ProPIG

Farm specific strategies to reduce environmental impact by improving health, welfare and nutrition of organic pigs

CoreOrganic Research Seminar
Paris, 29. Nov. 2011

CORE organic II

Archived at http://orgprints.org/20095

ERA-net CORE Organic II

ProPIG (2011-2014)

Aim of this project,

- to investigate the **interaction of animal health and welfare**, with nutrition and environmental impact
- to create and disseminate a **tool to improve both aspects** of organic pig production.

CORE organic II

Partners

- 9 Partners in 8 Countries (AT, CH, CZ, DE, DK, FR, IT, UK)
- Coordination: BOKU, Austria

Austria: **C. Winckler,** G. Rudolph and **C. Leeb** (BOKU)

Czechia: J. Urban (Bio-I), G. Illman (IAS, Prague)

Denmark: **T. Rousing, J.T. Soerensen** (Aarhus Univ.)

France: **A. Prunier**, J.Y. Dourmand, F. Vertes (INRA)

Germany: **S. Dippel** (FLI) and C. Simatke (BAT)

Italy: **D. Bochicchio** (CRA-SUI)

Switzerland: **B. Früh**, M. Meier, A. Berner (FIBL)

UK: **S. Edwards**, G. Butler (Univ. Newcastle)

(Sweden: E. Salomon, **K. Lindgren**, A.K. Lind (JTI))

CORE organic II

The working objectives are

- To identify animal - environment interactions in **the three different housing systems** for organic pigs (outdoor / partly outdoor / indoor with concrete outside run) across the European climate zones

- To **develop and implement farm specific strategies** to reduce environmental impacts by improving health, welfare, nutrition and management of organic pigs

- To **disseminate knowledge** to national advisory bodies and farmers

CORE organic II

Hypothesis

- When well managed, **all three housing systems are similar** in respect to environmental impacts and animal health and welfare


=

=


- Good animal health, welfare and proper nutrition is **correlated** with decreased environmental impacts at farm level

PIG HEALTH;
WELFARE
NUTRITION

ENIVRONMENT

CORE organic II

Hypothesis

- Implementation of farm specific management strategies leads to an **improvement of animal welfare** and simultaneously to a **reduction of environmental impacts** within husbandry systems and improved **profitability.**
- **Better feed management** will simultaneously improve pig performance, welfare and environmental impacts

PIG HEALTH;
WELFARE
NUTRITION

ENIVRONMENT,
PROFITABILITY

CORE organic II

WP1: Definition of systems and development of assessment protocols of animal health, welfare and environmental impacts

(WP leader: United Kingdom, Sandra Edwards/Gillian Butler)

- Definition of **Systems** (indoor/partly indoor/outdoor)
- **Development of Assessment protocols**
  - **Animal health and Welfare:** e.g. Clinical scoring, medicine records
  - **Environmental impact:** LCA, nutrient balances
  - **Farmer:** qualitative interviews, basic economical data
- **Automatic** recording and feedback
- **„Decision Support Tool“** for environmental impact

CORE organic II

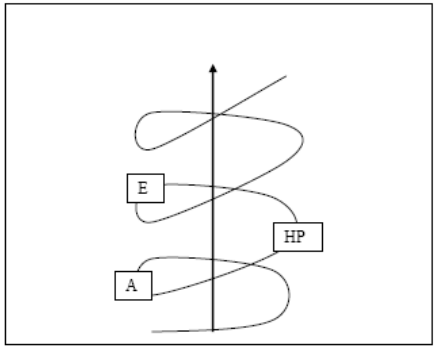
Assessment and improvement tools

- CorePig HACCPbased MS Excel® Tool (Post weaning diarrhoea, Parasites, Piglet mortality, Fertility) if applicable
- Automatic recording and feedback tool (handheld benchmarking system)
- Catalogue of possible improvement strategies
- Decision Support Tool for Reducing Environmental Impacts

CORE organic II

WP 2: On-farm assessment and application of improvement strategies of animal health, welfare and environmental impacts

(WP leader: Denmark, Tine Rousing Nielsen)



Prospective cohort observational study

75 farms (3 systems of 25 farms each)

- **1. visit:** Assessment and data collection of environmental impacts , animal health and welfare
- **2. visit** Feedback of summarised information as “benchmarking” , “plan” written by the farmer (goals and improvement strategies).
- between farm visits, support by phone and email.
- **3. visit** re-assessment of the farm situation, economic key data

CORE organic II

Benchmarking and improvement strategies

- Decision on goal of farm
- Decision on measures how to achieve the goal

Weaners

	A	B	C	D	E	Visit 1 A099
N groups/piglets						4 / 70
% weaners ocular discharge	32.5 - 70	>70 - 82.5	>82.5 - 90	>90 - 98.3	>98.3 - 100	97,5
% conjunctivitis	0 - 0	>0 - 0	>0 - 0	>0 - 7.5	>7.5 - 40	8,8
% pens with resp. problems	0 - 0	>0 - 33.3	>33.3 - 50	>50 - 80	>80 - 100	75,0
% pens with severe resp. problems	0 - 0	>0 - 0	>0 - 0	>0 - 0	>0 - 100	0,0

goal: *improve respiratory problems*

Preventative measures
find reason - take blood samples; adapt vaccination if necessary
improve ventilation
Therapy:
mild cases without fever: herbal cough tea; otherwise Antibiotic

CORE organic II

WP 3: Analysis, evaluation and dissemination

(WP leader: Germany, Sabine Dippel)

1. **Comparison of three systems** regarding animal health, welfare and environmental impact
2. **detailed analysis of effect of farming type** on health and welfare and productivity
3. **Evaluation of improvement strategies**
4. **Dissemination:**
   - Website, articles (farmer journals/scientific)
   - Handbooks and training material for advisors
   - National and international stakeholder meetings

CORE organic II

Thank You – Questions?

CORE organic II