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SOCIÉTÉ CANADIENNE D'ENREGISTREMENT DES ANIMAUX



C.L.R.C. WORKSHOP REPORT - 2007

The Annual Workshop presented by CLRC was held on April 14, 2007 at the Westin Bristol Place Toronto Airport Hotel in Toronto, Ontario. Again this year, the Workshop was a half-day event in the morning, followed by the CLRC Annual Meeting in the afternoon. Approximately 24 representatives of various breed associations were on hand for this very informative morning.

After an enjoyable continental breakfast, CLRC Chairman Sheryl Blackburn welcomed all of those present.

Following is a brief summary of each of the three presentations:

1. Brian Sullivan, Canadian Centre for Swine Improvement (CCSI)

Brian spoke on Internet Tools for Canadian Livestock Breeders, particularly on tools that CCSI has available to swine and goat breeders, but which could be adapted for other species. For both species, the website provides instant access to detailed genetic information, and to new developments as soon as they are available. Besides researching many years of historical data on many animals, there are also tools to enter data, make breeding decisions, and monitor herd improvement and genetic diversity.

Pigs on the Web has data for over 3,000,000 pigs collected over 30 years, and so provides a great deal of information on trends in the national swine herd for traits such as litter size, backfat, age at market weight, loin eye area, and feed conversion.

For individual animals, one can research an animal's ancestry and progeny (through links to the CLRC Members and Pedigrees site), test results and genetic evaluations (Estimated Breeding Values), and inbreeding levels.

Using the Computer Dating tool, breeders decide on their breeding goals, select the boars and sows they are considering for mating, and then receive expected mating results, calculated from the information on numerous traits that is in the database for those pigs.

Similarly for goats, there is information in the database for yield and percentage of milk, fat and protein, and for various conformation traits, as well as pedigree and inbreeding information.

Again, this information can then be used by breeders to help them make selection decision regarding breeding and culling, and to let them see the estimated value of particular matings before they actually perform those matings.

2. Dr. Carl Lessard, Canadian Animal Genetics Resources Program, Agriculture & Agri-Food Canada

The Canadian Animal Genetics Resources Program is a joint initiative of Agriculture and Agri-Food Canada and the University of Saskatchewan. The stated mandate of the program is to describe, preserve, support and increase the utilization of the genetic diversity in farm animals of socio-

economic importance. This will be done by building a repository of germplasm, and, through research, adding to the value of that repository.

As to the reasons for genetic conservation, Dr. Lessard said that without genetic variation, there is no gain or progress, and that once a gene is gone, it is gone forever. He showed several graphs indicating that the inbreeding level in Canadian livestock of various species has increased dramatically in the past 30 years. Factors that have contributed to the loss of genetic diversity include:

- the intensification of agriculture, with its use of modern reproductive technologies such as artificial insemination and embryo transplants
- marker assisted selection, which increases selection intensity while reducing genetic variance
- concentration of the breeding population in fewer and fewer hands
- economic pressures to emphasize increased production

The loss of genetic diversity then leads to reduction in production, breed extinction and socio-economic losses.

The steps necessary for the conservation of genetic diversity were outlined as follows:

1. Inventory- Database of breed status and effective population size, of the number of breeding lines and of the population trends over time.
2. Evaluation of the various breeds and bloodlines including phenotypes, unique characteristics, genotypes, genetic relatedness and genetic merit for conservation.
3. Establishment of a repository with active collection and industry participation, including donations.

The program is seeking donations of semen, embryos, gametes, and DNA from individuals, breed associations, A.I. centres and others. Each donor will sign an agreement form setting out the obligations of the donor and of Agriculture and Agri-Food Canada as the recipient. Donations will be used for both research and preservation.

The program is also conducting research to develop better methods for storing and preserving the genetic material. Agriculture and Agri-Food Canada has committed \$1.1 million dollars for this part of the research.

In closing, Dr. Lessard stated that they are very dependent upon working with breeders and breed associations to achieve their goals in the program.

3. Vel Evans, Equine Canada

Vel provided an update on the 2006 activities and the 2007 plans of the Breed and Industry Division of Equine Canada. Her presentation keyed in on three main areas:

- a) Government Relations:** Equine Canada staff and volunteers represented the equine industry
- at the Canadian Livestock Identification Agency,
 - on U.S. and international equine committees,
 - on the committee working on the project to develop a “border” at West Hawk Lake on the Manitoba-Ontario for emergency management, so that a disease outbreak contained in one half of the country would not stop movement of horses in the other half
 - to the Canadian Food Inspection Agency (CFIA) with regard to reviewing compensation paid to owners of horses ordered destroyed

- to Health Canada to develop new regulations for drug labeling and veterinarian health practices for horses.

On the compensation issue, the maximum paid to horses ordered destroyed increases from \$2,750 to \$8,000, except for those destroyed as the result of equine infectious anemia, where it decreases to \$2,000. Since this disease is preventable by screening infected horses, CFIA's position is that it is an industry responsibility to control it.

On the drug issue, there have been very few new products licensed for equine use in recent years, which limits veterinarians' ability to provide an adequate level of care without resorting to unapproved products. The process is ongoing but there has been progress in getting new products licensed promptly.

It was also noted that a virulent and contagious strain of the disease EHV, known as EHV-1 NEURO, has appeared in North America and has resulted in the deaths of more than 35 horses thus far. It is currently an Annually Reportable Disease but Equine Canada is lobbying CFIA to have it classed as an Immediately Reportable Disease to improve the timeliness with which containment procedures can be put in place.

Equine Canada is also building a fund to be used to lobby the government to have horses zero-rated for GST.

b) Equine ID: In 2006, the Canadian Cattle Identification Agency and ATQ in Quebec were asked to submit proposals for maintaining the Equine ID database to be known as Can-EQUID. ATQ was subsequently chosen to provide this service.

Can-EQUID will be based on using the visual identification of horses at registration (standardized description and graphic) as the official ID. Breeds will be encouraged to use ISO microchips as a secondary ID.

c) Member Benefits: Belonging to Equine Canada, either individually or as a member of an affiliated association, provides members with several benefits:

- i) International promotion of Canadian bred horses at trade shows and equine events
- ii) Internet marketing on Equine Canada website
- iii) Members First Program – discounts for Equine Canada members on John Deere farm equipment, Dodge trucks, Sherwin-Williams paint, and UPS courier services, with more to come.

All of the presenters answered a number of questions from the floor.

For further information, visit the following websites:

CCSI: www.ccsi.ca

CAGRP: e-mail plantey@agr.gc.ca

Equine Canada: www.equinecanada.ca

Next year's Workshop will be held on Saturday, April 5, 2008 in Calgary.

Prepared by Ron Black, General Manager, from the Powerpoint slides used by the presenters.
May 3, 2007