A Further Report of the Productivity of Crossbred Ewes of Finnsheep, Dorset and Rambouillet Breeding

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Story in Brief

In March-April of 1971 and 1972, about 250 crossbred ewe lambs were born at the Fort Reno Experiment Station of the following breed combinations: ½Dorset ½Rambouillet, ¼Dorset, ¾Rambouillet, ¼Finnsheep ¾Rambouillet, ¼Finnsheep ¼Dorset ½Rambouillet, and ¼Finnsheep ½Dorset ¼Rambouillet. The lambing performance of these five breeding groups has been reported previously for the years of 1972 and 1973. In 1974, the ewes were converted from a spring to a fall lambing program and lambed in January-February and again in October-February.

When lambing in January-February, the ½ Dorset ½ Rambouillet group excelled in reproductive performance with the highest percent ewes lambing (98) and the highest lahbing rate (1.75). Other groups were similar for percent ewes, lambings, and both ¾Rambouillet groups were the lowest in lambing rate (~1.50).

When lambing in October-November, percent ewes lambing was unusually low for all breeding groups. The ½D½R group had the highest percent ewes lambing (80). Of the ¼D¾R ewes, 73 percent lambed and the ¼ Finnsheep groups exhibited 57 percent to 63 percent ewes lambing. Lambing rates were highest for the two ¼ Finnsheep groups that contained both Dorset and Rambouillet breeding.

Fleece information from the 1974 clip showed that the breeding groups containing the greatest proportion of Rambouillet breeding produced the heaviest, highest grading fleeces. The influence of the Finnsheep breeding on wool quantity and quality appeared to be about the same as the influence of the Dorset breeding.

Introduction

The most productive mating system for commercial sheepmen usually involves a three-way cross. The ewe flock needs to be a cross between two breeds with high productive rates, and these crossbred ewes should be mated to rams that produce growthy lambs with good carcasses. Past research at Fort Reno has established the superority of the lambs from

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Dorset X Rambouillet ewes bred to good blackfaced rams for this purpose.

During the past few years a very limited number of Finnish Landrace (Finnsheep) sheep have been brought into the United States. This breed excels in lambing rate in their native country. In 1971 and 1972, crossbred ewes combining Finnsheep, Dorset and Rambouillet breeding were produced in order to evaluate their lifetime reproductive performance.

The growth rate of these ewes as lambs and some carcass characteristics of some of the male lambs were reviewed in the 1972 and 1973 Animal Sciences and Industry Research Reports (MP-87 and MP-90). The reproductive performance of all the ewes when lambing at approximately 12 months of age and approximately one-half the ewes when lambing at 24 months of age in the spring was reviewed in the same publication in 1974 (MP-92). Reproductive rate at one year of age showed a consistent advantage for the two ¼ Finnsheep groups that contained both Dorset and Rambouillet breeding. Reproductive rate at two years of age showed a small advantage for the ¼ Finnsheep ewes.

This report deals with the reproductive performance of these same ewes when lambing in both January-February and October-November, 1974, and information on their fleece yields and grades from the 1974 clip.

Experimental Procedure

The ewes constituting this flock are of five different breeding groups containing Finnsheep (F), Dorset (D) and Rambouillet (R) breeding. They are as follows: ¼F½D¼R, ¼F¼D½R, ¼F¾R, ¼D¾R and ½D½R. Approximately one-half of the ewes in each breeding group were born in the spring of each of the years of 1971 and 1972 except the ¼F¾R ewes which were all born in 1972. The manner in which they were reared and their lambing performance in 1972 and 1973 has been reviewed previously.

The ewes were mated to blackfaced rams over about a 50 day breeding season starting in August, 1973. They lambed in January-February, 1974, and had their lambs weaned at approximately 70 days of age. In order to put the entire flock onto a fall lambing program, the ewes were remated to blackfaced rams in May-June, 1974 and, consequently, lambed again in October-November, 1974. Their lambs were weaned at about 70 days of age.

Results and Discussion

Lambing Performance

Table 1 presents the lambing results of the five breeding groups when lambing in January-February, 1974. The ewes born in 1971 (first replicate) were coming three-year-olds and the ewes born in 1972 (second replicate) were coming two-year-olds.

