

The Romanov . . . the prolific import

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Several factors have contributed to the steady decline of Canada's sheep industry since the Second World War. Losses from predators, lack of high performance breeding stocks, low levels of management resulting in poor economic returns, inadequate nutritional programs, limited treatment programs for sheep diseases, little product development and quality control, and low retailer and consumer awareness of lamb as an alternative meat source have all been cited in discussions about the decline in lamb and mutton production.

But after all factors are examined, a key constraint to profitable lamb production emerges — the seasonal nature of the industry, or the traditional management system based on a single lamb crop each year. Multiple births were often discouraged because of problems caused by orphan lambs. Nevertheless, the ewe has the biological potential for much higher production levels. Ewes can theoretically produce two crops of lamb a year with special management, or at least three crops in two years with little effort. And many breeds produce larger litters than the Canadian average of about 1.3. So there is genetic scope for crossbreeding for higher production. In total, lambing can be accelerated by crossbreeding and selection, year-round mating, a shorter lambing interval, early mating of ewe lambs, larger litter size and artificial rearing.

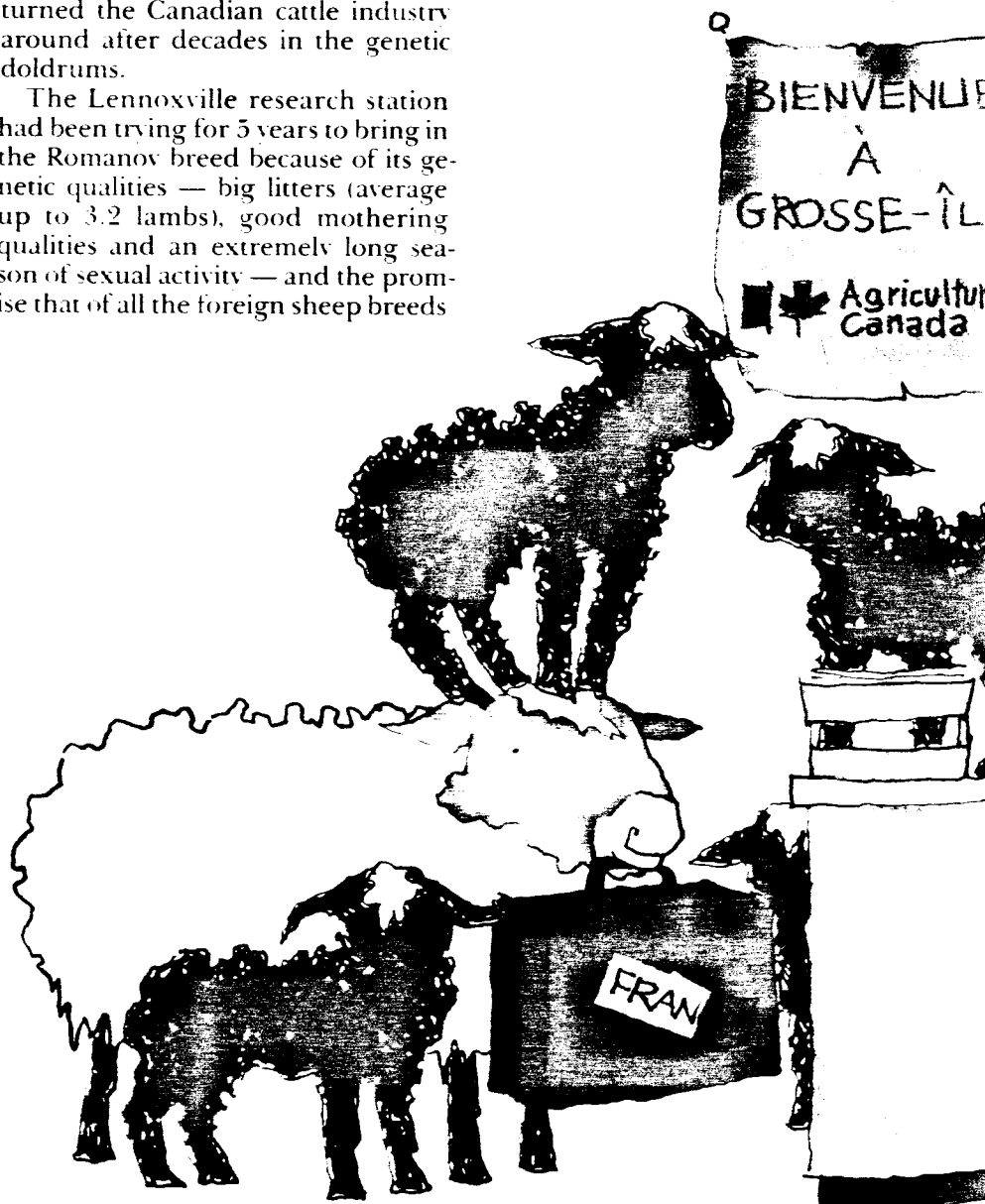
Genetic research and breeding work to produce a superior sheep have been underway in Quebec since 1965 at Agriculture Canada's Lennoxville Research Station and at La Pocatière Experimental Farm. The aim is not just to produce a new breed of sheep that will double Canadian lamb production, but one that will triple the lambs produced per ewe each year. To hit that target, Agriculture Canada now has a secret weapon — 19 adult Romanov sheep, a prolific breed imported from France. The Romanovs came off the quarantine sta-

tion at Grosse Ile in April, 1981. Four ewes took advantage of the 6 months in quarantine and gave birth to 12 lambs. All are alive and well. At Lennoxville the 14 mothers bore 34 lambs and the 5 ewe lambs gave birth to 13 lambs. The Romanov herd now comprises 60 animals.

