

## Effect of Teasing on Mating and Lambing Performance of Spring-Bred Ewes

A. A. Ovejera, J. V. Whiteman, M. B. Gould and F. A. Thrift

### Introduction

By restricting the breeding period, and, consequently, the lambing period, the efficiency of the sheep operation can be increased. To accomplish this without the danger of a considerable number of ewes not being bred, it is necessary that the majority of the ewes in the flock, if not all, should come into heat at about the same time or within a relatively short period of time.

The breeding season for the experimental flock at the Fort Reno Livestock Research Station starts each year on or about the 21st of May and continues for 40 days. Figure 1 illustrates the pattern of the occurrence of the first estrus of the ewe flock. The figure shows that every day throughout the 40-day breeding season there are ewes exhibiting their first estrus. Most of the ewes exhibit heat and mate during the first four weeks of the breeding season. Some advantages could be gained if this breeding period could be reduced to three weeks or less which means that all ewes should come in heat within this period.

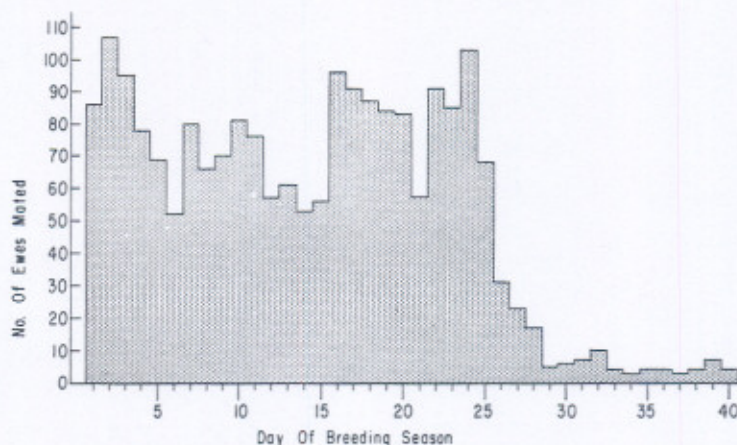
Various methods have been tried by other workers to control the time of sexual receptivity of ewes. This study was undertaken to determine the effect of teasing the ewes with vasectomized rams before breeding on their mating and subsequent lambing performance.

### Materials and Methods

Before the 1965 breeding season, the flock of 315 ewes was equally divided into two groups according to breed, age, and previous year's lambing performance. The ewe flock was composed of 2 to 8 year-old Rambouillet<sup>1</sup>, Dorset x Rambouillet, Rambouillet x Merino, and Panama. One group of 157 ewes was run with vasectomized rams for eight days beginning 16 days before the start of the breeding season. The other group of 158 ewes served as a control. If teasing the ewes with vasectomized rams before breeding had no influence on their mating pattern and subsequent lambing, then the two groups should have about the same performance.

At the start of the breeding season fertile rams were introduced into the teased and control groups. The fertile rams were equipped with marking harness. The ewes were observed once or twice daily and those with fresh marks were recorded as mated. Mating records obtained in this manner are not perfect: a few ewes are mated but not marked, and other ewes are marked but not mated.

<sup>1</sup>These ewes were of predominantly Rambouillet breeding but a few had as much as one-fourth Panama, Columbia or Corriedale breeding.



**Figure 1.** Pattern of the occurrence of first estrus of the ewes in the flock at the Fort Reno Livestock Research Station. Data include mating records of more than 2000 ewes over several years.

At lambing, lambing date and number born were recorded for each ewe. Lambing dates were checked back to mating dates to determine to which mating the ewes conceived. Mating dates of ewes that lambing with no recorded matings were estimated based on a 147-day gestation period.

## Results and Discussion

The first estrus mating patterns for the teased group and control group are presented in Figures 2a and 2b. It appears from the histogram that a great majority of the ewes in the teased group mated during the first ten days of the breeding season, while in the control group most matings occurred during the first three and one-half weeks. Apparently the presence of teaser rams in the teased group before the breeding season caused some of the ewes to exhibit estrus earlier such that most of them mated within the first ten days of the breeding season.

In the control group some of the ewes exhibited their first estrus mating during the first two weeks of the breeding season but an even greater number mated first during the next ten days, especially during the 15th to 19th days of the breeding season. This indicates that there was probably a stimulating effect that occurred soon after the fertile rams were joined with the ewes, but most of the ewes did not exhibit estrus at that time. Nevertheless, they exhibited estrus one cycle later and were mated. This accounts for the great number of ewes mated during the 15th to 19th day period.

