58th Annual Meeting of
European Association for Animal Production (EAAP)
Dublin, Ireland
August 26-29th, 2007

1. The Congress

The EAAP annual meeting gives the opportunity to present new scientific results and discuss their potential applicability in animal production practices. The 2007 meeting was of particular interest for participants from a wide range of animal production organisations and institutions, especially coming from the ten new countries that joined EU in May 2004. Discussions at this meeting also stimulate developments in animal production and encourage research on relevant topics.

2. Highlights

The Congress provides a very good opportunity to gain scientific knowledge applicable to the Canadian context, to increase the awareness of Canadian achievements in other countries and to network with key institutions at the international level.

Scientific Program

The Congress was held for five days, with 39 sessions in total. About 800 papers were presented, including theatre presentations and many posters. A complete list of the sessions is given in Appendix 1. Following themes were especially useful for our pork industry:

- Disease transmission and epidemiology
- Environmental pollution through pig production
- Sustainable animal production - Biological aspects related to milk and meat quality
- Uniformity in pigs
- Free communications on Animal Genetics
- Statistical analysis of genomics data
- Free communications on Pig Production
- Applications of molecular genetics to breeding programmes
- Nutrition and management of lactating sows
- Feed for Pig Health

Among all the information presented during this congress, a few outstanding presentations with specific emphasis on swine genetics were given:

- The session on uniformity in pigs included papers (mostly from Denmark, France and The Netherlands) on factors affecting variability in pigs, from birth to slaughter, including feeding, management and genetics. Breeding strategies for uniformity were discussed, based on canalizing selection for birth weight, carcass weight or meat quality.
- Several sessions included recent studies on the use of molecular genetics in swine breeding, in relation with several on-going or past EU projects. This topic was also widely present in other species, especially dairy ad beef cattle. With the genome of several species already sequenced (cattle) or about to be (swine, sheep), a lot of projects deal with ‘post-sequencing strategies’ in order to optimize the use of

molecular information. A lot of new developments are going on statistical models and SNP programs.

- A very well attended session was on Statistical analysis of genomics data. Bill Muir presented the concept of genomic selection as a break though for application of markers assisted selection to traits of low heritability and discussed the pros and cons. Genomic selection (GMAS) was compared with BLUP under a range of heritabilities. Following up on the presentations made by Bill Muir in Ottawa at previous genetics committee and other meetings, the concept of using molecular information only without any phenotypic records was presented. He described the generations required for training the genomic information for selection later on and number of generations one can "coast" on that information while no further phenotypic data is recorded. Under low heritability, four generations of GMAS exceeds BLUP while BLUP plateaus. GMAS continued to yield higher accuracy than BLUP for over 7 generations past the training. For traits with heritability, the accuracy of GMAS was 45% more than BLUP with three generations of training (recording phenotypic data). It is better to have fewer numbers of numbers and more generations of training than other way round. Imprtant question in the methods for genomic selection relate to accounting for epistatic effects.

Plenary sessions were also held, giving status information about several on-going European projects, for instance the Sustainable farm animal breeding and technology platform (FABRE TP), which involves many research teams in animal breeding.

The complete scientific programme is available on http://www.eaap.org/Dublin/index.htm. Videos of some presentations are also on line.

Announcements were made about the launching of a new scientific journal, ANIMAL, which is owned by BSAS (British Society of Animal Science), INRA (Institut National de la Recherche Agronomique) and EAAP. It is actually the merging of three former journals: 'Animal Science', 'Animal Research' and 'Reproduction, Nutrition, Development'. The first issue was released in February 2007. The journal website is http://www.animal-journal.eu/

Presentations from CCSI

Two posters were presented by CCSI:

1. Effect of breed, sex and slaughter weight on performances of Canadian purebred pigs. *Maignel, L., P. Mathur, F. Fortin and B. Sullivan*
2. Use of IGF2 gene tests for carcass quality and sow productivity in Canadian pig populations. *Mathur, P.K., Y. Liu, L. Maignel, B.P. Sullivan and S. Chen*

They both receive good comments and initiated discussions and new contacts with swine researchers working in the same areas.

Networking

This congress is always a good opportunity to keep informed about recent work in animal production, especially in genetics and pig breeding, in European countries. Moreover, over time other countries are more and more represented, especially US, Australia and African countries. There were several requests for a larger participation of Canada in the next years. Above all, EAAP is a good place where to network with scientists and key individuals in homologous organizations.

There were interesting discussions with several European working groups involved in international genetic evaluation, the collaboration with France being cited many times as a good example in a context of growing competition.
Several scientists from IFIP (Institut du Porc), and INRA France (Institut National de la Recherche Agronomique) also attended the meeting and it was a good opportunity to provide some updates on areas of collaboration. Contacts with other homologous organizations were made at the meeting (from Switzerland, Germany, Ireland, Spain, Sweden, etc) and might lead to further collaborations.

Appendix 1

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Meeting sessions

(www.eaap.org/Dublin/index.htm)

- Session 1. Breeding for robustness in cattle - part 1
- Session 2. Regulation of milk synthesis
- Session 3. Disease transmission and epidemiology
- Session 4. Impact of feed processing on nutritive value
- Session 5. Environmental pollution through pig production
- Session 6. Human-horse relationships
- Session 7. Changes in land use due to the CAP reform
- Session 8. Sustainable animal production - Biological aspects related to milk and meat quality
- Session 9. Open session - Uniformity in pigs
- Session 10. Free communications on Animal Genetics
- Session 11. Use of crosses and dairy calves for beef production
- Session 12. Herd and stable management: health and performance issues
- Session 13. Understanding and assessing farmers' decision making
- Session 14. Artificial Insemination
- Session 15. Sustainable animal production - Productivity aspects related to milk and meat quality
- Session 16. Genetics and physiology of behaviour in relation to housing and transport
- Session 17. Breeding evaluation in horses
- Session 18. Statistical analysis of genomics data
- Session 19. Free communications on Animal Genetics
- Session 20. Free communications on Animal Nutrition
- Session 21. Free communications on Animal Management and Health
- Session 22. Free communications on Animal Physiology
- Session 23. Free communications on Livestock Farming Systems
- Session 24. Free communications on Cattle Production
- Session 25. Free communications on Sheep and Goat Production
- Session 26. Free communications on Pig Production
- Session 27. Free communications in Equine nutrition and physiology
- Session 28. Maximizing forage and pasture use in the diet of herbivores
- Session 29. Applications of molecular genetics to breeding programmes
- Session 30. Crossbreeding in ruminants
- Session 31. Approaches to livestock farm multifunctionality
- Session 32. Nutrition and management of lactating sows
- Session 33. Open session - Ruminant Nutrition
- Session 34. Biology and genetics of udder health
- Session 35. Feed for Pig Health Workshop
- Session 36. Horse production in Ireland / tour
- Session 37. Free Communications on Cattle Production
- Session 38. Free communications on Animal Genetics
- Session 39. Breeding for robustness in cattle - part 2