A GUIDE FOR SHEEP AND FARM LIFE

THE SHEPHERD

Volume 37-Number 11 November, 1992

A Morning in the Meadow

Newfoundland Sheep Revisited

By M. H. Fahmy, Lennoxville Research Station, Quebec, Canada

My article on the Newfoundland sheep published in the October 1991 issue of the *Shepherd* has created a great deal of interest among sheep breeders in Canada and United States, especially those with an environment similar to Newfoundland's. We also received inquiries from professors and sheep specialists who wanted to know more about the breed. Most important was that the article generated interest among several sheep breeders in Newfoundland who realized that they cannot afford to let this breed disappear and the Minister of Forestry and Agriculture for Newfoundland also supported any efforts to conserve and declare the breed as a provincial heritage. Finally, Rare Breed Conservation Farm near Ottawa was also interested in including the breed among its vast collection, a request which is under consideration. Unfortunately, we could not provide further information on the breed to the requests we received because the next step is to gather this type of information.

I was asked to go back to Newfoundland and learn more about the breed and breeding systems on the island in order to develop a research and conservation program for the breed. The present article covers the findings and my recent impressions illustrated by the many photographs I managed to take.

The most inbred flock in the world.

My first stop was a remote island called Exploits Island off the shores of Gander. During the summer the island is a vacation resort with inhabitants and visitors numbering 20,000, but only one family lives there year-round, that of Mr. Richard Wells. Accompanying the Minister of Forestry and Agriculture, the honourable Mr. Graham Flight, the Deputy Minister for Agriculture, Mr. Robert Peters; and Mr. Dale Sudom, the Director of Agriculture Canada Station in St. John's, I visited a flock which could well be the most inbred in the world. The owner, Mr. Wells, inherited that flock, established 60 years ago, from his father, and according to him no introduction of new blood was made since that time. That means for 60 years, or over 20 generations, this flock was systematically being inbred. Mr. Wells, and his father before him, used one or two rams from the flock on all the females and changed them every two years. Under this management, rams and ewes were closely related and although inbreeding cannot be calculated since no records were kept, my suspicion is that it must be extremely high.

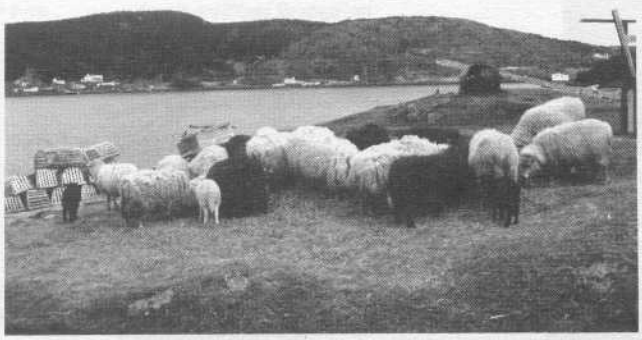
Inbreeding had taken its toll on the productivity of the flock, with most of the lambs reaching maturity late and they seldom lamb as yearlings. Twinning is rare. Economically the flock is not generating income to the farmer; as a matter of fact, Mr. Wells gives the lambs away to visitors. The flock is more a tourist attraction than a production unit.

Although Exploits Island can easily accommodate 500 sheep and provide them with all their needs, Mr. Wells' flock of 20 ewes and their lambs are the only animals which graze there, and yet the sheep are spoiled by being fed hay and grain bought on the main island.

I found it difficult to recommend a plan of action for these sheep. From a scientific point of view, it would be very interesting to study the effect of line crossing on restoring the productivity of these sheep after all these years of inbreeding. However, from a conservation point of view, once crossing takes place there is no going back, and this unique flock may be lost forever. One possibility which we may consider, is to move and use rams and a few ewes from this flock for line crossing and maintain the rest of the flock as it is on the island.

