Integration of Farm Oriented Research Projects in Breeding Evaluation

Bianca Lind\textsuperscript{a}, Inga Schiefler\textsuperscript{b}
\textsuperscript{a}German Cattle Breeders’ Federation
\textsuperscript{b}Association for Bioeconomy Research
Bonn, Germany
Cattle Production in Germany
Animal husbandry is the main source of income

- in Germany half of the farms are specialised in livestock
- main group (> 25 %) are dairy farmer
- through the sale of products from livestock enterprises, 60 % of revenues in German agriculture are generated
What do we produce in 2015?

- **32.6m t** milk production
- **31.5m t** delivered to creamery
- **0.29 EUR per kg milk**

Source: ADR, 2015
Cattle production in Germany

12.6m cattle

4.3m dairy cows

70,000 dairy farms

Source: ADR, 2015
Research and Innovation
Structure of associations

Breeding and AI organisation
Milk recording organisation

Umbrella association

farmer
From farmer to research

Joint research activities for cattle and pig

farmer
The future of agriculture in Germany

„We can only improve measurable things!“
Farmers: „Brown Swiss calves have suckling weakness“

Farmers‘ observation

- no suckling
- weak suckling
- suckling
- strong suckling
Farmers: „Brown Swiss calves have suckling weakness“

Farmers‘ observation

- no suckling
- weak suckling
- suckling
- strong suckling

Need help to solve the problem
Is there a genetic influence?

Research project initiated by farmers

250 Brown Swiss farms

18,000 dairy cows
Start with the calf

- Observation by the farmer of
  - suckling weakness after birth
  - calving weight
  - calving ease
  - diseases
  - feeding
- Genotyping of all calves in the farm by staff of breeding organisation
Suckling weakness has an incidence of 8% 

2016

• Results of 9,700 Brown Swiss calves
• 8% of all calves have suckling weakness
• The evaluation is going on to provide a genical influence
Application

For all Brown Swiss farmers
- Breeding for new traits
- Prevention of genetic defects

For farms integrated in the project
- Improved selection for calves, heifers and dairy cows in the herd
- Prevention of genetic defects
- Genomic information for female calves

For AI and breeding organisations
- Be a player in international competition (bovine semen, breeding cattle, bovine embryo)
- Better quality of products
- Close customer relationship
- Elimination of AI bulls with weakness in some traits (e.g. claw disorders)
- Improvement of animal welfare
Ask the farmers what they are looking for!

- In the area of milk recording the MRO staff collects data
- In the area of new traits the farmer has to collect data or he has to provide his data
- It is important to motivate the farmer to participate
  - collecting data
  - using data for management
  - using data for mating selection
Our way is the common research!

- In the area of milk recording the MRO staff collects data
- In the area of new traits the farmer has to collect data or he has to provide his data
- It is important to motivate the farmer to participate
  - collecting data
  - using data for management
  - using data for mating selection