

The Effects of Shearing on Suffolk Ewes

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Information has been presented on shearing ewes prior to breeding. Shearing ewes prior to breeding in North Dakota may or may not be advantageous, depending upon the climatic conditions that prevail during the breeding season and the management employed.

Shearing ewes and rams has been advocated as a management practice to increase the number of lambs dropped per ewe and the fertility of rams. Rams commonly are shorn several weeks prior to the breeding season, particularly if ewes are mated in August or September. Ewes are not commonly shorn in North Dakota prior to the breeding season.

This study was initiated in the fall of 1963 at the Hettinger Branch Experiment Station to determine the effect of fall shearing on Suffolk ewe productivity.

Procedure

A flock of 42 purebred Suffolk ewes was divided into two lots according to weight and age. They were reallocated annually for the duration of the experiment. One lot was shorn in late August, approximately two weeks prior to breeding, and the other was left unshorn. Both lots were managed together as a single unit except for the

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shearing process. One ram was turned with the flock nightly from September 6 through October 17, and rested during the hot part of the day.

Data were collected on ewe weight changes during the breeding season, gestation and lactation, number of lambs born, weaned and their 30-day and weaning weights. Annual wool production was also recorded.

Results and Discussion

Average ewe weights are shown in Table 1. Pre-breeding weights were remarkably uniform throughout the duration of the experiment. On the other hand, weight gains during mating were variable. They appeared to be influenced by climatic conditions during individual seasons. There were like differences in weight changes between groups during seasons when temperatures were mild. However, during cooler seasons the unshorn ewes gained from 32 to 46 per cent more (Table 3). Pooled data for the entire experiment reveals no significant differences for average weight gains during breeding.

It was not determined whether the lower rate of lamb drop was due to lower rate of ovulation or because of embryonic mortality.

Table 1. Ewe Weight Information by Year and Four-Year Average

	1963		1964		1965		1966		4 Yr. Ave.	
	S ¹	NS ²	S ¹	NS ²	S ¹	NS ²	S ¹	NS ²	S ¹	NS ²
Pre-breeding wt. (lbs.)	150.5	146.3	152.2	149.7	146.5	145.9	155.5	155.3	151.2	149.3
Post-breeding wt. (lbs.)	165.1	161.6	157.8	158.0	154.0	159.9	161.9	162.6	159.7	160.5
Ewe wt. change during breeding	14.6	15.3	5.6	8.3	7.5	14.0	6.4	7.3	8.5	11.2
Fleece wt. (lbs.)	6.0	5.3	6.2	5.7	5.7	5.9	6.0	5.6

¹ S - designates fall shorn

² NS - designates not fall shorn

Table 2. Lamb Weight Information by Year

	1963		1964		1965		1966		4 Yr. Ave.	
	S ¹	NS ²	S ¹	NS ²	S ¹	NS ²	S ¹	NS ²	S ¹	NS ²
Birth wt. (lbs.)	11.0	9.4	10.4	10.5	11.2	10.5	10.1	10.9	10.7	10.3
30-day wt. (lbs.)	27.1	27.4	25.2	25.6	32.2	31.1	29.6	31.8	28.5	29.0
Weaning wt. (lbs.)	85.6	78.2	64.4	64.1	94.3	96.9	84.4	90.3	82.2	84.6
Age at weaning (days)	135.0	135.8	102.7	106.1	133.7	138.2	119.1	122.2	122.6	125.6
Lbs. lamb at 120 days (lbs.)	95.1	80.9	90.3	120.8	93.6	136.2	141.8	109.4	105.2	111.9

¹ S - designates fall shorn

² NS - designates not fall shorn

The incidence of dry ewes and ewe death losses was recorded during this experiment. There were no significant differences between groups.

Birth, 30-day and weaning weights of lambs are presented in Table 2. There were no significant differences between groups for these characteristics. There was a trend for lambs from unshorn ewes to be somewhat older at weaning in each of the years. Reasons for this are not clear.

In those seasons when temperatures were high during the breeding period (above 60 degrees), the number of lambs dropped per ewe bred from shorn ewes was significantly higher. In years when temperatures were average or below, the unshorn ewes dropped more lambs. These observations agree with those of Dutt and Bush (1955) and Dutt et al. (1956) who demonstrated the harmful effects of high environmental temperatures on embryonic survival. Dutt et al. (1956) and Whiteman and Brown (1959) also demonstrated that shearing ewes prior to breeding had a positive effect on initiation of estrus and alleviated the effects of high temperatures.

Although there were significant yearly differences between groups in lambs dropped, com-

bined data show non-significant differences between groups. These observations made possible the following recommendations to North Dakota sheepmen:

1. There is no advantage for shearing ewes prior to breeding if they are bred later than September.
2. Ewes to be bred in August, particularly, and possibly in September should benefit from shearing provided that (a) adequate protection is available in unseasonally cool falls, and (b) additional feed can be provided during breeding.

References

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Table 3. Air Temperatures, Lambing Percentages and Weight Changes of Ewes During Breeding Seasons

Year	Average Air Temp ³	Shorn	Gain Lbs.	Unshorn	Gain Lbs.
1963	63.8	160.0	14.6	135.0	15.3
1964	55.1	145.0	5.6	171.4	8.3
1965	46.6	133.3	7.5	190.4	14.0
1966	60.4	185.7	6.4	123.3	7.3

³Temp - designates degrees Fahrenheit from September 5 through October 17.