7th International Conference on Goats

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In May 2000, I had the opportunity to attend the satellite symposium "Applied genetic programs of dairy goats" being held in conjunction with the 7th International Conference on Goats in Poitiers, France. I was invited by the conference organizers to present a paper about genetic evaluation of US and Canadian dairy goats for milk production and body conformation.

The symposium included presentations from France, Switzerland, Norway, Italy, Spain and Brazil, as well as my presentation. There was a lot of interest in the methods being used in Canada, and in the comparison with the US system. It was interesting to discover that Norway has implemented the same genetic evaluation model that was developed here in Canada based on Dr. Schaeffer's test day model research at the University of Guelph.

From the French presentations, it was clear that there is a huge untapped market for high quality dairy goat genetics. France is actively pursuing these markets, specifically in Italy (since 1988), Mexico (since 1995) and Malaysia (since 1997). These efforts involve training in AI techniques, other technical training and support, and of course use of superior genetics from France. The importing countries appear to be quite satisfied with the results.

The satellite symposium also included technical visits to the goat AI centre (Capri-IA) and to two dairy goat farms in France. One of the farms processed their own milk into cheese on the farm, while the other was shipping to a dairy plant. Very impressive presentations about the French dairy goat industry and genetic improvement program were given as part of the technical tour.

There are one million dairy goats in France, with half of them on milk recording, and 150,000 of these are considered part of the nucleus selection scheme. Genetic selection takes place among these 150,000 goats, and is disseminated out to the remaining commercial producers. Young bucks are selected from the top 500 matings per year, with the best 35 of these being retained after a progeny test. Herds using more than 70% AI in France average 850 kg of milk, compared to only 728 kg per lactation in herds with less than 10% AI.

Effect of AI Use in France
Average milk yield in herds with varying AI usage

Source: Capri-IA, 2000
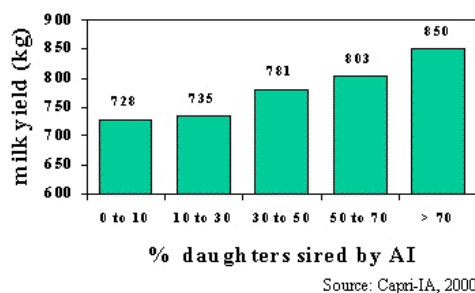
Canada has a relatively small tested population of goats, with only about 1000 being tested per year. Compare this to the 500,000 being tested in France. Nevertheless, the technical expertise exists in Canada on the use of AI and genetic improvement. There could be some opportunity to market this technical expertise in other countries. This could also include genetic evaluation services in countries that have recording programs already in place. The quality of genetics is probably better than many importing countries would have, so in the short term, there could also be good opportunities for exports of genetics to go with the technical support. However, in order for the genetic export market to be sustained and to grow, there needs to be more effective genetic improvement of the Canadian goats.

Importing some semen of top bucks from France would probably give the Canadian herd a genetic boost, and France appears willing to export semen at this time. Ultimately, sustained genetic improvement will require an expansion of the testing program to include more herds in Canada. Otherwise, at best Canada will ride on the coat tails of another country like France. It is also possible that access to foreign genetics could become more restrictive in future, especially if Canada starts to compete for the same export markets.

Canada could also implement a breeding scheme involving limited use of a large number of young bucks based on performance of dams and sisters. More common are progeny testing schemes, like the one used in France. Progeny testing requires large populations, as it aims to get accurate evaluations on each buck by testing a large number of daughters. It also takes several years to evaluate bucks since you have to wait for the daughters to have their first lactations. With this alternative scheme, the focus is on a large group of young bucks, and not on accurately evaluating any individual buck. The evaluation of the group based on records of the dams and sisters can be quite accurate. The approach could be effective even with a relatively small tested population. It would work on large populations as well, but I am unaware if such a program exists yet in the world. It could be another first for the Canadian dairy goat industry.

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