

Report of the meeting with the Czech stakeholders for the Farm Animal Breeding and Reproduction Technology Platform

Report by Chris Warkup and David Telford, Genesis Faraday

The meeting with the Czech stakeholders of the Farm Animal Breeding and Reproduction Technology Platform was held near Prague on July 11th, 2007. The meeting was hosted by the Institute of Animal Physiology and Genetics (Videnska 1083, 142 20 Prague 4 – Krc).

Josef Pazdera from the Holstein Cattle Breeders' Association of the Czech Republic acted as the local contact to organise the meeting. Representatives of the major Czech animal production industries and breeders organizations, and from the Universities and Research Institutions involved in animal breeding and reproduction, and other relevant organisations like the Department of Agriculture, were invited to attend the meeting. A total of 22 people participated in the meeting.

Chris Warkup expressed his thanks to Josef Pazdera, Josef Kucera (Czech Fleckvieh Breeders) and Jan Kopečný (Institute of Animal Physiology and Genetics) for their help in organising the meeting. He then gave a presentation introducing FABRE-TP. This outlined what Technology Platforms are, and why they are important. The presentation was then used to describe why and how FABRE-TP has been established and its activities so far. Following this, the Strategic Research Agenda was explained, with particular focus on the Technology Research Priorities. The participants were also informed of the opportunity to set up a National Mirror Group for the Czech Republic, and for Czech organisations to sign up to show support for FABRE-TP.

The attendants were then provided with an opportunity to express their views on FABRE-TP in general, and in particular, the Strategic Research Agenda. These comments were recorded, and then circulated to those who attended the meeting for possible corrections and additions. The final list of significant comments is as follows:

1. It was stated that the FABRE Vision is generally in-agreement with the overall thinking and views of those involved in Czech animal breeding and reproduction.
2. A further comment was made that the FABRE Vision document is well written, but there are some practical obstacles to its successful implementation in the Czech Republic, particularly problems in co-operation between industry and academic research. More specifically, researchers have problems accessing well phenotyped populations from industry, which are needed to undertake genomics work, and also often face Intellectual Property Rights issues when accessing samples from animal breeding companies. In response, Chris Warkup explained that this is also a problem for other research centres throughout Europe, and globally. One potential solution for the EU research community could be the development of shared resource populations for research use. For example, for dairy cattle it may be sensible to consolidate resources in a small number of large populations available to the whole EU, rather than duplicating resources by having one small research population for every member state. The quality of research populations varies from state to state in the EU. One of the aims of FABRE-TP is to improve interaction between industry and the research base and so help to overcome this problem.

In relation to any Czech contribution to such a joint research resource, a comment was made that the Czech dairy industry is very suitable for inclusion in research projects and potential resource populations because they have large (relative to much of Europe) dairy herds, with good data recording and processing systems, and also one of Europe's largest dual-purpose Fleckvieh cattle populations is based in the Czech Republic. A further comment was made that the information from such well recorded populations is currently underutilised, and that such strengths should be built upon using either National or EU funding. It was suggested that in some member states a contribution to the cost of research projects by animal breeders (in cash or in-kind) had proved successful in obtaining government funding to conduct research on the dairy populations, as it shows the commitment of industry to obtaining such research results.

3. Another problem issue identified was that the Czech research centres and Universities working in genomics are, on the whole, not as scientifically advanced as the leading International centres conducting research in this area. Chris Warkup responded that maintaining competitiveness is an important issue throughout the EU, as there are large and well funded programmes undertaking high-quality research, in countries such as the USA and Australia. However, to strengthen national research capabilities, there are existing opportunities for Czech Scientists (and those from other new member states) to undertake training in leading European research centres by utilising various EU funds (two examples include the "SABRE – Cutting Edge Genomics for Sustainable Animal Breeding" Integrated Project, in which funds are available for scientists from new EU Member States to spend time working in a SABRE partner (33 partners in the project) so as to help disseminate existing knowledge to spread best practice, and the Quantitative Genetics and Genome Analysis MSc course at Edinburgh University also has various funds available, including Marie Curie funding. For more details, see respectively; <http://www.sabre-eu.eu/GetInvolved/Training/tabid/195/Default.aspx>, www.qgen.co.uk

