Integration of Farm Oriented Research Projects in Breeding Evaluation

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In Germany almost 30 organisations are involved in dairy cattle breeding. For each organisation research is essential to develop the breeding programmes, the breeding goal and the techniques in breeding evaluation, parentage verification and performance testing. Because performance testing and breeding evaluation is standardised and focused to a few calculation centres, the breeding industry has established an umbrella organisation for research matters (Association for Bio-economic Research – FBF). In Germany, all AI centres and breeding organisations are member of FBF and can participate in research projects and receive project results.

FBF is focusing on the research in reproduction and breeding. One of the first projects in dairy cattle was the development of genomic selection in Germany. The German Ministry of Education and Research supported a project in cooperation with scientific institutes and industry to create the first training set of proven bulls. After a project period of three years the breeding organisations and AI centres were enabled to transfer the results into practice and to establish genomic breeding value evaluation.

It is very important for FBF to meet the requirements of its members and farmers. Sometimes, research needs directly arise from practical dairy farming. Together with scientific partners, FBF has set up projects aiming to detect genetic defects. This project is based on farmers' observations. A special case of an undesired genetic trait or anomaly is the project dealing with the lack of suckling reflex in Brown Swiss calves. Therefore, collaborating farms need to record the suckling reflex of all born calves and take tissue samples for further genetic analyses. The aim is to find one or more genes that influence the suckling ability of calves and to eliminate these families from breeding finally.

One of the major challenges of the present and in the future is the observation of health data. Health parameters like udder health, fertility, claw health, have to be collected by farmers on site. The health treatment of dairy cows, calves and heifers has to be documented precisely. There is a special need to understand the data and to combine it to data that is collected by milk performance testing or genomic analysis.

Motivation of farmers in proper data collection is our big challenge. And it is also our challenge to foster the cooperation of the diverse involved parties, like milk recording organisations, AI centres, breeding organisation, and companies, like pharmaceutic companies, to arrange the best for the farmer and the animals. Common projects can be one way to come closer.