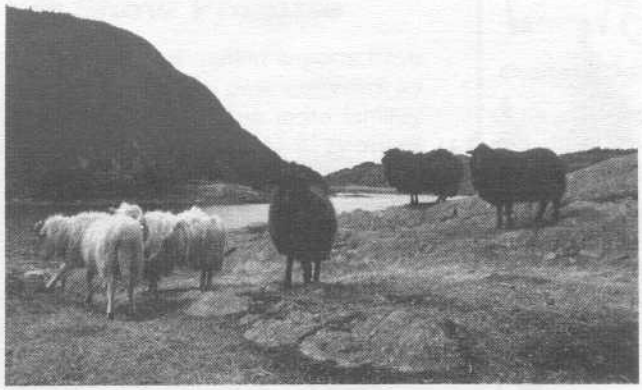
Prolific Newfoundland sheep with a major gene?

Since the discovery of the Booroola gene in Merino sheep in Australia, scientists all over the world have been on the search for similar mutations in other breeds of sheep. In all the cases found, the symptoms were similar, a flock with exceptionally higher prolificacy than the norm for that breed. One of my visits was to the farm of Mr. Howard Morry, a few miles from St. John's. Mr. Morry's flock has been well recognized in the area for its prolificacy. I was told that his average lambing is 2.2 lambs per ewe, well above the 1.5 we found with these sheep. He mentioned that triplets are common in his flock and he gets quadruplets occasionally. Because Mr. Morry is an excellent shepherd and worked as such for 20 years at the research station, my first impression was that his flock must have been kept on optimum feeding and management status to achieve that



The entire flock of Mr. Wells on Exploits Island.

Newfoundland ewe and her lamb on Exploits Island.



White and black ewes grazing on Exploits Island.

The island used by Mr. Morry for grazing during the summer.

level of production. To my surprise, he informed me that he, too, exploits an island not very far from his farm. He rents a boat and transfers his 70 ewes to that island in the spring after weaning their lambs, and brings them back in November for breeding. The animals are then kept indoors for the winter. He claimed the prolificacy of his sheep is due to better genetics. On his farm he was proud to show us one of his prize ewes, a fourteen-year-old, with an impressive record and still perfect teeth.

It was during an unscheduled visit to another breeder that the possibility of the presence of a major gene in the flock of Mr. Morry occurred to me. Mr. Ernest Sullivan is a sheep breeder who utilizes another island nearby. When we stopped to visit him he had only one ewe and her triplets kept on the farm. He feared for her so much that he decided not to send her to the island with the rest of the flock. That ewe gave him 17 lambs in 5 lambings, 2 quadruplets and 3 triplets. Unfortunately, 15 of these lambs were males (talk about bad luck with sex ratio) and of the 2 females, one died before it lambed, and the other gave triplets and twins. I was surprised at that level of reproduction and immediately started suspecting a major gene when Mr. Sullivan informed me that this ewe came from Mr. Morry's flock. Fortunately Mr. Morry keeps detailed records and agreed to let us look at them. It may well be that we have a major gene in Newfoundland sheep; I'll keep you posted.

Land of thousand islands and peninsulas.

The coastline of Newfoundland is made of one peninsula next to the other and endless small islands of different sizes, mostly covered with thin vegetation and/or evergreen trees. New settlers cleaned the coastal area of trees and rocks and cultivated the land. A few decades ago, the government resettled the inhabitants inland, a few miles off the peninsulas, to have access to roads and public utilities and schools. Many of these peninsulas were then fenced and used for grazing. It was sad to see how under-used these areas are. In the two we visited, the first had about 50 ewes with a capacity of 300 ewes plus 50 cows, the second was completely deserted. There is no reasonable estimate on the number of sheep these natural grazing peninsulas can accommodate, but my guess is that it can be very high.

Newfoundland is not only rich with thousands of these natural peninsulas but also many of the islands scattered near the shores have natural reservoirs for fresh water so sheep breeders claimed a few of them for summer grazing. Thousands more are not used, and their carrying capacity for sheep is substantial. These islands are ideal for raising sheep since they do not require fencing nor appropriate protection from predators. The only cost involved is renting a boat to transport the animals to and from the islands. And even if there is a need to construct a small water reservoir, the cost may not be that high after all, the grazing is absolutely free.

