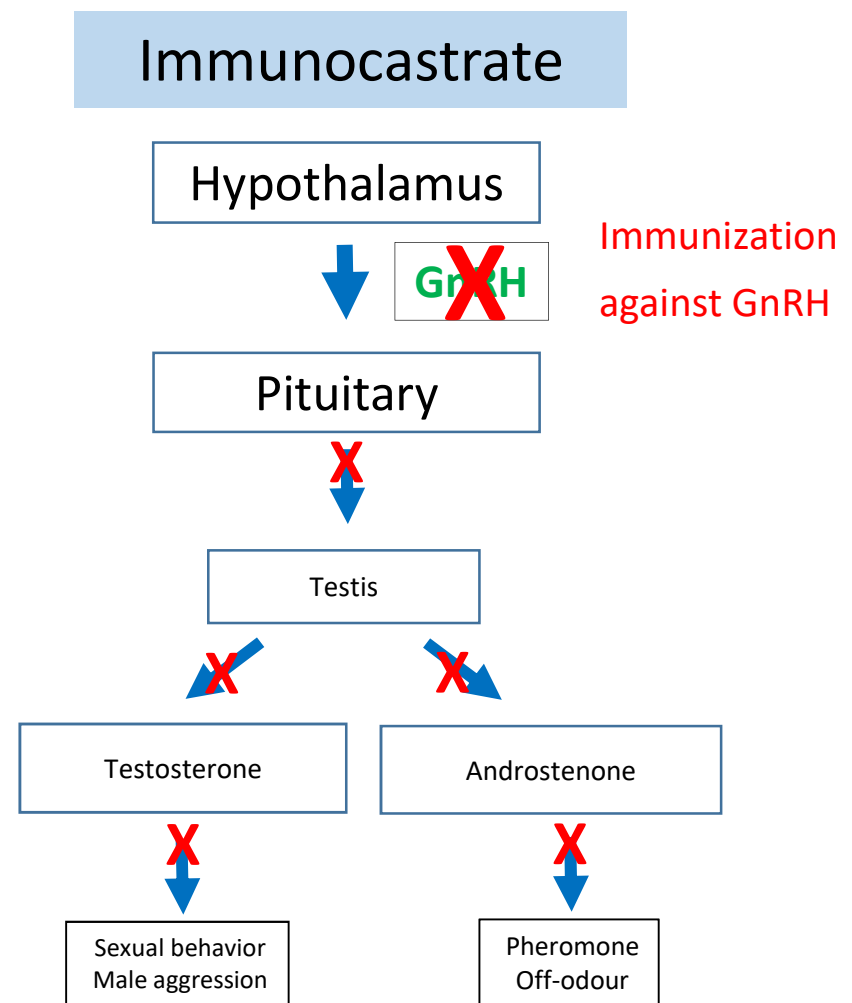
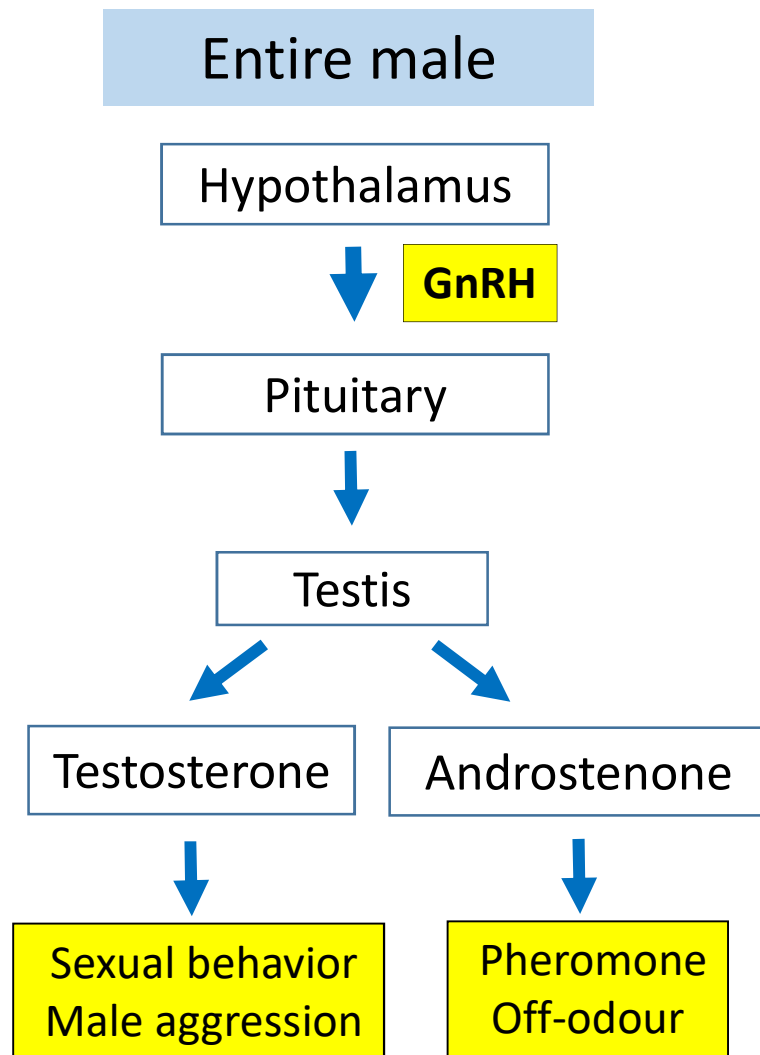
In the **EU**, about **75 % of male piglets are surgically castrated** (castration without anesthesia allowed within the first week of life). Castration serves **to prevent off-odour** in meat from male pigs (boar taint).

