

The 9th Discover Conference on Food and Agriculture was held November 2-5, 2004 at the Plains Hotel in Cheyenne, Wyoming. "Protecting and Managing Animal Genetic Resources for Future Generations: The Next Steps", attracted approximately 80 U.S., Canadian and European registrants from the livestock industry, universities and governments.

The conference provided a unique opportunity to follow-up on the progress made in securing animal genetic resources since the 3rd Discover Conference which was held in November of 1999. The 3rd Discover Conference provided a launching point for the USDA/ARS National Animal Germplasm Program (NAGP). Therefore, the 9th Conference provided an opportunity to take stock of what has been accomplished over the past five years and how to address animal genetic conservation issues over the next five years.

There was a consensus that the program had made significant progress in addressing the animal genetic diversity agenda. At the time of the conference the national collection had grown to 150,000 samples of semen, embryos and blood from:

- 63 breeds of cattle, swine, sheep and goats,
- 43 chicken lines, and
- 17 aquatic species.

In addition, sufficient germplasm has been collected to meet minimum breed security targets for the following breeds or lines: cattle (Holstein, Jersey, Angus, Hereford, and Salers), swine (Meishan, commercial line from Danbred), and chickens (15 lines of research populations). Since the 3rd Discover Conference six species committees have been formed, regularly meet and providing NAGP staff with assistance in identifying populations to collect and the execution of germplasm collection. In total there are more than 60 industry, university and government agency species committee participants.

Presentations were categorized into the areas of: issues driving genetic diversity (economic valuation of genetic resources, biosecurity, industry perspectives, and in-situ conservation); species committee reports (providing an update on committee actions and the status of germplasm collection); cryopreservation (focusing upon collecting materials other than semen and embryos, and issues that still impede the collection of semen and embryos); and genetics (that focused upon utilization of the collection for expanding our knowledge of livestock genomes and how the GRIN information system will have to be developed to accommodate the linkage between the collection, phenotypic data, and genomic databases).

During the meeting there were species and cross species breakout sessions. From those sessions several over-arching themes emerged, in addition to the continued collection of germplasm and tissue and included:

1. Develop a targeted approach to collecting germplasm utilizing pedigree/clustering approaches and/or molecular genetic approaches;

2. Compare the genetic variability between collected germplasm and the in-situ populations;
3. Initiate collecting tissues other than semen, and where techniques are deficient develop effective approaches;
4. Develop a comprehensive mechanism to address potential intellectual property issues;
5. The need for NAGP to establish in-situ conservation efforts on selected populations;
6. The need to sample livestock breeds that are currently outside the U.S; and
7. Insure that GRIN is developed in such a manner as to address the needs of the range of species and targeted users.

The program committee for this conference included Harvey Blackburn, USDA/ARS/National Animal Germplasm Program; Larry R. Miller, USDA-CSREES-PAS; Darrell Anderson, National Swine Registry; Dennis Funk, ABS Global; Ronnie D. Green, USDA-ARS Food Animal Production; F. Abel Ponce de Leon, University of Minnesota; Muquarrab A. Qureshi, Animal Genetics, USDA-CSREES; Terry S. Stewart, Purdue University Department of Animal Sciences; Terrence R. Tiersch, Aquaculture Genetics, Louisiana State University Agricultural Center; Bill R. Baumgardt, DISCOVER Opportunities; and Molly Kelley, ADSA DISCOVER Conference Series.

For more conference information, including interpretive summaries of each speaker's presentation, go to <http://www.adsa.org/discover/>. The DISCOVER Conference Series is a program of the American Dairy Science Association.