Community pastures.

Many years ago the sheep had access to all government land near and around the communities. However, with

Teeth of a 14 year old ewe from the flock of Mr. Morry.

This ewe and her triplets from the flock of Mr. Sullivan may be carrying a major gene.

Sheep grazing on one of the peninsulas, notice how under used they are.

Sheep grazing in a community pasture.

the organization of communities, this land became inaccessible to sheep breeders. Instead, many communities with financial assistance from the government, organized fenced areas and designated them as community pastures. User fees were charged to help offset the costs of seeding and improving the quality of these pastures. There are vast areas of unused land. For many of these community pastures the only requirement is fencing and proper management. Together with islands and peninsulas, these community pastures can easily accommodate thousands of sheep, and the most obvious choice may be the one most adapted to these conditions, the local Newfoundland sheep.

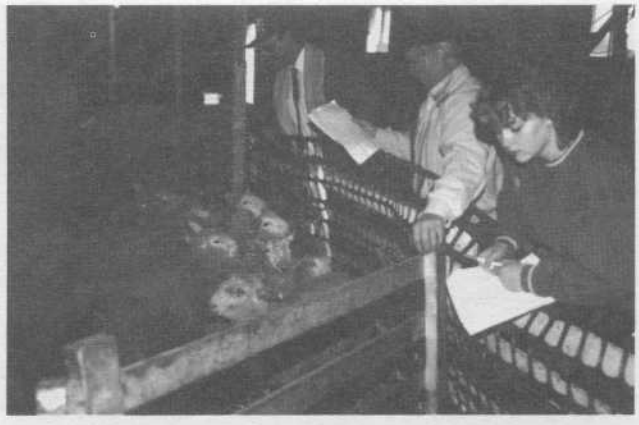
Intensive vs. extensive, prolific vs. local.

These questions seem to be the preoccupation of many sheep breeders in Newfoundland recently. As a result of the extremely high cost of grain and hay in Newfoundland, breeders are forced to adopt a semi-intensive system in which animals graze during the summer on fenced private pastures and are housed for a few months of the winter in holding facilities. Many breeders adopting these systems are experimenting with prolific breeds to offset the high cost of operation. During my last trip we visited a farm in Conception Bay run by Mr. Jack Rose.

In a modern installation and with private fenced grazing area of about 30 acres, Mr. Rose, a full-time teacher, raises local and Arcott sheep under a financial aid research program. His flock is composed of 52 Newfoundland sheep purchased locally from different breeders and 25 Arcott ewes imported recently to the island. The management is semi-intensive with the sheep grazing during the summer and housed during the winter. When we visited, the flock was in holding yards ready to go on pasture. Although the two flocks are raised similarly and receive the same care at birth, lamb survival for the Arcott was 39% compared to 88% for the locals. In terms of fecundity the Arcott managed 1.04 to 1.20 for the locals. Mr. Rose keeps good records and his results could be used to evaluate the locals in comparison with other breeds under semi-intensive management. The poor performance of the Arcott in their first year may be caused by lack of adaptation. It would be interesting monitoring the performance over several years. The report of this two-year pilot project should be very interesting and would provide Newfoundland breeders presently involved with Finnsheep and Romanov crosses with urgently needed information.

Just before leaving Newfoundland, I witnessed a great change in attitude among local breeders. The research station organized a sale for its surplus spring lambs. In earlier years, no one cared to buy these lambs and almost all were sold to abattoirs for meat. This time it was different, all the ewe lambs and many ram lambs were sold for breeding and breeders showed great enthusiasm in acquiring them. I considered that as a positive step towards a renewed interest in Newfoundland sheep and hopefully its preservation for future generations.

Newfoundland and Arcott ewes in holding yards before going to pasture, these sheep are raised under a semi-intensive system.



Interested sheep breeders examining Newfoundland sheep during the sale.