

UTILIZATION OF THE BOOROOA MERINO IN A CROSSBREEDING PROGRAM TO INCREASE LITTER SIZE

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Increasing litter size is one of the prime concerns in the sheep industry. By increasing the litter size the producer has no large increase in investment in the ewes during the dry period but has a larger number of lambs to market.

The Booroola Merino is a strain of the Merino breed which has a substantially higher lambing rate than other strains of Merino. The Booroola appears to be different from other highly fecund breeds of sheep in one major factor. The high litter size in the Booroola appears to be controlled by a single gene, which is referred to as the F gene, rather than by multiple genes as has been observed in other breeds. This difference would make it possible for the ewe flock to have a very small percentage of Booroola Merino and still have a large increase in litter size.

The experiment which has been outlined involves the evaluation of percentage Booroola Merino ewes as compared with Dorset and Finn crossbred ewes. The study is divided into two phases the first being the comparison of percentage Booroola Merino, Dorset and Finn ewes for various traits. The actual matings which are planned are shown in Table 1. The third cycle of phase I will be continued for three additional years in order to evaluate the performance of these crosses in a terminal crossbreeding system.

The second phase of the study which is outlined in Table 1 will begin in the fall of 1990 and will consist of the same breed makeup as phase one with the exception of the removal of the Finn breed from the study. This phase is to evaluate the use of the Booroola Merino in a fall lambing program.

Table 1. Breeding projection for booroola crossbreeding project.

	Matings						
Phase I-Spring Lambing							
Phase I, Cycle I	DxR	BmxR	FxR				
Phase I, Cycle II	RxDR	RxBmR	BmRxBmR	BmxBmR	RxFR	FRxFR	FxFR
Phase I, Cycle III	SxRDR	SxRBmR	SxBmRBmR	SxBmBmR	SxRFR	SxFRFR	SxFFR
Phase II-Fall Lambing							
Phase II, Cycle I	DxR	BmxR					
Phase II, Cycle II	RxDR	RxBmR	BmRxBmR	BmxBmR			
Phase II, Cycle III	SxRDR	SxRBmR	SxBmRBmR	SxBmBmR			

D-Dorset, R-Rambouillet, Bm-Booroola Merino, F-Finnish Landrace, S-Suffolk

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