Productivity of Selected Sheep Breeds & Crosses Under N. D. Conditions

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The most important factor to a profitable sheep enterprise is the number of lambs marketed per ewe bred. Many factors influence the per cent lamb crop marketed. Of these, selection of parental stock having the genetic capability of conceiving and bearing large numbers of offspring is of primary importance.

An experiment was initiated in 1966 to determine the potential of cross-bred offspring of two breeds not commonly raised in North Dakota or other parts of the United States, the North Country Cheviot and the Border Leicester. These breeds are white faced, medium to large in size, clean faced and clean legged. They are not particularly good wool producers but are used extensively in the British Isles to sire crossbred commercial ewes. These crossbreds are being compared at the Hettinger station with ewes sired by rams of the Columbia and Rambouillet breeds, common in North Dakota and the western states.

Experimental Procedure

The Hettinger Branch Experiment station contracted with a Columbia commercial sheep producer and a Rambouillet commercial producer to produce the experimental females for this experiment. Each producer randomly allotted his ewes into four groups of about 40 each. Each group was then mated to either a Columbia, Rambouillet, North Country Cheviot or Border Leicester ram considered to be of typical commercial quality. The initial matings were made in the fall of 1966 and ewe lamb delivery was made to the experiment station in the fall of 1967. All lambs were handled as a single unit during the winter and summer period. Additional like-matings were made in the fall of 1967. These ewes were delivered during the fall of 1968 as the final ewes for evaluation.

Fall delivery weights of ewe lambs purchased in each year show an average advantage of approximately six pounds for lambs from Rambouillet dams. This difference may reflect a genetic difference or may be due to the range conditions under which they were raised.

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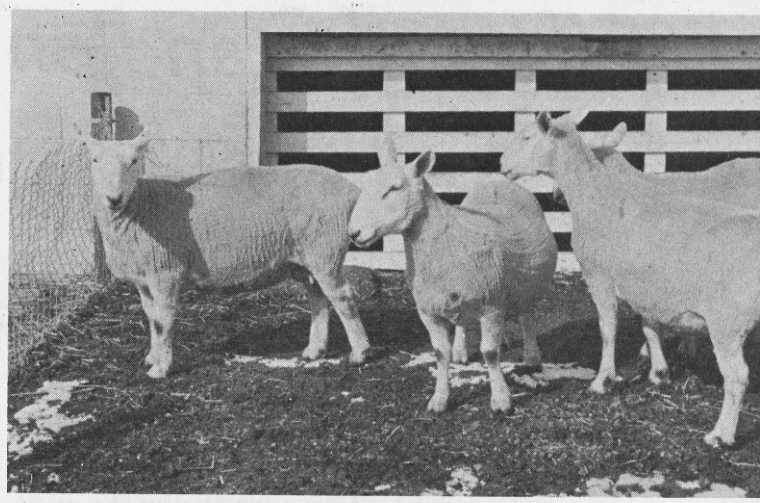

Figure 1. Experimental Crossbred Ewes.

Initial matings of experimental ewes were made in the fall of 1967 to Hampshire and Suffolk rams. Ewe groups were randomly assigned to Hampshire and Suffolk ram groups and to February and April lambing groups.

Results

The combined February and April lambing performance for each ewe group is presented in Table 1.

No attempt is made to draw conclusions from these first year data. Lifetime production records will be accumulated before final conclusions can be drawn. The reproductive performance for crossbred ewes from both Columbia and Rambouillet dams is very satisfactory for yearling ewes. Several sire groups are outstanding in prolificacy.

Further data will be reported at Field Days to keep North Dakota sheepmen informed of the progress of this project.

Table 1. Yearling Crossbred Ewe Reproductive Performance.

Ewe Type						
Sire	Dam	No. Ewes Exposed	No. Lambs Born	% Lambs Born	% Lambs 4-30-68	No. Barren Ewes
Rambouillet	x Rambouillet	16	21	131.3	131.3	0
B. Leicester	x Rambouillet	16	30	187.5	175.0	0
N.C. Cheviot	x Rambouillet	16	27	168.7	168.7	1
Columbia	x Rambouillet	16	25	156.2	156.2	0
Total		64	103	160.9	157.8	1
Rambouillet	x Columbia	16	18	112.5	100.0	1
B. Leicester	x Columbia	16	16	100.0	100.0	3
N.C. Cheviot	x Columbia	16	25	156.2	150.0	1
Columbia	x Columbia	15	20	133.3	120.0	1
Total		63	79	125.4	120.6	6