The practice of castration of piglets **causes strong public disapproval**, as it is painful and considered a welfare problem.

Pork production with entire males has long been regarded as an alternative, but problems with meat quality and welfare issues remain.

Many problems of pork production with entire males could be avoided with immunocastration (Improvac[®] marketing authorization in the EU in 2009). However, to date **immunocastration is not widely used in the EU**.

Why then is immunocastration (IC) not being used universally?



Challenge

Currently use of immunocastration (IC) is hampered by:

Lack of knowledge on specific management requirements like feeding and housing strategies, animal welfare and aspects of product quality.

Reservations about consumer acceptance.

Immunocastration could be a **serious alternative with potential economic and ecological advantages** to make the European pig industry more competitive.

Precondition: Optimisation of the whole production process with immunocastrates and increased market acceptance.

Overall objective

To critically evaluate and optimise pork production with immunocastration as an environmental, economic and socially sustainable alternative to production systems with surgical castrates and entire males.

Specific goals

- Development of innovative feeding concepts
- Optimising the timepoint of vaccination
- Determining the impact of IC on animal behaviour and health under different housing conditions (animal welfare)
- Testing the reliability of IC under different conditions
- Product quality: strategies to improve quality in different production systems
- Researching market acceptance of IC products, the potential for changing consumer attitudes, and the impact of regional differences
- Determining the impact of IC on production efficiency, improving economic margins and minimising the environmental footprint
- Transfer the knowledge gained into *Best Practice Guides* in accordance with the three pillars of sustainability

Consortium

Multidisciplinary consortium of 8 scientific partners from 7 EU countries

Etienne Labussiere, French National Institute for Agricultural Research, INRA (F)

AP1: *On-Farm-Management* Strategies: Nutrition

Volker Stefanski, University of Hohenheim (D) (Project Coordination)

AP2: *On-Farm-Management* Strategies: Effectivity of Immunisation, Animal Health and Welfare

Ulrike Weiler, University of Hohenheim (D)

AP8: Communication and Dissemination

Meta Candek-Potokar, Agricultural Institute of Slovenia, KIS (SLO)

AP3: *On-Farm-Management* Strategies: Meat and Product Quality

Marijke Aluwé, Institute for Agricultural and Fisheries Research, ILVO (B)

Sylwia Zakowska-Bieman, Warsaw University of Life Sciences, WULS (PL)

AP4: Acceptance of Immunocastration

Sam Milet, ILVO (B)