Figures 3a and 3b show the conception pattern of the two groups by day of breeding season. Comparing these to Figures 2a and 2b will indi-

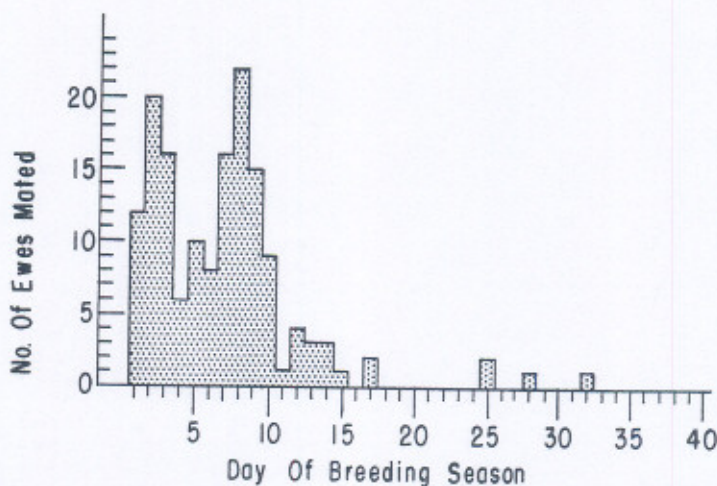


Figure 2a. Histogram illustrating the first estrus mating pattern of the teased ewes.

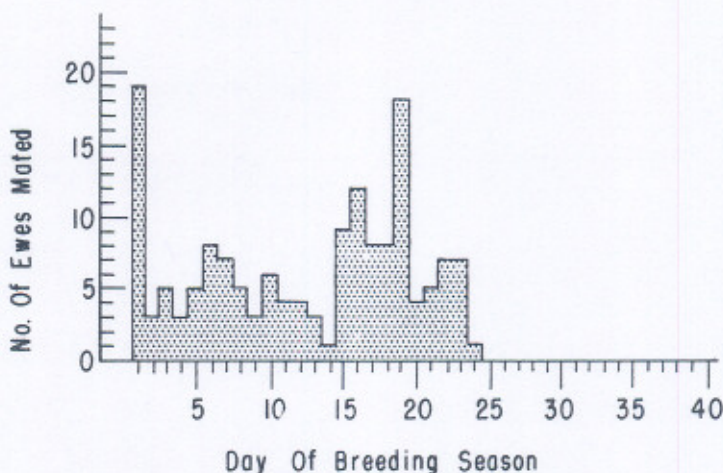


Figure 2b. Histogram illustrating the first estrus mating pattern of the control ewes.

cate that most of the matings during the first ten days of the breeding season for the teased group are relatively fertile or successful matings: that is, most of the ewes that mated during this period conceived to such matings. On the other hand, most of the control ewes that mated during

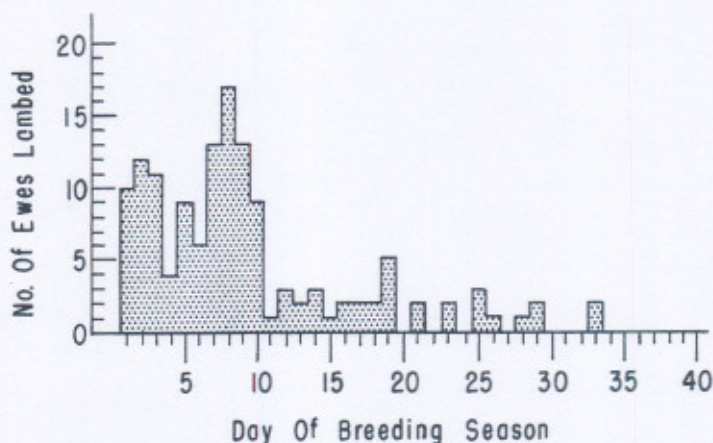


Figure 3a. Histogram illustrating conception pattern of the teased ewes.

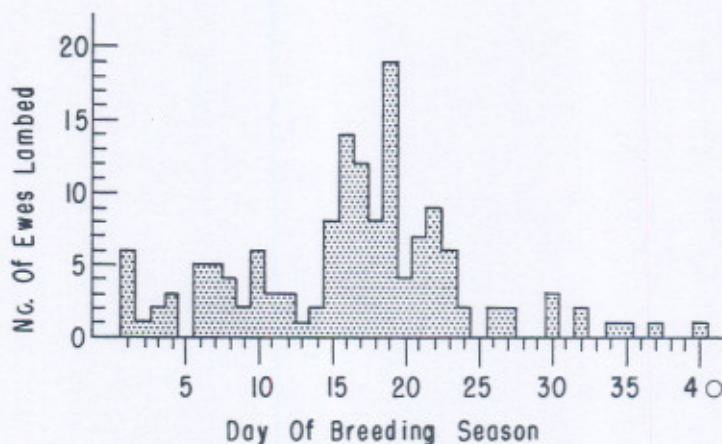


Figure 3b. Histogram illustrating conception pattern of the control ewes.

the first few days of the breeding season failed to conceive. Apparently, upon the introduction of the rams to the ewe flock some ewes were sexually receptive but their fertility was poor. Most of these ewes that did not conceive were bred during their next cycle and lambled, as indicated by the high number of ewes conceiving to matings that occurred during the third week.

