Réseau laitier canadien
Canadian Dairy Network

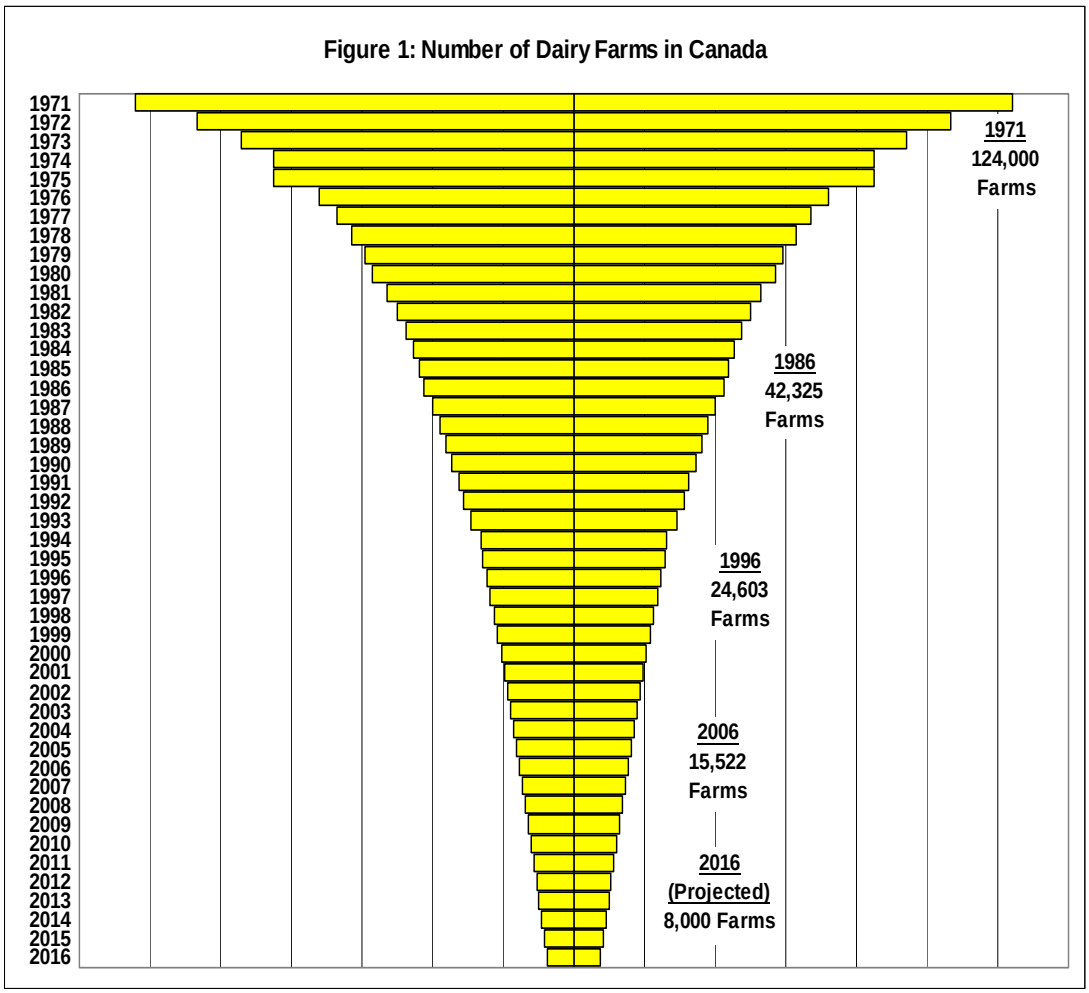
Breed Improvement Programs: Critical to Success and Profitability

Successful genetic selection requires active producer interest and participation in breed improvement programs. First and foremost are the unique identification of each animal and the registration of birth date and pedigree information in the breed association herdbook. Once this basic information is known for a high percentage of animals in the population, the recording of each animal's performance for traits of importance adds major value. In addition, the wide use of artificial insemination allows every herd owner access to semen from elite proven sires as well as the promising team of young sires that enter testing programs each year.

In today's environment within each dairy breed, the list of important traits continually expands and now includes production, type, somatic cell, reproduction, longevity, calving ease, calf survival, milking speed, milking temperament and most recently disease resistance. In Canada, with the exception of type classifications recorded by breed associations and the majority of insemination data being recorded by A.I. organizations, the milk recording agencies across the country are collecting all other dairy cattle performance data. The milk-recording partners within Canadian Dairy Herd Improvement (CDHI) share a common centralized database and a national milk recording processing centre. On a weekly basis, data is exchanged between this national processing centre and Canadian Dairy Network (CDN) in order for genetic evaluations to be calculated and published on each herd's Genetic Herd Inventory report.