4. The participants were asked what areas they would want to prioritise for EU research expenditure? A response was made that there are concerns that although the EU spends money on research into new technology, in contrast, EU policy also sometimes restricts adoption of new technologies (such as those related to Genetically Modified Organisms, or GMOs). Chris Warkup then explained that although Technology Platforms are led by industry, the view of the TP has to take account of the wider political and societal agendas, including consumers' concerns. A question was raised as to if it is important that the EU undertakes research in relation to GMOs and other similar related biotechnologies? A response was made that even if the EU do not decide to apply these technologies, it is important to conduct research into these technologies so that we have EU scientists with the expertise to understand them and make decisions on them in future. Another comment was made that this is important particularly as other countries throughout the world are making significant advances in this area, and the EU risks being "left behind". The audience were then asked for a show of hands as to whether or not they thought the EU should be undertaking research into GM animals. The overwhelming majority view was that the EU should be undertaking research in this area.

5. In dairy cattle breeding, it is important to address the conflict between increased selection for milk production and worsening levels of inbreeding. Concentration of breeding companies will make this problem even worse. A question

was asked as to how genomics can provide a solution to this, and help maintain biodiversity, and it was also stated that this issue is more important than investment in cloning research, which would benefit breeding companies more than individual dairy farmers. Chris Warkup explained that some tools are already available to address this issue, and some breeding organisations already utilise ‘Contribution Theory’ to manage inbreeding and optimise genetic gain. Furthermore, the increasing availability of molecular information provides a good way to examine and manage biodiversity at the genome level.

6. For the sheep and beef industries, it is important to develop breeding programmes relevant to low input breeding systems, i.e. in sheep production, research on lamb survival, disease resistance, maternal qualities etc is important, in addition to research focussing on production traits.

7. The view was expressed that it is important that the list of research priorities include digestion and gut health.

8. The Czech pig industry has suffered from cheap pig meat imports, which have reduced Czech pig production. There is a need for research to focus on production of high-quality products within the EU, and within the Czech Republic, so as to help safeguard local production systems which are based on providing high-quality products. This related to the ‘Distinctive Europe’ aspects of the Vision document.

9. A number of questions were then posed to Chris Warkup, who responded as follows;

Q – What are priorities in other member states?

A - These vary from state to state, in some states applied technology transfer is important, and in others, more focus is placed on cutting-edge science. A general view is that the more southern member states are very keen to ensure sheep and goats are properly represented.

Q - What happens if the Czech Republic does not state priorities for research?

A - This is a missed opportunity to feed into the EU platform, and to help establish Czech and EU research priorities.

Q - Is their EU funding to assist with the establishment of national platforms/mirror groups?

A – Not from the existing project. There is a need for this to be addressed by the Czech research and industrial organisations, and the platform will benefit both in terms of serving as a platform for the Czech Republic to make a valuable contribution to the Technology Platform, and to harmonise the animal breeding and reproduction community at a national level.

Q - How important should the national platform be, and what are its powers?

A - The national platforms will have no “official” power. Each individual can already respond and comment on FABRE. However, well supported mirror groups would have a much stronger voice. They would have the opportunity to feed into EU policy. Potentially, they are equally important at national level, co-ordinating research and industry and their efforts, and to prioritise areas for research (addressing industries needs and informing researchers of important topics to address).

Q – Will the FABRE-TP help to get research funding from EU?

A - One of the aims of the TP is to allow input into prioritisation for formulation of future research calls. Projects will not be submitted by the TP, but rather research groups involved in the TP. The same applies nationally, i.e. a mirror group could work with government to exemplify why animal breeding is important to the Czech economy, and why it is important research is conducted in this area, and in what specific areas local funding needs to be applied.

10. It is important to note that this is just the start of the process, and that those involved in Czech animal breeding and reproduction will have continual opportunities to feed into FABRE, either through a National Mirror group if this is set up, or immediately and individually, via the FABRE website: <http://www.fabretp.org>

Participants

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