



Canada's

Agriculture, Food and Beverage
INDUSTRY

Canada's Dairy Genetics Industry

Canada has a long tradition of dairy cattle improvement. Milk production and dairy cattle performance have attained high levels, thanks to long lasting investment on genetic improvement programs. It all started when the Canadian Record of Performance (R.O.P.) program was established in 1905 with the objective of "testing of individual purebred dairy cows for full milking periods for the purpose of securing for dairy farmers reliable information as to where sires from high producing ancestry may be secured".

That objective is still relevant today. While many things have changed over the past century, the need for good, sound information remains



National Milk Recording

The R.O.P. program, which had been run by the Government of Canada, was gradually privatized beginning in 1985.

The national database not only serves as a production analysis tool but also as an important instrument in the exchange of production data between partners and the Canadian Dairy Network (CDN). Production and other data is sent on a weekly basis to the CDN.

All test day records submitted to the CDN for inclusion in genetic evaluations are from herds using milk weighing devices that are

approved by Canadian Dairy Herd Improvement (Canadian DHI) and verified annually for accuracy by a Canadian DHI-approved milk recording agency.

All-breed Type Classification

Type classification programs are offered by all dairy breed associations. By participating in a regular type classification program producers receive valuable information for mating their cows to improve weaknesses of the cow and the herd. As well, their increased knowledge and awareness of desirable feet & legs, mammary and rump characteristics will help manage their herd in the areas of mobility, udder health and reproductive performance.

Canada is recognized worldwide for the excellence of its type classification program as well as the accuracy and stability of the resulting genetic evaluations. With a breeding goal that combines high production with desirable conformation contributing to increased longevity, the value of type classification in Canada is significant.

Genetic Evaluation

Canada was the first country in the world to implement a multiple lactation, multiple trait test day model genetic evaluation system back in February 1999. Genetic evaluations for milk, fat and protein yields, fat and protein percentages, somatic cell score and lactation persistency are calculated using a very sophisticated system called the Canadian Test Day Model. The name of this methodology comes from the fact that every test day record on each cow from the first 305 days of her first three lactations is used. Geneticists worldwide recognize the advantages of using test day information instead of lactation data and various countries are now also using a test day model.

Increasing Milk Production

The average production of dairy cattle on a publishable milk recording program in Canada is currently more than double the level achieved in the early 1960s. With the combination of quality genetics and innovative farm management practices, that level continues to grow.

The Canadian dairy industry is a mature industry with per capita consumption of dairy products at 125 kg per person. Due of the maturity of the market, the national production level of milk has remained relatively consistent over the past three decades. The stable national production level, combined with increased production per cow, has resulted in the need for a smaller national herd. The national herd has decreased from 2.4 million head in 1970 to 1.07 million head in 2005. In general, farms in Canada are more specialized than they were decades ago. Dairy farms, becoming less diversified and focusing more on milk production, have decreased from 122,194 to 16,970 with the number of cows per farm increasing from 19 to 60 and the average production per farms increasing to 447,318 litres.

Herd Management is Key

While genetic improvement is a crucial factor, these production increases would not have been possible without advances in herd management, herd health and animal nutrition. As cows continue to improve genetically, we must also improve nutrition and management to allow the cow to produce to their inherited potential. A good feeding program must consider the quantity of feed, the quality of the feed and how and when the feeds are offered

Learning from the Past

The strength of the Canadian dairy genetic programs is the fact that all industry stakeholders work together in order to

advance the genetic progress of the individual breeds.

The collaborative efforts between producers, researchers, regulators and allied industries will bode the industry and its supporting programs well as they move forward.

On the world stage

The Canadian dairy sector has developed a cattle population of the highest genetic level in the world.

This is based on strong milk recording and genetic evaluation programs. Genetic material from Canadian dairy cattle, recognized for their ability to produce high quantities of milk over many lactations, is exported to more than 65 countries.

Major export markets include North America, China, the European Union, Japan, South America, Australia and the Middle East.



Additional information

Approximately 80 per cent of Canada's dairy farms are in Ontario and Quebec; with the rest being in the Western provinces (14 per cent) and the Atlantic Provinces (6 per cent).

In 2003-2004, 1.06 million cows on 16,970 dairy farms produced close to 76 million hectolitres of milk.

For More Detailed Information

The Canadian Dairy Information Centre (CDIC) is a partnership between:

- Dairy Farmers of Canada (DFC)
- Canadian Dairy Commission (CDC)
- Agriculture and Agri-Food Canada (AAFC)

These three organizations work in partnership to create a comprehensive site on the Canadian dairy industry. The CDIC is the Internet reference for up-to-date market information on the Canadian dairy industry. The CDIC fosters partnerships and information sharing in order to allow the companies and the associations of the Canadian dairy sector to make better business decisions.

CDIC: www.dairyinfo.gc.ca

Further information on products, suppliers and investment opportunities in the Canadian agri-food industry is available on the Agri-Food Trade Service Web site at: www.ats.agr.gc.ca

Canada's food and agricultural products reflect our dedication to excellence, and our deep commitment to safety, quality, environmental responsibility, innovation and service.

In every facet of our industry, we seek to earn the trust of our customers by answering their needs and exceeding their expectations. Those values along with our belief in building strong relationships, have given Canadian agriculture and food products an international reputation for excellence. Customers around the world know that they can trust the goodness of Canada.