Canadian Dairy Farms

While the industry is improving the efficiency of data collection and programs oriented to assist producers in achieving profitable herds, the fact remains that there are fewer and fewer dairy producers in the business each year. Figure 1 shows the evolution of the number of dairy farms in Canada based on actual statistics from 1971 to 2006 and then projections to 2016. Thirty-five years ago, there were approximately 124,000 dairy farms and this was significantly reduced by two-thirds to only 42,000 in the mid-1980s. During the next twenty years, from 1986 to 2006, the number of dairy farms decreased another 63 percent to 15,500. This gradual but steady trend towards fewer dairy farms will undoubtedly continue and it is projected that only 8,000 will remain in ten years from now, which represents another loss of nearly 50 percent. Those remaining producers will have to be excellent herd managers making smart business decisions benefiting from the best services and programs available to them. For an ever-increasing proportion of herd owners, these important programs include herdbook registration, artificial insemination using semen from proven sires and young bulls, milk recording and type classification. These fundamental programs are the basis for calculating genetic evaluations for bulls and cows, which can be used optimally through computerized genetic mating programs to assist in genetic selection decisions.



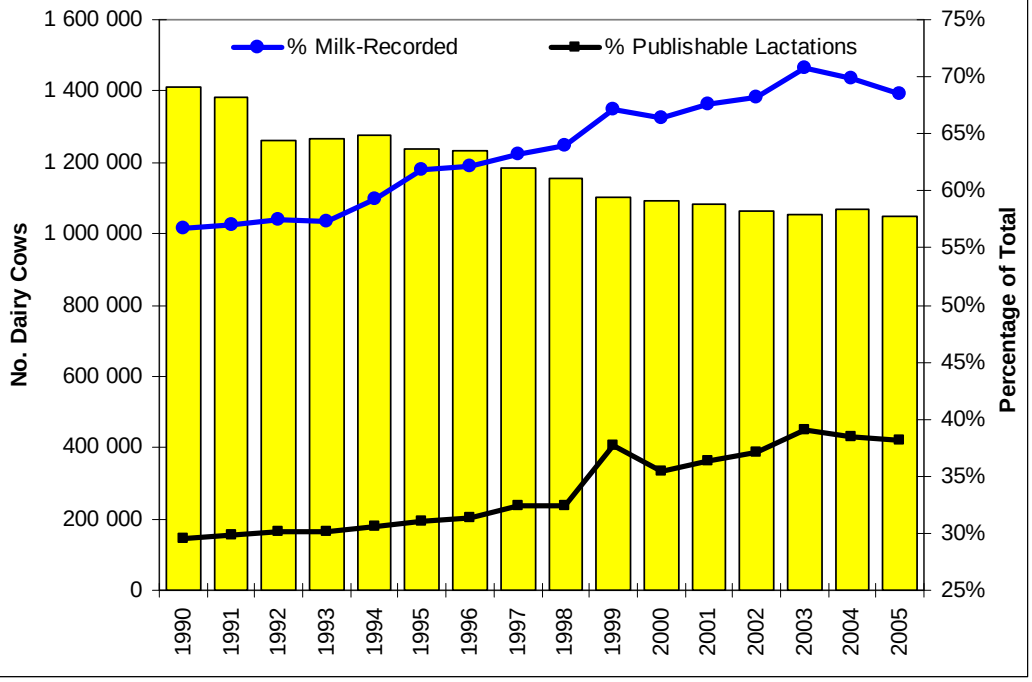
Milk Recording is Critical to Success

While it is impossible to completely separate the various genetic improvement programs since they are so interdependent, it is critically important that every dairy producer in Canada enrol on milk recording and registers all animals in the breed association herdbook. These basic programs provide the fundamental components for recording the herd performance for the vast majority of traits that affect profitability. The use of artificial insemination, especially while qualifying for young sire testing programs, and type classification would maximize the tools available for herd improvement and achieving net profit.

Figure 2 shows the evolution in the number of dairy cows in Canada from 1990 to 2005 as well as the percentages enrolled on milk recording and qualifying for publishable lactations. During this 15-year period, the number of total dairy cows in Canada decreased by 25 percent from 1.41 million to just over one million. Of importance, however, is the fact that the percentage of this dairy cow population that was enrolled on milk recording has increased from 57 percent to nearly 70 percent over the same time period. In other words, cows remaining in the population each year are increasingly within herds enrolled on milk recording since those herd owners have better herd management tools and are therefore more profitable. Also of interest is the fact that

more and more cows are in herds enrolled on a milk recording program aimed at generating officially publishable lactation records. Since 1990, the percentage of the total dairy cow population that was enrolled on "publishable" milk recording has risen from 30 percent to nearly 40 percent, which translates to 56 percent of all cows on milk recording in 2005. Publishable lactations are displayed on official breed association pedigrees and contribute to the computation of annual herd averages, cow awards and master breeder shields, which all serve to recognize the successes of each herd owner.

Figure 2: Trend in Total Dairy Cows and Percentages on Milk Recording and With Publishable Lactations



Summary

There is no doubt that the Canadian dairy industry is changing, almost daily. Various forces affecting dairy producers and the industry in general have a significant impact on the decreasing number of dairy farms remaining from year to year as well as the increasing average herd size. Industry organizations work closely together to gain efficiencies in the breed improvement programs and services offered to dairy producers, including herdbook registration, artificial insemination using semen from proven sires and young bulls, milk recording, type classification, genetic evaluations and computerized mating programs. It is vital that more and more dairy producers see the value of these important programs as fundamental tools for herd management, genetic improvement and overall profitability.

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