

Report on the 4th International Workshop
on Data Management and Genetic Evaluation in Pigs
Domzale, Slovenia, April 15th-18th, 2004
http://agri.bfro.uni-lj.si/delavnice/pigworkshop_4th/

Canadian Centre for Swine Improvement

The International Workshop on data management and genetic evaluation in pigs has been co-organized since 1996 by **Dr Eildert Groenveld** (Institute for Animal Breeding, Mariensee, Germany), **Dr Milena Kovac** (University of Ljubljana, Slovenia), **Dr Dana Peskovicova** (Research Institute for Animal Production, Nitra, Slovakia) and **Dr Jochen Wolf** (Research Institute of Animal Production, Prague-Uhrineves, Czech Republic), at a rhythm of about one meeting every two or three years. Various subjects dealing with genetic evaluation of pigs are usually discussed, such as data management, traits evaluated, methodology and models used in evaluation systems, breeding goals, evaluation of selection efficiency, etc.

The fourth issue of this workshop was attended by 30 delegates coming from 13 different countries : Austria, Canada, Croatia, Czech Republic, Estonia, France, Germany, Macedonia, Poland, Slovakia, Slovenia, South Africa, The Netherlands.

Twenty-eight presentations were given during two days of workshop, which were divided into five different sessions :

- 1. Data management
- 2. Genetic evaluation
- 3. Aggregate genotype
- 4. Efficiency of selection
- 5. Free presentations

The first session of the workshop, dealing with issues in data management, was the longest one. Several countries presented their current data management system : Estonia, Czech Republic, Slovenia, South Africa, Germany and Poland. Different questions and issues were raised, such as data correction and errors management, data exchange between participating herds and central database, and identification issues. Several countries use an APIIS system.

At the end of this first session, a “mini-workshop” was chaired by Eildert Groenveld, after a presentation dealing with a proposal for an implementation effort of “EURO-PIS”, which would be a new integrated framework based on APIIS and common tools useful to pre-process data before running genetic evaluations, run BLUP, load solutions into the database and publish results. Several countries have already implemented an APIIS framework and could be interested in this common project, which will certainly be a European project.

The second session dealt with genetic evaluation. Various subjects were presented, such as the combined use of station and field testing results in the German evaluation, inclusion of carcass traits (The Netherlands) or meat quality traits (Austria) in routine genetic evaluation systems, and the interest of using ESR gene information in selection for litter size (Czech Republic). Laurence Maignel (CCSI) presented a method to convert foreign EBVs in order to use them in a selection program, using the conversion of French EBVs into Canadian equivalents as an example. Imports of genetic material are quite often used in swine in many

countries, but usually the main issue for the importing country is to have access to EBVS from the exporting country. A discussion about the opportunity to work on international comparisons in this particular workshop was started. Canada and France could certainly have a major role if such a working group was created.

The third session of the workshop gave the opportunity to hear talks about aggregate genotype. Four speakers presented new developments in this area in their respective country : inclusion of carcass traits EBVs in indices in The Netherlands, new selection criteria in France and in Poland, and presentation of the selection tool “Breeding for Profit” developed by CCSI, by Dr Pramod Mathur.

The fourth session, dealing with efficiency of selection, had only two presentations, one about genetic improvement in Slovakian pig population after introducing multitrait animal model, and the second one about the efficiency of selection in Slovenia. In both cases, BLUP was introduced to compute EBVs quite recently (in 2000 or after) and is giving good results especially on low heritable traits such as litter size. Different selection parameters such as generation interval and selection differential were also presented.

The last session was dedicated to free presentations. Two papers dealt with random regression models (to analyse growth curves or dispersion parameters for litter size), two others with the use of crossbred information, and one with joint analysis of fattening and reproduction traits.

This workshop was an excellent opportunity to know more about new developments in swine genetics, but also to network with many other geneticists coming from all around the world. A lot of exciting subjects were discussed. It is important to notice that most of the participating countries have test stations having a major role in the selection system, and that genetic evaluations are run on a weekly basis for many of them, some even having daily evaluations on some traits. This meeting had a special emphasis on development of pig breeding in East/Central European countries. Some of these countries have been developing their genetic evaluation systems very quickly, such as Estonia where the database was starting to be developed in 2002, and who now has a current weekly genetic evaluation, with most breeders sending their data and getting their results through Internet. But all the countries in East/Central Europe don't have the same developments, and many of them are looking for possible collaborations with other countries in order to facilitate their implementations and development of selection tools.

All abstracts and copies of presentations are available at the following url :
http://agri.bfro.uni-lj.si/delavnice/pigworkshop_4th