Workshop for on-farm and participatory research

Case animal husbandry

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Types of research

• Analysis of retrospective production data
  • Batch data from fattening pig and broiler production
  • Herd data from piglet or milk production
  • Combined with background information from farms or other data bases

• Surveys
  • Questionaires (web or interview)
  • Sampling and measurements on farms

• On-farm experiments
  • Feed production and preservation
  • Feeding and production trials
Animal experiments on farms

• Rules for the use of animals for scientific purposes are set down in The Act on the Protection of Animals Used for Scientific or Educational Purposes (New legislation 1.1.2013)

• Does your on-farm trial cause animals pain, suffering, distress or lasting harm comparable at least to the pain caused by the introduction of needle? If YES
  • Project licence authorized by Animal Experiment Board
  • Competence to perform animal experiments
  • Authorization of establishment

• Feeding trials with performance measurements only are not generally considered as animal experiments that would require a project licence. Uncertain? Ask advice from authorities.

• Farms where feeding trials are carried out must meet the requirements set down in The Act on Animal Protection
Some challenges in on-farm feeding trials

- Experimental unit in group feeding systems can be large
  - The smallest unit where feed consumption can be measured
- Application of concurrent dietary treatments
  - Many on-farm feeding systems can deliver only one feed at the time
  - Residual feed in liquid feeding system (mixing tank, pipelines)
- Presence of confounding factors
  - Time, animal background, production environment

- Experimental design, sample size, randomization
- Accurate and reliable measurement of feed consumptions
- Individual identification of animals throughout the trial
- Some management practices, e.g. cross-fostering, and handling of unexpected events

- Detailed protocol, support to farmer (workers), regular visits to the farm and monitoring of data collection
On-farm trial to test two sire lines for fattening pig production

• Research questions
• Experimental design
  • Experimental unit
  • Calculation of sample size
  • Design and randomization
• Practical arrangements at three production sites
  • Breeding unit
  • Farrowing unit
  • Fattening unit
• Protocols, identification of treatments and individual animals, data collection forms
• Regular visits, support and monitoring data collection
• Arrangements at slaughter
• Analyses and reporting
Did anything go wrong?

Impact of research results?