

# DATE OF LAMBING AND REPRODUCTIVE PERFORMANCE OF NEWFOUNDLAND AND "DLS" BREEDS OF SHEEP RAISED UNDER EXTENSIVE MANAGEMENT IN NOVA SCOTIA<sup>1</sup>

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## Summary

A sample of a breed native to Newfoundland (Nfld) and another of a crossbred population selected for extended breeding season (DLS; ½ Dorset, ¼ Leicester, ¼ Suffolk) were transferred from St-John's, Newfoundland, and La Pocatière, Quebec, respectively, to Nappan, Nova Scotia, for a study of out-of-season lambing and other reproductive performances of these two breeds under conditions different from those of their native environments. Although the two breeds gave indications of an ability to breed out-of-season in their local environments, neither succeeded in breeding out-of-season in the new environment. The average lambing dates of the Nfld and DLS ewes were March 5 and February 20, respectively; the difference was significant. Ewes 2 years old and older lambed earlier ( $P < .05$ ) than yearlings. Fertility of the two breeds exceeded 97%, and the number of lambs born and weaned per ewe lambing was 1.45 and 1.28 (Nfld) and 1.51 and 1.04 (DLS). Lamb survival at birth and weaning was 93 and 87% in Nfld, and 85 and 69% in DLS. Age at first lambing averaged 386 days among Nfld sheep, 11 days younger than among DLS. Birth and weaning weights of DLS lambs were heavier than those of Nfld (4.09 vs 3.42 kg and 20.1 vs 18.3 kg, respectively). Body weight at maturity was about 5 kg higher and yearly fleece weights

about .7 kg heavier in DLS than in Nfld ewes.

(Key Words: Sheep Breeds, Date of Lambing, Newfoundland Sheep, DLS Sheep, Reproductive Performance.)

## Introduction

The relatively short breeding period of sheep, usually lasting from September to December, is a constraint to the development of the sheep industry in Canada. Present market demands generally require a year-round supply of a commodity for good marketing. The seasonal nature of the supply of lamb and mutton in Canada militates against orderly marketing and frequently results in depressed prices during the short marketing season. Therefore, there is considerable interest in developing a breed of sheep that will breed every or any month of the year, thus giving the breeder an opportunity to control the breeding season to conform to market demands.

Despite the importance of, and continuous interest in, the development of such a breed of sheep, little work has been done on this matter. Selection within the Southdown breed in Kentucky for date of birth (Thrift *et al.*, 1971) is the only work in the literature of which we are aware. The results of that study showed that date of lambing can be advanced by selection. Another attempt of a similar nature is a selection experiment being carried out in Quebec on a synthetic population of ½ Dorset, ¼ Leicester and ¼ Suffolk sheep (Fahmy, 1976). The purpose of the program is to develop a breed of sheep with the ability to mate during the traditionally infertile summer months. Preliminary results (M. H. Fahmy, unpublished data), indicated that selection was successful in advancing date of lambing by about 3 days per generation.

The native Newfoundland breed (Nfld)

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