In both replicates, the ½D½R ewes produced more lambs per ewe exposed than did any other group. In the first replicate the ¼ Finnsheep ewes ranked second and performed well as coming three-year-olds. The ¼D¾R ewes ranked last in lambs per ewe exposed due primarily to a poorer lambing rate. In the second replicate, the two ¼ Finnsheep groups containing both Dorset and Rambouillet breeding produced a poor lamb crop due primarily to a large percentage of the ewes not lambing since they did have the highest lambing rates of any of the groups. The ¼D¾R and ¼F¾R produced poor lamb crops due to both an average lambing rate and average proportion of the ewes exposed lambing. These results may indicate that the ½D½R ewe, as a relatively prolific crossbred, is better adapted to the hot summer climate of an Oklahoma August (when these ewes were mated) than ewes containing some Finnsheep breeding.

Table 1. Lambing Performance of the First and Second Replicate Ewes when Lambing in January-February, 1974.

First Replicate

Breeding Group	No.[1] Exposed	Ewes Lambing No.	Ewes Lambing %	No. Lambs Born	Lambing Rate[2]	Lambs/Ewe Exposed
½D½R	22	21	95	40	1.90	1.82
¼D¾R	24	22	92	33	1.50	1.38
¼F¾R	0	0	0	0	0	0
¼F¼D½R	21	19	90	34	1.79	1.62
¼F½D¼R	21	21	100	34	1.62	1.62

Second Replicate

Breeding Group	No.[1] Exposed	Ewes Lambing No.	Ewes Lambing %	No. Lambs Born	Lambing Rate[2]	Lambs/Ewe Exposed
½D½R	19	19	100	30	1.57	1.57
¼D¾R	18	14	78	22	1.57	1.22
¼F¾R	27	24	89	35	1.46	1.29
¼F¼D½R	20	16	80	26	1.62	1.30
¼F½D¼R	17	12	71	20	1.67	1.18

[1] Ewes from two ram groups were deleted due to reproductive failure of the rams.
[2] Lambs born per ewe lambing.

Under Oklahoma conditions of generally abundant fall and early spring wheat pasture and mild winters, most commercial sheepmen have adopted a fall lambing program. Lambing at this time of year utilizes farm labor during one of the slower seasons of the year and takes advantage of the higher fat lamb prices in the spring of the year. With these considerations, the true test of the value of these five breeding groups of ewes to the commercial sheep industry of Oklahoma is their performance under a fall lambing program.

Table 2 presents the lambing performance of the five breeding groups when lambing in October-November, 1974. The first replicate ewes were approximately three and one-half years old and the second replicate ewes were approximately two and one-half years old. Lambs born per ewe exposed was poor for all breeding groups in both replicates. This is probably due in part to the fact that the majority of these ewes gave birth to and raised at least one lamb the previous winter. The ½D½R ewes produced more lambs per ewe exposed in both replicates than any other group as a result of a higher percentage of the ewes of this group lambing. In both replicates, the ¼ Finnsheep ewes containing some Dorset and Rambouillet breeding were not exceeded by any other group in lambing rate. Their poor performance was due to a large pro-

Table 2. Lambing Performance of the First and Second Replicate Ewes when Lambing in October-November, 1974.

First Replicate

Breeding Group	No. Exposed	Ewes Lambing No.	Ewes Lambing %	No. Lambs Born	Lambing Rate[1]	Lambs/Ewe Exposed
½D½R	30	25	83	39	1.56	1.30
¼D¾R	33	24	73	33	1.38	1.00
¼F¾R	0	0	0	0	0	0
¼F¼D½R	26	19	73	31	1.63	1.19
¼F½D¼R	26	18	69	28	1.56	1.08

Second Replicate

Breeding Group	No. Exposed	Ewes Lambing No.	Ewes Lambing %	No. Lambs Born	Lambing Rate[1]	Lambs/Ewe Exposed
½D½R	24	18	75	26	1.44	1.08
¼D¾R	23	17	74	21	1.24	0.91
¼F¾R	35	20	57	24	1.20	0.69
¼F¼D½R	25	13	52	19	1.46	0.76
¼F½D¼R	21	11	52	21	1.91	1.00

[1] Lambs born per ewe lambing.

portion of the ewes failing to lamb. The ¼F¾R ewes' poor lambing record was due to both a poor lambing rate and a large proportion of the ewes failing to lamb. A poor lambing rate for the ¼D¾R ewes is the main reason for their poor showing.

