CANADIAN LIVESTOCK RECORDS CORPORATION
OUR 100th YEAR SERVING THE CANADIAN AGRICULTURE INDUSTRY
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SOCIÉTÉ CANADIENNE D'ENREGISTREMENT DES ANIMAUX

C.L.R.C. WORKSHOP REPORT - 2005

The Annual Workshop presented by CLRC and organized by Vice-Chairman Sheryl Blackburn was held on April 1, 2005 at the Lord Elgin Hotel in Ottawa, Ontario. Approximately 20 representatives of various breed associations were on hand for this very informative day. Also present for the morning sessions were all of the registrars on the CLRC staff.

CLRC Chairman Dan Stephenson welcomed all of those present and Sheryl Blackburn introduced the various speakers throughout the day.

Following is a summary of the presentations:

1. <u>One Hundred Years of CLRC – The Role of the Federal Government and Changing Trends:</u>
- by David Trus, Animal Registration Officer, Agriculture and Agri-Food Canada.

David started his presentation by posing the question "Where is the Trend?''. He stated that, in promoting Breed Improvement, the role of the federal government is changing, while the roles of breed associations, of CLRC, and of genetics and genetic improvement have stayed much the same. He noted that the perceived value of genetics and genetic improvement by industry and by the public varies widely. In order for a program to be perceived as having value, it must offer usefulness and consistency, with the benefit outweighing the cost.

The changing role of Agriculture and Agri-Food Canada has been to privatize the genetic improvement programs, and to be more involved with issues of Food Safety and Health and of Quality Assurance.

David traced the development of agriculture in Canadian society from the subsistence agriculture of the early years, through the land settlement years to a mature, competitive and diversified industry in an industrialized society, producing for both the domestic and export markets. As agriculture developed in Canada, policies and laws regarding agriculture and livestock were put in place. These included laws on fencing and strays, animal cruelty, branding, animal health, marketing standards and animal improvement and breeding. Agriculture was also greatly changed by technological changes, including electricity, tractors, and transportation. Specifically, David spoke of the changes in genetics and breeding, starting with the creation of breed societies in the 1800's, and the development of livestock shows in the mid to late 1800's. In the early 1900's, there was the start of performance recording, the use of Mendelian genetics in selection of breeding stock, progeny testing and the creation by the government of several experimental farms for research. This was followed in the mid 1900's by genetics research on statistical methods, selection index and advance prediction methods, the discovery of DNA, the development of artificial insemination, parentage verification by blood typing, and the creation of synthetic "breeds". In the later 1900's, breed registries and genetic

evaluation systems were computerized. Embryo transfer, DNA typing, marker assisted selection and transgenic animals all became realities.

David went on to note the involvement of the federal government in the creation of CLRC. After several breed associations were established in the late 1800's, the lack of a national legal framework under which to operate, and the inconsistency as to how pedigree registries were being handled, caused the associations to request he Minister of Agriculture to put appropriate national legislation in place. The Hon. Sydney Fisher had a large role in the creation of CLRC in 1905, calling the meetings that resulted in the establishment of a national system, but creating it such that control belonged to the breed associations.

Graphs and statistics showing trends in registrations of various breeds of swine, dairy cattle and heavy horses through the century were presented and examined. It was noted in swine, for example, that Berkshires and Tamworths were registered in large numbers early in the century, but as lard type hogs fell out of favour later, those registrations decreased dramatically. In heavy horses, all breeds, especially the Clydesdale, had many registrations until mechanization occurred; then after 30 or more years of very few registrations, the numbers increased again as disposable incomes increased and heavy horses became a popular hobby an show animal.

David then reviewed some of the significant changes implemented in the Animal Pedigree Act of 1988. These include: the stated purposes of the Act being to promote breed improvement and to protect breeders and buyers; the recognition of breeding stock other than purebred: the recognition of assisted reproductive technologies (e.g. artificial insemination and embryo transfer); and the recognition of both distinct breeds and evolving breeds. The Act also established CLRC as a corporate body and ended the practice of Agriculture and Agri-Food Canada approving all certificates.

David closed with the question "What is Next for Livestock Breeding?". His answers to that question included: questions of access, control and rights to genetics; maintaining genetic diversity: the ability to co-operatively manage livestock breeding populations; animal health and disease control; traceability; and animal welfare.

N.B. A printed copy of the slides David used is available by contacting CLRC.

2. <u>The Place of Minor Breeds in the Livestock Industry:</u>
Eric Lawlor, Ontario Ministry of Agriculture and Food.

Eric drew heavily on his own experience as a breeder of Dexter cattle in making his presentation. He indicated that if we are to have the capability of diversifying genetics from time to time, it is important to maintain a viable population of the minor breeds as well as the more common breeds. Breeders of minor breeds should, however, be particularly aware of both the desirable and undesirable characteristics of their breed and then make their breeding choices accordingly.

Eric also talked about several methods of marketing your animals. Often with minor breeds, the first step is making a larger number of people aware that the breed exists. Among the methods discussed were print advertising, either corporate or by individuals, in various types

of publications, attendance at shows, Internet advertising, and direct contact with potential customers. Some pros and cons of each method were identified.

3. Update on National Equine Identification Strategy:
Ron Black, CLRC

I gave a brief update on progress toward implementation of a national identification strategy for horses. This initiative is under the leadership of Equine Canada, which will represent the equine sector at the Canadian Livestock Identification Agency. In its initial stages, the strategy will be voluntary, will be phased in over time, and will make use of the data currently being collected by breed registries and sport associations. Every horse will be assigned a UELN (Unique Equine Life Number), which will be the key to the record for that horse. The record will also include contact information for the owner, and a standardized graphic and text description of the horse. There is ongoing work to identify a physical device for identification in the future.

More information regarding the identification strategy can be found on the Equine Canada website www.equinecanada.ca.

4. Panel Discussion:

In the afternoon session, David Trus moderated a panel discussion on the topics of genetic improvement and genetic diversity.
The participants were:
- Dr. Jacques Chesnais, Senior Geneticist, The Semex Alliance
- Yuefu Liu, Canadian Centre for Swine Improvement
- Bill desBarres, Chair Breeds and Industry Division, Equine Canada
- Eric Lawlor

Dr. Chesnais gave a presentation regarding genetic improvement in dairy cattle, particularly Holsteins. He referred to the increasing number of traits being recorded, such as somatic cell counts as an indicator of animal health, and the stayability of animals in dairy herds. He also spoke about calculating inbreeding percentages.
Mr. Liu gave a technical presentation regarding the use of molecular genetics in the seine industry, noting two genes in particular that have been identified and are being used to improve certain qualities of the meat.
Mr. desBarres noted that the horse industry is far behind come of the other sectors in genetic improvement. He noted that there has been some work done regarding colour patterns in breeds such as Appaloosa, Pinto and Paint Horses.

Several questions were posed from the floor, which created some very interesting discussion to close the day's program.

Prepared by Ron Black
May 5, 2005