

# COREPIG

**Prevention of selected diseases and parasites in organic pig herds - by means of a HACCP based management and surveillance programme**

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**Faculty of Agricultural Sciences**



# Partners CorePig

- Austria
  - University of Natural Resources and Applied Life Sciences, and Veterinary University Vienna
- Denmark
  - University of Aarhus
  - University of Copenhagen
- France
  - Inter Bio Bretagne, and INRA
- Germany
  - University of Kassel
- Italy
  - Consiglio per la Ricerca e la Sperimentazione in Agricoltura (C.R.A)
- Sweden
  - Swedish University of Agricultural Sciences, and Swedish Institute of Agricultural and Environmental Engineering
- Switzerland
  - Research Institute of Organic Agriculture (FiBL)
- UK
  - University of Newcastle



# Outline of CorePig

- WP1: Knowledge synthesis describing current health and welfare problems in organic pig production, and identifying future needs for research into disease and parasite prevention
- WP2: Epidemiological survey to estimate herd health and identify risk factors for selected diseases and parasites in European organic pig herds
- WP3: Development and evaluation of a HACCP based management and surveillance systems for organic pig herds



# Main hypotheses of CorePig WP2

- Health and welfare problems in organic pig herds
  - Intestinal parasites (Ascaris, Oesophagostomum, Trichuris)
  - Piglet mortality
  - Weaning diarrhoea
  - Sow reproduction problems
- Epidemiological survey in 100 sow herds in 6 European countries (WP2): Variation in pattern and prevalence of disease and welfare problems in organic pig herds in Europe
  - Health measures: faecal egg count, clinical examination of animals, medicine records, mortality, production records, slaughter records
  - Risk factors: production system (indoor/outdoor), space allowance, feeding and watering, hygiene, cleaning measures, vaccination, disease prevention strategies



# Main hypotheses of CorePig WP3

- HACCP based management system
  - Intestinal parasites (Ascaris, Oesophagostomum, Trichuris)
  - Piglet mortality and weaning diarrhoea
  - Sow reproduction problems
- HACCP plans: Literature review, expert opinion and epidemiological results
- Evaluation of HACCP plan as farm management tool
  - Identify risk factors on-farm
  - Suggest corrective actions
  - Continuous monitoring of risk level



# Results so far

- WP1 – knowledge synthesis draft
  - Small amount of knowledge regarding organic pig production
  - Use knowledge from outdoor pig production (but differences in feed, treatment strategy etc.)
  - Describe current herd health monitoring and health management
  - Point to research needs
- WP2 – data analysis in progress – no results yet
  - First description of the variety of pig production systems and management routines in Europe
  - Possible to analyse risk factors for health problems – indoor/outdoor, space allowance, hygiene, disease prevention strategies
  - This will show development possibilities for the sector and point to viable production methods as regards animal health and welfare
  - Further it will help to identify research hypotheses relevant for further research improving organic pig production
- WP3 – data collection in progress
  - Questionnaire for farmer for each problem area (parasites, sow reproduction problems, piglet mortality, weaning diarrhoea) to identify important risk factors on-farm
  - Suggestions for action to control the problem – taking specific risk factors into account
  - Targeting the organic farmer – the tool should be readily applicable in local herd health management to control parasites, piglet mortality, weaning diarrhoea and sow reproduction problems



	DK	UK <sup>2</sup>	Germany	France <sup>2</sup>		Italy	Austria	Switzerland
<b>Housing</b>								
Out/in	Outdoor	Outdoor	Indoor – (access to concrete outdoor run)	Outdoor		Outdoor	Indoor with concrete outside run	Indoor (after 24 days of life access to outdoor run – always concrete floor)
Penning	Individual or group housing	Single and group	Group penning of sows	Individual		Individual	Individual, in almost 50% group suckling after 1-2 weeks	Single and Group Housing (15 – 20 %)
Farrowing crate	No	No	Yes	No		No	No	No
Bedding	Straw	Straw	straw	Straw		Straw/nothing	Straw	straw
<b>Type of breed</b>	Conventional	Large herds conventional, small herds local	Conventional	Conventional		50% Local	Conventional	Conventional
<b>Weaning age</b>	49-56 days, some farms up to 80 days	42-56 days	42-49	42-56 days		40-60 days	42 days	42 – 56 days
Fostering of piglets	some	In larger herds	some	No		No	some	No information



# Ideas for future research

- Future research questions:
  - Effect of prolonged lactation on sow health
  - Colostrum and milk intake in piglets
  - Heat stress and cold stress – coping with climatic challenges
  - Organic feed and roughage
  - Parasite management – survival, treatment, control
  - Health monitoring system for extensive production systems
  - Hygiene and health management measures in organic systems
  - Effect of outdoor access on animal health, welfare, meat quality
- Challenges for organic pig production:
  - Local or conventional “outdoor” breeds – robust animals
  - Castration of piglets
  - Biosecurity – herd hygiene and herd health management
  - Animal welfare vs environmental load



# Experience with transnational research

- added value
- scientific inspiration
- perspectives for the European sector



# Added value

- In most countries the number of organic pig producers is low. National epidemiological studies are consequently often hampered by a low number of herds.



# Scientific inspiration

- Expertise in animal welfare, diseases and parasite management in organic pig production is scattered all over Europe. This project gives us a unique opportunity to collaborate and to exchange ideas, experiences and knowledge.
  - Initiation of a network of researchers in organic pig production at international as well as national level
  - General knowledge transfer between countries
- Calibration of parasitological labs
- Internships between countries



# Perspectives for the sector

- The international cross sectional epidemiological study will allow us to test more specific hypotheses and further to estimate more precise risk factors for diseases, parasite infestation, and animal welfare problems.
- HACCP plans will be evaluated simultaneously in several countries and thus facilitate implementation throughout Europe
- Suggestions for future farming practices



# More info on CorePig?

- <http://www.corepig.coreportal.org/>

Thank you for your attention

