

Improving the Value of Auxiliary Trait Information to Canadian Producers

Background

For several years now, herds enrolled on milk recording in Canada have been requested to provide information on auxiliary traits; namely calving ease, milking speed and milking temperament. Although optional to producers, most have recognized the benefit of providing this information in a regular and consistent manner. The recording of auxiliary trait data is valuable for herd management especially if the frequency of difficult calvings and stillbirths increases over time or if first lactation cows show a growing trend of being slower and more nervous at milking. In addition, the recorded data for these traits is used to calculate bull proofs for direct and maternal calving ease as well as for milking speed and temperament, which are important to most producers when making sire selection decisions.

Data Recording

At the time of each herd visit conducted by milk recording personnel, the producer is requested to provide information associated with the birth of each calf in the herd since the last visit as well as an evaluation of the milking speed and milking temperament of each first lactation cow that is between the first and sixth month in milk. The subjective scale for recording this information is described in Table 1.

Table 1: Subjective Scales Used for Auxiliary Trait Data Collection					
Category	1	2	3	4	5
Calving Ease	Unassisted/ Unobserved	Easy Pull	Hard Pull	Surgery Required	----
Milking Speed	Very Slow	Slow	Average	Fast	Very Fast
Milking Temperament	Very Nervous	Nervous	Average	Calm	Very Calm

At the time of each calving, the appraisal of the ease of calving should properly be recorded as well as the calving date, the sex of the calf, the size of the calf (ie: small, medium or large), calf survival defined as whether the calf was alive or dead at 24-hours after birth and of major importance is the registration number of the calf's sire. In cases involving embryo transfer, the registration number of both the genetic dam (ie: donor cow) and the birth dam (ie: recipient) should also be recorded.

For milking speed and milking temperament, the person milking the cows on test day should provide the evaluation. Only first lactation cows need to be evaluated for these traits to reduce the time requirement for data collection. Since these traits are recorded subjectively, the most frequent code in each herd should be “Average” and an attempt to spread the cows across the entire 5-point scale is ideal. Should the milk-recording representative not request the auxiliary trait information, a reminder from the producer is encouraged.

Current Situation

Table 2 provides an indication of the current level of producer participation in providing usable auxiliary trait data by province, based on first lactation cows that calved in 2000 across all breeds. In general, usable calving ease data for first lactation heifers represents only 39% of the total possible number. Although calving ease appraisals are provided for approximately 75% of all calvings, the very low percentage that are usable for genetic evaluation is mainly due to the lack of reporting the identification of the sire of each calf born. Some regional disparity appears to exist with Québec having a significantly higher level of usable calving ease data, but still only to the 50% level.

Province	No. First Lactations In 2000	Percentage With Usable Calving Ease	Percentage With Milking Speed	Percentage With Milking Temperament
Prince Edward Island	2,482	34%	86%	86%
Nova Scotia	3,217	18%	66%	66%
New Brunswick	3,253	20%	88%	88%
Québec	72,338	50%	60%	58%
Ontario	63,727	35%	49%	49%
Manitoba	6,431	36%	69%	69%
Saskatchewan	4,452	22%	40%	40%
Alberta	14,243	23%	49%	49%
British Columbia	12,338	31%	31%	12%
CANADA	182,481	39%	54%	52%

The collection of milking speed and milking temperament data is the most complete of all three auxiliary traits with a national average just surpassing 50%. Since milking speed and milking temperament are recorded at the same time, it is not surprising to see essentially the same level of recording for both traits in each province. The only exception is British Columbia since the recording of milking temperament only started two years ago. The relatively poor level of reporting for these traits will hopefully

improve in the near future since the publication of official bull proofs for Milking Temperament was introduced in August 2001.

Data Accuracy

In addition to data completeness to maximize the value of auxiliary trait information, accuracy is even more critical. Analysis of auxiliary trait data provided in recent years has revealed a few problems affecting the data accuracy. In some herds, it appears that all cows are being recorded in the same category such as "Average" for Milking Speed and Milking Temperament or as "Unassisted/Unobserved" for Calving Ease. This situation may occur when the producer has little interest or time in providing the data or when the milk recording personnel records a standard default value. In any case, provision of this type of information results in no value to the producer for herd management and reduces the variability in the data required for accurate genetic evaluations.

Industry Goals

A.I. organizations offering young sire testing programs rely on accurate data from participating herds to help identify superior sires for production and type traits as well as Calving Ease, Milking Speed and most recently Milking Temperament. Breed associations recognize the value of these same auxiliary traits as they affect cow reproduction, udder health and therefore profitability. Milk recording agencies are shifting to increased emphasis on herd management information that is now starting to include herd statistics for these traits compared to national or provincial benchmarks. All in all, it is clear that a strong, concerted effort to improve the value of auxiliary trait information to Canadian producers is not only needed but should be a unified industry goal of high immediate priority.