These preliminary data reveal the following tendencies of the five breeding groups when lambing in the fall:

1. The three breeding groups containing Finnsheep breeding do not readily conceive in the spring and, consequently, lamb in the fall when compared with the two groups containing only Rambouillet and Dorset breeding.
2. The two breeding groups containing the greatest proportion of Rambouillet breeding (¼F¾R and ¼D¾R) have the lowest lambing rates when compared with the other groups.
3. The two breeding groups containing Finnsheep, Dorset and Rambouillet breeding (¼F½D¼R and ¼F¼D½R) have the highest lambing rates.
4. The ½D½R breeding group has the greatest tendency to conceive in the spring and lamb in the fall.

These tendencies of the five breeding groups are based on only one fall lambing and under rather unusual conditions in that the ewes were also given an opportunity to lamb the previous winter. More data on the performance of these five breeding groups under fall lambing conditions will be gathered before definite conclusions as to their performance will be developed.

Fleece Characteristics

In April, 1974, the ewes of all five breeding groups were shorn, their grease fleeces weighed and the pounds of clean wool per fleece estimated. The fleeces were sent to the Midwest Wool Marketing Cooperative, Hutchinson, Kansas where they were graded by their staff. Table 3 presents the fleece data collected on the five breeding groups.

Table 3. Fleece Characteristics of the Five Breeding Groups Determined from the 1974 Clip.

Breeding Group	Fleece Weight (lb.)			
	No.	Grease	Est. Clean	Grade[1]
½D½R	54	9.7	5.1	2.9
¼D¾R	57	10.4	5.4	2.3
¼F¾R	36	10.1	5.2	2.3
¼F¼D½R	52	10.0	5.0	3.1
¼F½D¼R	47	8.6	4.6	3.5

[1] Fleece Grade Code 1 = Fine, 2 = Half Blood, 3 = Three-Eights Blood, 4 = Quarter Blood.

The ¼D¾R and ¼F¾R ewes produced the heaviest grease fleeces, the ¼F¼D½R and ½D½R ewes produced the next heaviest fleeces and the ¼F½D¼R ewes produced the lightest fleeces. These findings are a reflection of the fact that Rambouillets produce heavier fleeces than either Dorsets or Finnsheep.

Fleece grades followed a similar pattern with the fleeces from the ¼D¾R and ¼F¾R averaging slightly lower than "Half Blood". The fleeces from the ¼F¼D½R and ½D½R ewes averaged about "Three-Eights Blood" and the average grade of the fleeces from the ¼F½D¼R ewes was intermediate between "Three-Eights" and "Quarter Blood".

These data would indicate that the substitution of a ¼ Finnsheep breeding for ¼ Dorset breeding in these crossbred ewes has little effect on grease fleece weight or grade.

Comparisons of Some Reproductive Traits of Dorset, Suffolk and Hampshire Rams Under Commercial Conditions

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Story in Brief

In order to get some information about breed of sire effects on certain reproductive traits, the records of the Ft. Reno flock for a 10 year period were studied. During this period 27 Dorset and 28 Blackfaced (about half were Suffolk and half Hampshire) rams were involved in 2501 matings and 2141 lambings. For certain comparisons the Blackfaced rams were compared to the Dorsets and for other studies the breed effects were studied by breed.

When the breeding season was during the spring, the Dorset rams were more aggressive whereas the Blackfaced rams were more aggressive during the late summer and fall. There was little difference due to ram breed in conception rate. When Dorset X Western crossbred ewes were mated to Blackfaced rams, they produced and reared nine more lambs per 100 ewes lambing than when mated to Dorset rams. Blackfaced rams

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