The lambing performance of the two groups of ewes are summarized in Table 1. The 40-day breeding season was divided into four ten-day

periods to see which period is most efficient or in which period the most conceptions out of the first estrus matings occurred and the most twins produced. In the teased group, 103 out of 134 ewes that mated first during the first ten days of the breeding season, or 76.9 percent, conceived to such matings. The corresponding figure for the control group is 34 out of 64 or 53.1 percent, which is considerably lower. During the next ten-day period 85.7 percent of the teased ewes that mated first during this period conceived to such matings while 84.5 percent of the control ewes that mated first during this period conceived to such matings. In the teased group only four ewes mated first during the last twenty days. In the control group 20 ewes mated first during the third ten days and 18 ewes or 90.0 percent conceived to such matings.

Lambing rate was measured as the average number of lambs born per hundred ewes lambing. In a given group of ewes, a higher figure indicates a higher incidence of twinning. The control group had consistently higher lambing rate than the teased group. This indicates that teasing before breeding had no beneficial effect on lambing rate and may have actually reduced it.

In both groups, the first estrus conception rate was higher for ewes that mated during the latter part of the breeding season than during the first ten days. Although the number of animals involved in some of the categories was too few to give conclusive evidence, it appeared that con-

Table 1. Lambing Performance of the Teased and Control Ewes.

	Teased Group	Control Group
No. of ewes	157	158
First 10 days <sup>1</sup>		
No. first estrus matings	134	64
No. conceptions	103	34
Lambing rate <sup>2</sup>	149.5	164.7
Second 10 days <sup>1</sup>		
No. first estrus matings	14	71
No. conceptions	12	60
Lambing rate <sup>2</sup>	141.7	158.3
Third 10 days <sup>1</sup>		
No. first estrus matings	3	20
No. conceptions	2	18
Lambing rate <sup>2</sup>	100.0	150.0
Last 10 days <sup>1</sup>		
No. first estrus matings	1	0
No. conceptions	0	0
Lambing rate <sup>2</sup>	0	0
Total first estrus conceptions	117	112
Lambing rate <sup>2</sup>	147.9	158.9
No. second estrus conceptions	20	29
Lambing rate <sup>2</sup>	130.0	131.0
Third estrus conceptions	1	1
Lambing rate <sup>2</sup>	100.0	100.0
No. not lambing	14	13
No. not mated	5	3

<sup>1</sup> Of the 40-day breeding season

<sup>2</sup> No. of lambs born per hundred ewes lambing

ception rate was low at the start of the breeding season when the ewes were coming out of anestrus and increased toward the latter part of the breeding season.

The most twins in both groups were produced from the matings that occurred during the first ten days of the breeding season as shown by the higher lambing rate. The lambing rate in the teased and control ewes that mated during the first ten-day period were 149.5 and 164.7 respectively. Lambing rate was lower for ewes that conceived to matings later in the season. This trend is typical of the ewe flock at the Fort Reno Livestock Research Station as shown by the following summary which includes more than 1800 mating and lambing records over several years:

Period of the breeding season	No. of ewes	Lambing rate
First 10 days	482	145.2
Second 10 days	670	139.3
Third 10 days	568	132.6
Last 10 days	103	135.9

Lambing rate was higher for ewes that conceived to first estrus matings than for ewes that conceived to return matings in both groups. Lambing rates were 147.9 and 158.9 for the teased and control ewes respectively that conceived to their first estrus matings. For the teased and control ewes that failed to conceive to their first estrus matings and had second estrus matings, lambing rates were 130.0 and 131.0 respectively.

### Summary

About one-half of the flock of 315 ewes was teased with vasectomized rams for 8 days beginning 16 days before the 1965 breeding season (May 21-June 29) to determine the effect of teasing on mating and lambing performance. The other half served as a control.

Teasing before breeding brought about the occurrence of estrus in most of the ewes during the early part of the breeding season. As such, the teased ewes mated earlier and within a shorter period than the control ewes. Relatively more teased ewes had successful or fertile matings during the early part of the breeding season compared to control ewes. Lambing rate was higher for the control ewes which indicated that teasing had no beneficial effect on lambing rate and may have actually hurt it.

In both groups, conception rate was low at the early part of the breeding season and tended to increase toward the latter part. On the other hand, lambing rate was the opposite, that is, lambing rate was relatively high for ewes that conceived to matings that occurred during the early part of the breeding season and low for those that conceived to matings during the latter part. Lambing rate was higher for ewes that conceived to their first matings than for ewes that conceived to return matings.