

FABRE European Technology Platform

Iceland meeting, Reykjavik - 25, February 2008

Andrea Rosati welcomed those attending and introduced the reason for the meeting. He then gave a brief introduction to EAAP. Chris Warkup briefly described Genesis Faraday and then delivered the standard FABRE-TP presentation, explaining what European Technology Platforms are and the operation of FABRE-TP, before giving an overview of the Strategic Research Agenda Priorities.

Twelve delegates were present representing both industry and the research base from Iceland.

At the start of the discussion it was confirmed that Iceland has no group at the moment that would provide local strategic planning and act as a Mirror Group to feed into the main Technology Platform. The small group of relevant Icelandic individuals meet regularly and know each other well, but there is not a formal process for reviewing strategic planning. Iceland has Councils of professionals for each species that tend to focus on priority setting only for their species. The meeting considered that it would be possible to bring these groups together to provide the infrastructure for more cross-species strategic planning. It was considered by those present that the Farmers Association and the University would be well placed to get cross-sector discussions back on the agenda.

It is extremely important for Iceland that FABRE-TP and the SRA recognise the genetic isolation of the Icelandic breeds – these are small populations of native breeds of sheep, cattle and horses, where tools for the management of genetic diversity is a real priority. Within these breeds, ‘new’ traits of interest are important to identify valuable characteristics of these breeds. Therefore phenomics is a high priority for R&D. Characterisation of breeds by extensive phenotyping is an ongoing activity.

Behaviour genetics is of real interest – an example being ‘Leader’ sheep or fecundity genes in sheep.

Some farmers have taken the initiative to automate data capture – the meeting participants considered it would be good to see more work on automation of data capture.

There is no tradition of crossbreeding in Iceland – all the 450,000 plus sheep are one breed. Conception rates of 70% to trans-vaginal AI from fresh semen are being achieved (about 8% of matings). Good genetics links have been established to provide genetic connectedness for whole breed BLUP analysis. More research to deliver better results with frozen sheep semen would be welcomed within the ‘improvement of existing reproductive technologies’ heading of the SRA.

Diary cows – the Icelandic native breed (about 27,000 head) is a small breed with average production of about 5,500 litres, but a huge range with individual cows up to

13,000 litres. The cows may have an unusual range of casein alleles and have a low frequency of the A1 allele.

Horses – the Farmers Association runs the International database for the Icelandic horse (www.worldfengur.com) with about 75,000 horses in Iceland and about twice as many in other countries. The horses are BLUP'd for type, behaviour and performance traits.

Goats – there is an endangered native breed of goat. Currently this is of little economic value in Iceland.

There was some discussion of sheep genomics and Chris advised that if Icelandic researchers wanted to access a new sheep SNP panel, they should contact Hutton Oddy at the University of New South Wales or John McEwan at AgResearch in New Zealand.

Iceland has in place or is researching breeding programmes for Arctic Char and Cod. The right people for this topic were not at the meeting, but it was agreed to obtain their input. The need to be able to use plant protein as feed is a universal challenge. There is also ongoing work to domesticate Halibut.

The delegates thanked FABRE-TP for attending and providing the inputs. Overall the SRA covered the research needs of Iceland. The emphasis for Iceland would be the genetic variation and special characteristics of local breeds, especially horses, cattle, and sheep. Health status would also be a priority.

Andrea and Chris thanked the delegates for attending the meeting and their helpful discussion. The next steps were explained and continued input was encouraged.

Attendance at the Iceland meeting

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