



**CA 15215**

**Innovative approaches in pork production  
with entire males  
(IPEMA)**



# Innovative approaches in pork production with entire males

- **COST Countries (24)** : Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, France, FYR of Macedonia, Germany, Greece, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK
- **COST International Partners (1)** : Canada
- **Near-Neighbour Country (1)** : Ukraine
- **Coordinator:** Prof. Ulrike Weiler, Universität Hohenheim  
Stuttgart - Hohenheim, Deutschland
- **Duration:** 10/2016 – 10/2020

# Background ...

- Surgical castration of boars without pain relief is now **unacceptable.**
- Stakeholder of the pork chain committed themselves to **voluntarily end surgical castration of boars in Europe by 1.1.2018.** Some countries have already prohibited surgical castration of boars without pain relief by law.
- **Production of pork with entire males or immunocastrates** results in new challenges and not everyone is aware of them and prepared to handle them.

# Challenges....

- **Production systems** (genotype, feeding, housing, management, traditional systems ) affecting welfare, sustainability and quality
- **Product quality** (taint, leanness, fat quality) of fresh meat and pork products
- **Consumer attitudes** (boar taint, vaccination, traditions and prejudices)

# Why we need IPEMA

- To **coordinate research** to increase efficiency
- To **find general and regional specific solutions** for open questions
- To **fill knowledge gaps** between different countries as well as between science and parts of the value chain (e.g. farmers, meat industry)
- To **support the training of young scientists, dissemination of knowledge** and to **accelerate innovations by networking**

# IPEMA Objectives (1)

1. To guide breeding programmes for meat production systems with entire males (EM) or immunocastrates (IC) - reducing the incidence of boar taint, aggressive and sexual behavior.
2. To develop nutritional concepts for EM and IC to meet their nutritional requirements, and to reduce boar taint.
3. To define EM specific housing and management conditions, including transport, pre-slaughter handling and slaughter practice to minimize the new welfare issues due to male specific behavior.

## IPEMA Objectives (2)

4. To evaluate innovations of grading and meat quality control systems including boar taint detection at slaughter line and other traits that are important for eating and processing quality.
5. To summarize innovations in the processing industry – adaptation of products to the different characteristics of EM pork and valorisation of meat with boar taint by masking, cooking, dilution, dry curing or fermentation.
6. To develop specific information strategies for different European countries, as well as export markets to increase the acceptance of meat from EM and IC.

**Chair**  
*Vice Chair*

**STSM Coordinator**

**Communication & Dissemination**

**Training & Education**

**Inclusiveness**

**WG1**  
**Breeding &  
Genetics**

**WG2**  
**Nutrition**

**WG3**  
**Management,  
housing &  
Welfare**

**WG4**  
**Grading &  
Meat Quality**

**WG5**  
**Innovation in  
Processing**

**WG6**  
**Consumer &  
market  
behaviour**



# WG1 – Breeding and Genetics

- Research on markers or candidate genes, which efficiently reduce boar taint with no negative side effects on performance and reproduction
- Genetic parameters for relevant behavioral traits to reduce aggressive and sexual behaviour
- To address genetic relationships between boar taint, meat quality and performance of EM

## WG2 - Nutrition

- To develop optimized recommendations for dietary energy, amino acids, fatty acids of EM at efficient growth, dietary control of boar taint and optimized technological and sensory pork quality
- To propose nutrient requirements for IC with regard to specific characteristics of the two metabolic phases

## WG3 – Management, Housing and Welfare

- To propose welfare oriented housing conditions and management suitable for specific behaviour of EM
- To develop an alert system to identify EM specific welfare problems so early, that interventions are possible

## WG4 – Grading and Meat Quality

- To develop of new grading systems for pig carcasses in Europe (including parameters for sensory, nutritional and technological quality of meat) with detection of boar taint on the slaughter line

## WG5 – Innovations in processing

- To provide technical solutions to counteract an inferior quality of EM meat (increased toughness and reduced WHC)
- To find a suitable using of EM meat in dry-cured or thermally processed products
- To find the possibilities for masking boar taint with additives or dilution of tainted meat for different types of products

## WG6 – Consumer and Market Behaviour

- To specify the definition of boar taint and cut-off levels for consumer acceptance of pork from EM
- To harmonize these parameters across EU
- Dissemination of results to increase the public knowledge about EM and IC production

# Dissemination and/or Exploitation Plan

- Creating an open IPEMA website
- IPEMA conferences, workshops, meetings
- Organizing public lectures, presentations at Science Festivals, TV and radio broadcasting
- Brochure „Research with Impact“ for practise
- Using social media (LinkedIn)
- Organizing a social networking forum in IPEMA website
- Organizing STSM and Training Schools for young researchers and ECI

# Position and role of Slovakia in IPEMA

- Membership in Committee
- Vicechair of WG<sub>4</sub>, Core group
- Contribution to WG<sub>4</sub>, WG<sub>6</sub> (questionnaire on consumer attitudes to surgical castration of piglets) and WG<sub>2</sub> (experiments with nutritional manipulation of EM to reduce of boar taint)
- Organization of workshop (industrial meeting) for farmers and pork industry) - discussed

# Importance of IPEMA project for Slovakia

- Participation in international networking allowing the access to new knowledge and research links
- Collaborative publications, knowledge exchange
- Possibilities for training of young scientists and ECI
- Dissemination of newest information in the field of entire male production between slovak stakeholders
- Deepening existing ones and acquiring new contacts will contribute to obtaining grants in the future



# Thank you for your attention!

For more information, follow:

[www.ca-ipema.eu](http://www.ca-ipema.eu)

or contact:

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