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1979

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Recommended Citation

Slyter, A. L., "The Effect of Management System and Breed Ewe on Lambing Performance at 12 and 24 Months of Age" (1979). *South Dakota Sheep Field Day Proceedings and Research Reports, 1979*. Paper 4.
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THE EFFECT OF MANAGEMENT SYSTEM AND BREED OF EWE ON LAMBING PERFORMANCE AT 12 AND 24 MONTHS OF AGE

(Progress Report)
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A.S. Series 79-12

Summary

Production data for 1977 and 1978 have been collected on Finn x Targhee, Suffolk x Targhee and Targhee ewes mated to Suffolk rams. All ewes were exposed at the Brookings Sheep Research Unit when they were 7 to 8 months of age. Following weaning (approximately June 1) of the first lamb crop, one-half of each ewe breed group was taken to the Antelope Range Field Station, Buffalo, South Dakota, for collection of subsequent production data. Percentage of ewes exposed that lambed at 12 months of age was highest for Finn x Targhee (73.8), intermediate for Suffolk x Targhee (65.8) and lowest for straightbred Targhee ewes (31.0). Number of lambs born per ewe lambing were 1.65, 1.19 and 1.13 for Finn x Targhee, Suffolk x Targhee and Targhee ewes, respectively.

At 24 months of age (second lambing), a higher percentage of the Targhee ewes lambed under both the farm flock (Brookings) and range (Buffalo) management systems than for the two crossbred groups. However, fewer of the Targhee ewes had lambed at 12 months of age. Finn x Targhee ewes weaned more pounds of lamb in both management systems than either Suffolk x Targhee or Targhee ewes. Subsequent production data should be evaluated on these ewes before final conclusions are drawn.

Introduction

Recent economic pressure has stressed the importance of maximizing production if sheep are to compete favorably with other farm enterprises. Lambing at a younger age and/or increasing lambing rates offer means of increasing total productivity. Crossbreeding with Finnsheep, noted for multiple births, has been viewed as a means of increasing prolificacy. This study was initiated to compare the productivity of Targhee, Finn x Targhee and Suffolk x Targhee ewes under management systems typical to a farm flock (semi-confinement) vs a range operation.

Experimental Procedure

Targhee and Suffolk x Targhee ewe lambs born at the Antelope Range Field Station and Finn x Targhee ewe lambs born at the South Dakota State University Sheep Unit in the spring of 1976 and 1977 were utilized in this experiment. Lambs born at Brookings (Finn x Targhee) were exposed to creep feed and alfalfa hay from shortly after birth until weaning.

Prepared for Sheep Day, June 8, 1979.

Ewe lambs born at Buffalo (Targhee and Suffolk x Targhee) were raised on native range without supplemental feeding prior to weaning. All groups were weaned at about 10 weeks of age (approximately June 1) at which time the Targhee and Suffolk x Targhee ewe lambs were transported to Brookings and started on feed. After adjusting to feed, the Targhee and Suffolk x Targhee lambs were co-mingled with the Finn x Targhee lambs in a single lot with a self-fed ration of 60% cracked corn and 40% chopped alfalfa hay. All lambs were sheared in mid- to late June. The ewe lambs were self-fed the 60/40 ration until 2 weeks prior to breeding when they were switched to 1.5 lb. cracked corn plus ground alfalfa hay in self-feeders. In addition, they had access to pasture during the day. Following a 5-week breeding season (starting September 30), the ewes were confined to the drylot and fed 2 lb. per head per day of the 60/40 ration plus ground alfalfa hay free choice in self-feeders until 8 weeks prior to lambing. At this time, they were switched to chopped hay plus cracked corn at recommended levels through late gestation and lactation. Following weaning (approximately June 1) of the first lamb crop, one-half of each ewe breed group was returned to the Antelope Range Field Station for collection of subsequent lifetime production data. Subsequent breeding and management procedures have been similar to a traditional spring lambing system for a farm flock and for a range shed lambing system for the respective locations. Suffolk sires have been used in both systems as the terminal sire breed for lamb production from these ewes. Management at the Brookings Unit includes flushing of ewes and creep feeding of all lambs. Neither practice is used at the Antelope Range Station. Both management systems have utilized 70- to 80-day weaning weights taken at a similar calendar date (approximately June 1).

Results and Discussion

Lambing performance at 1 year of age is shown in table 1. A higher percent of ewes exposed lambled for both crossbred groups than for the straightbred Targhee ewes. Eight percent more Finn x Targhee than Suffolk x Targhee ewes lambled their first year. Lambs born per ewe exposed favored Finn x Targhee (1.21) over Suffolk x Targhee (.78) followed by Targhee ewes (.35). Little difference was found in lambing rate (lambs per ewe lambing) between Suffolk x Targhee and Targhee ewes, 1.19 vs 1.13, respectively. However, a noticeably larger percent of the Finn x Targhee ewes twinned, resulting in 1.65 lambs per ewe lambing.

Second-year lamb production is shown in table 2. Little or no difference was found between management systems in the percentage of ewes lambing. In both systems, a higher percent of the straight Targhee ewes lambled at 24 months of age than either crossbred group. However, only 31% of the Targhee ewes had lambled at 12 months of age compared to 65.8 and 73.8% of the Suffolk x Targhee and Finn x Targhee ewes, respectively.

Number of lambs per ewe lambing and number of lambs weaned per ewe exposed favored Finn x Targhee ewes in both management systems. Little if any differences were found between management systems within breed of ewe for numbers of lambs produced. However, an advantage was noted in all three breed groups in the weaning weight (\bar{x} = 70 days) and pounds of lamb weaned per ewe exposed in favor of the farm flock management system. Creep feeding in this system is, no doubt, reasonable for most, if not all, of this weight difference.

Results to date have shown higher productivity from Finn x Targhee

and Suffolk x Targhee than for straight Targhee ewes when lambing at 12 months of age. At 24 months, Finn x Targhee ewes weaned more pounds of lamb than either of the other two breed groups in both systems of management. However, subsequent production data are necessary before final conclusions can be drawn.

Table 1. Lambing Performance at One Year of Age

Breed of ewe ¹	Suffolk x Targhee	Finn x Targhee	Targhee
Number of ewes			
Start of breeding season	114	126	100
Lost from start of breeding season to May 1	6	2	1
Lambing	75	93	31
Open	34	32	68
Total lambs born	89	153	35
Percent ewes lambing	65.8	73.8	31.0
Number lambs/ewe exposed	.78	1.21	.35
Number lambs/ewe lambing	1.19	1.65	1.13

¹ Exposed to Suffolk rams for 34 days starting September 30.

Table 2. Effect of Breed and Management System on Lamb Production - 1978 (24 Months)

Management system	Breed		
	Finn x Targhee	Suffolk x Targhee	Targhee
<u>Brookings (creep)</u>			
Number exposed	25	30	20
Percent lambing	84	83	100
Number lambs/ewe exposed	1.80	1.27	1.35
Number lambs/ewe lambing	2.14	1.52	1.35
Lambs weaned/ewe exposed	1.28	.90	.95
Weaning weight, lb.	75	75	73
Lb./ewe exposed	96.0	67.5	69.4
<u>Buffalo (noncreep)</u>			
Number exposed	25	28	19
Percent lambing	84	79	100
Number lambs/ewe exposed	1.68	1.11	1.42
Number lambs/ewe lambing	2.00	1.41	1.42
Lambs weaned/ewe exposed	1.32	.96	.89
Weaning weight, lb.	58	68	64
Lb./ewe exposed	76.6	65.3	57.0