AP5: Ecological Sustainability

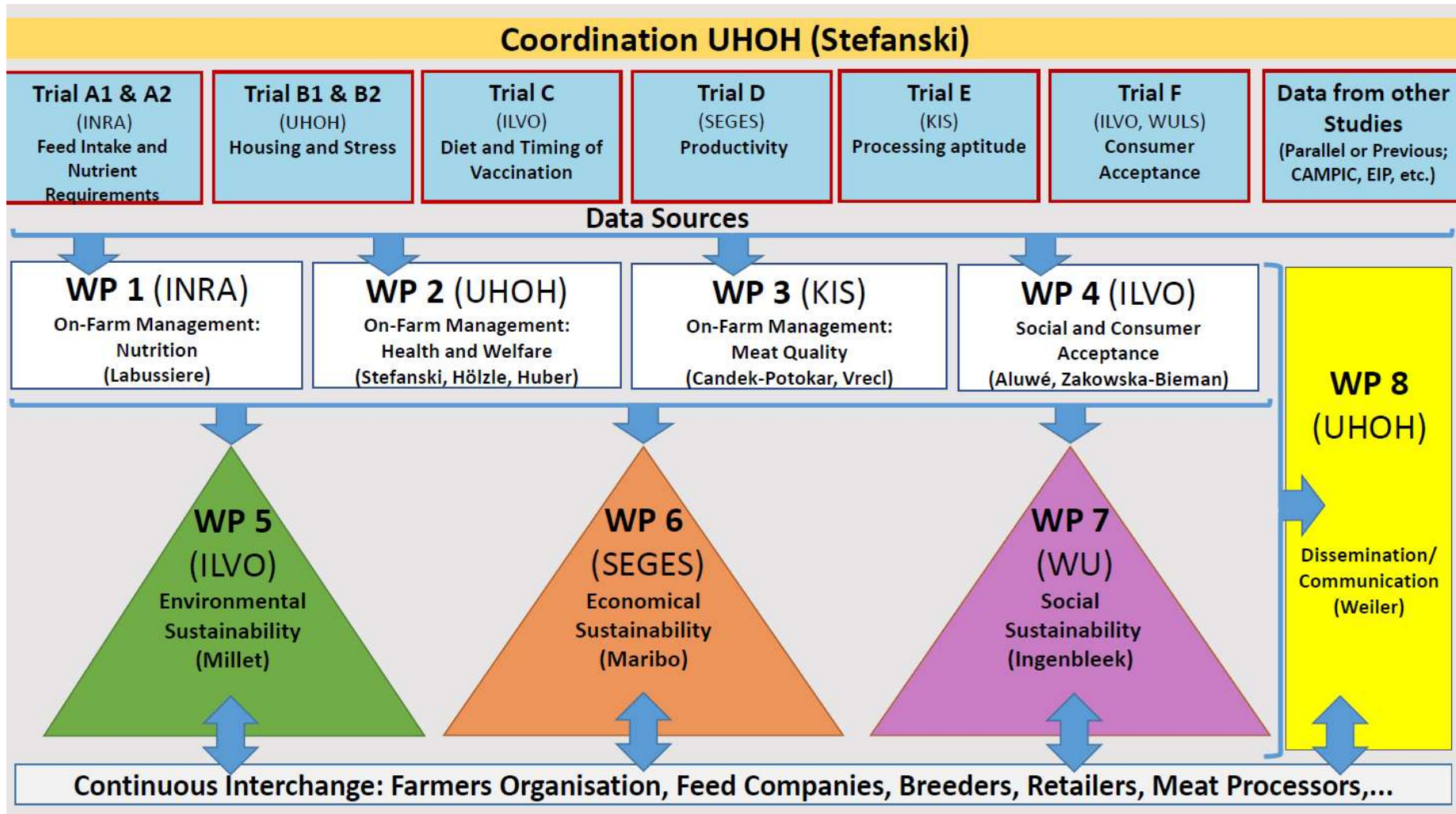
Hanne Maribo, SEGES Pig Research Centre (DK)

AP6: Economic Sustainability

Paul Ingenbleek, Wageningen University, WU (NL)

AP7: Social Sustainability

Consortium



Consortium

The SuSI consortium multidisciplinary expertise covers the entire pork production chain

SuSI benefits from translational value as the full expertise is not available in one single country: Pooling of knowledge is mandatory in order to evaluate complex questions.

Consideration of regional and national peculiarities: The analysis of the consequences of pork production with IC has to consider specific regional situations and differing social attitudes.

Fast and effective knowledge transfer: SuSI enables a fast knowledge transfer for practical application, and the development of knowledge-based communication strategies.

Avoidance of redundancies: Transnational collaboration prevents duplicate research efforts.

Potential impact

SuSI will contribute to an improved pork production with immunocastrates:

- to better exploit the potential **economic and ecological advantages of IC** to make the European pig industry more competitive.
- to **provide support** for pork industry and farmers, but also assist governmental authorities in **their decision-making processes towards an animal-friendly and consumer-accepted pork production** across the EU.
- to issue recommendations for pork production with IC that **considers regional and national peculiarities** in the EU.

Preliminary results

- SuSI started September 1, 2017.
- **SuSI kick off meeting** on September 14, 2017 in Hohenheim.
- **First experimental trial started** (October 2017), other experimental trails according to schedule
- **Contribution of SuSI partners (trainers & trainees) to training school** on methodological issues of pork production with males (in scope of COST action IPEMA) in Ljubljana (Nov. 20-22, 2017)

TRAINING SCHOOL

Harmonisation of methods in entire male and immunocastrate research
Ljubljana, November 20-22, 2017
Lectures (handouts)



Harmonisation of methods in
entire male and immunocastrate
research



Stakeholders and expectations

Distribution of results / sharing of information and experiences with stakeholders

SuSI enables a fast and effective knowledge transfer for practical application and the development of knowledge-based communication strategies, as partners are connected to regional, national and EU-wide networks (i.e. EIP, COST IPEMA).



- **Objective evaluation of pork production with immunocastration**
- **Optimised feeding and management strategies** → Improvement of ecological and economic sustainability.
- **EU-wide insights** on the factors that influence **consumer acceptance** of IC.
- **Cost-benefit analyses** and economic competitiveness models of EU pork production.
- **Best practice guides for sustainable production systems with IC**
 - Improvement of animal health and welfare.
 - Increased efficiency of immunisation.
 - Production of high-quality meat products on a regional and EU-wide level.

SuSI partners from 7 EU countries



ILVO (Belgium)

KIS (Slovenia)



UHOH (Germany)



SEGES(Denmark)



Wageningen
(Netherlands)



Warschau (Poland)



INRA(France)