It is hoped that the introduction of the Romanov breed will be as historic as the 1965 arrival of the first exotic beef breeds. Those European imports turned the Canadian cattle industry around after decades in the genetic doldrums.

The Lennoxville research station had been trying for 5 years to bring in the Romanov breed because of its genetic qualities — big litters (average up to 3.2 lambs), good mothering qualities and an extremely long season of sexual activity — and the promise that of all the foreign sheep breeds

studied, it would have the biggest impact on the established domestic breeds. Specifically, the Romanov was needed to bring up the litter size of the Dorset-Leicester-Suffolk (DLS) flock started at Lennoxville in 1965. So far six generations of the DLS line have been produced. Selection has been aimed at finding a year-round lambing strain. This has been done by



selecting rams from females that lamb early. Many of the best ewes have been lambing twice a year if weaned and bred 14 days after the first lambing. In one group 75% of the ewes lambed twice a year. But the best animals, because they can breed very early in the season, tend to give only one lamb at a time, which is far from the aim of at least four a year.

Crossbreeding of the DLS sheep to the prolific but small-sized Finnish Landrace increased litter sizes to about two lambs a litter. But the lambs' growth rate was slow and mortality high. It is hoped that the Romanov breed can do better than the Finnsheep, and match the results achieved by French breeders who, 14 years ago, obtained 50 Romanov sheep from their native Russia and now have a flock of about 50 000 in a sheep population of approximately 9 million. In France, crossbreeding produces litter sizes of 2.2 to 2.5, while pure Romanov average about 3.2 lambs per ewe in the best flocks.

Canada is the fifth nation to obtain the Romanov breed. And it wasn't easy, notably because the health regulations affecting sheep importation into Canada are stringent. The Romanovs released in April are the only sheep to come from continental Europe through the Grosse Ile quarantine station since it was opened in 1965. Because of the presence of scrapie disease in Europe, the im-



Dr. Fahmy with a Romanov lamb.

M.H. Fahmy et un agneau Romanov.

ported animal has to be older than 2 years, come from certain regions and not be vaccinated against paratuberculosis. Scrapie disease has a long incubation period. The sheep spent 30 days in the Brest quarantine station in France and more than the required 90 days at Grosse Ile. The first progeny of the Romanov will be kept under farm quarantine until they are 60 months of age.

The Romanov breed originated in Russia in the 18th century. The lambs are born black in color and then turn grey because of a mixture of black and white wool fibers. The males have a mane of long, black hair around their necks and down their briskets. The average body weight of the mature animals is 50 kg for ewes and 70 kg for rams.

Sexual maturity comes early to the Romanov. Males are capable of mating at 3 to 4 months; some ewes have lambed at 9 months. Well-fed females can reach 40 kg live weight in 6 to 8 months and can be bred at that age.

In the U.S.S.R., the average number of lambs born to 100 ewes ranges from 184 to 320 lambs, depending on the flock and its condition. In many cases, ewes give birth to seven to nine live lambs. One ewe has apparently given birth to 64 lambs in 12 lambings. The high birth rate results from a larger percentage of ewes producing twins and triplets rather than from a few ewes producing exceptionally large litters.

In France, where management conditions are better than in the U.S.S.R., the Romanov gave even better results. In six herds involving about 1400 births, prolificacy was 2.69 lambs for adult ewes and 2.07 for yearlings. In one herd the average was 3.13 lambs per ewe.

The Romanov is a good maternal breed. Some lines possess four functioning teats. The better milking and maternal ability of the Romanov is transmitted to its half-blood progeny.

In lambs of 7 to 8 months, a dressing average of 49% can be expected. The high-priced cuts represent 60 to 70% of the carcass.

It will be years before an assessment can be made of the Romanov's performance in Canada. But if the imports do as well as expected, crossbreeding and selection will produce the ideal combination — a smaller ewe (for low maintenance cost) that gives many fast-growing lambs. This would be a



Romanov lambs are born black in color.

Les Romanov sont noirs à la naissance.

dream come true for progressive sheep producers looking for high production.

But it is a dream that must wait at least 5 years. During these years, however, life will not stand still at Lennoxville. The Romanov will be multiplied to a herd of 200 pure animals. Crossbreeding with DLS will commence and the improved DLS strain fully developed. Crossbreeding with a standard breed such as the Suffolk will also be initiated. When these 5 years finally end and the quarantine station at Lennoxville opens its doors to Canadian sheep breeders, the animals will be available and their capabilities fully documented. From then on the animal's success will be the responsibility of the breeders. But the scientists at Lennoxville will continue to search for new ideas and methods to further help the Canadian sheep industry.

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