

National genebank information repositories in FABISnet

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With the increasing demand for food and the usage of highly productive breeds the conservation of domestic animal diversity is recognized as priority task on international level. The monitoring, sustainable use and the conservation of livestock diversity will play important role in the future development of new breeds, adapted and performing well in various conditions. One of the relatively cheap ways of preserving the autochthonous breeds is the *in vitro ex situ* conservation of germplasm in genebanks. There are already available collections for many breeds in Europe, however these are disconnected and in the most countries there is no central national genebank information system. In the FABISnet project, in cooperation with EU, EAAP, FAO and partners from 14 countries, an European network of national biodiversity information systems for monitoring the national farm animal genetic resources was created and linked to the EAAP database (EFABIS) and world database (DAD-IS) at FAO. In the second part of the project the network is extended with 10 national genebanks management information systems based on the CryoWEB software. These systems are intended as a central documentation of the samples stored in various repositories. Each system collects data about the animal donors and their pedigree, the production of the samples, the distribution of the samples in the storage facilities, all movements and status changes, along with their history. A protocol for data exchange was developed for the upload of the cumulated yearly statistics for the conserved germplasm in EFABIS database.

Breeding for high welfare in outdoor pig production: a simulation study

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The present simulation study was conducted within the EU-supported project Q-Porkchains. Concern for animal welfare has increased. Consumers often associate outdoor production with high welfare, and good health is an important aspect of welfare. To our knowledge, there is no special breeding program aiming for high welfare in outdoor pig production. The aim of this study was to compare the genetic progress in simulated breeding programs for a dam-line. Selection for high welfare was compared to a conventional breeding program. The deterministic simulation program SelAction was used to calculate the genetic progress. Three schemes were defined: 1) a conventional scheme that aimed at improving sow's production and reproduction traits (litter size, piglet mortality (PM), mean piglet weight at weaning, weaning-to-mating interval (WMI), ADG from 0 to 20 kg, ADG from 20 to 100 kg and lean content); 2) extension of the first scheme with welfare considerations (leg condition of sows after first lactation (LEGw) as an extra trait and double weight on PM and WMI); 3) a breeding program for high welfare in which the weights of LEGw, PM and WMI were increased until genetic progress was achieved. Results show that those traits (LEGw, PM and WMI) should contribute to more than 40 % weight in the index in order to improve all considered welfare traits. This is at the expense of economically important traits. The implementation of breeding for high welfare requires other prerequisites, such as a high willingness to pay for welfare among consumers.

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