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## INTEGRATED MANAGEMENT OF REPRODUCTION IN THE EWE

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### Summary

The effectiveness of a scheduled lambing program using a combination of prostaglandin F<sub>2α</sub><sup>1</sup> to synchronize breeding and flumethasone to induce lambing was evaluated during the 1982-83 breeding-lambing season using 104 Hampshire and Columbia ewes. Ninety-seven of the 99 ewes present at lambing time lambed. Eighty-one percent of the 89 ewes that received flumethasone lambed on the 2nd, 3rd and 4th day following injection. The peak number lambing per day was 45 (46%) on February 6. Sixty-eight percent lambed in a 4-day period with 81% lambing in a 9-day period. Adequate facilities to handle such a rapid lambing period are a necessity if such a program is to be useful.

### Introduction

The ability to group lambing into a short predetermined period offers several desirable benefits to the producer. By concentrating lambing into a shorter period, one should be able to provide closer supervision and thereby increase survival. Also, lambs of similar age can be worked for castration, docking, vaccination, etc. as a group. Part-time producers may find it desirable to program lambing to coincide with available leave time if lambing can be confined to a reasonably short period. A trial was conducted during the 1982-83 breeding-lambing season to evaluate a combined program of synchronization of breeding and induction of lambing to achieve such a program.

### Experimental Procedure

During the 1982 fall breeding season, estrus was synchronized in Hampshire and Columbia ewes with prostaglandin F<sub>2α</sub> (PGF<sub>2α</sub>). Ewes were placed with a teaser ram and started on a flushing ration (3/4 lb cracked corn on good pasture) 2 weeks prior to the start of the breeding period. The teaser rams were removed and intact rams were placed with ewes for 35 days. Flushing continued for an additional 2 weeks after the start of the breeding period. Breeding marks were recorded daily. On the morning of the fifth day of the breeding period, all ewes without breeding marks were injected intramuscularly with 15 mg of PGF<sub>2α</sub>. Ewes per ram did not exceed 15 synchronized or 20 ewes total for the first 10 days of the breeding period. Of the 104 ewes exposed, 78 (75%) received PGF<sub>2α</sub>.

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<sup>1</sup>Furnished courtesy of The Upjohn Company, Kalamazoo, Michigan.

Parturition was induced with flumethasone at lambing time in an attempt to further group lambing. Once each week, all ewes that were on days 140 through 146 of gestation based on breeding marks were injected with 2 mg flumethasone intramuscularly. Of the 104 ewes exposed, five died between the breeding and lambing season, two were open and 97 lambed. Eighty-nine of the 97 received flumethasone. Time of lambing, number and sex of lambs, birth weight and milking score of the ewe were recorded at lambing for each ewe.

#### Results and Discussion

The number of ewes lambing per day and the cumulative number of ewes lambing is shown in figure 1. Seventy-two (81%) of the 89 ewes receiving flumethasone lambed on days 2, 3 and 4 following injection. Eighty ewes were injected on February 4, five on February 11, three on February 18 and one on February 25. The highest number of ewes lambing per day (45) occurred on February 6. This amounted to slightly over 46% lambing in one day. Sixty-eight percent lambed in the 4-day period of February 5 through February 8 and 81% in the 9-day period of February 5 through February 13.

This program was highly effective in terms of synchronizing lambing. However, before attempting such an endeavor, one must carefully assess the facilities to be sure they are adequate to handle the expected peak numbers of ewes lambing per day. If facilities are adequate, this program does work well in being able to provide close supervision at lambing. It also allows management procedures to be done on a group basis rather than a few lambs at a time. This program does require a higher than normal percentage of jugs, feed pails, etc.

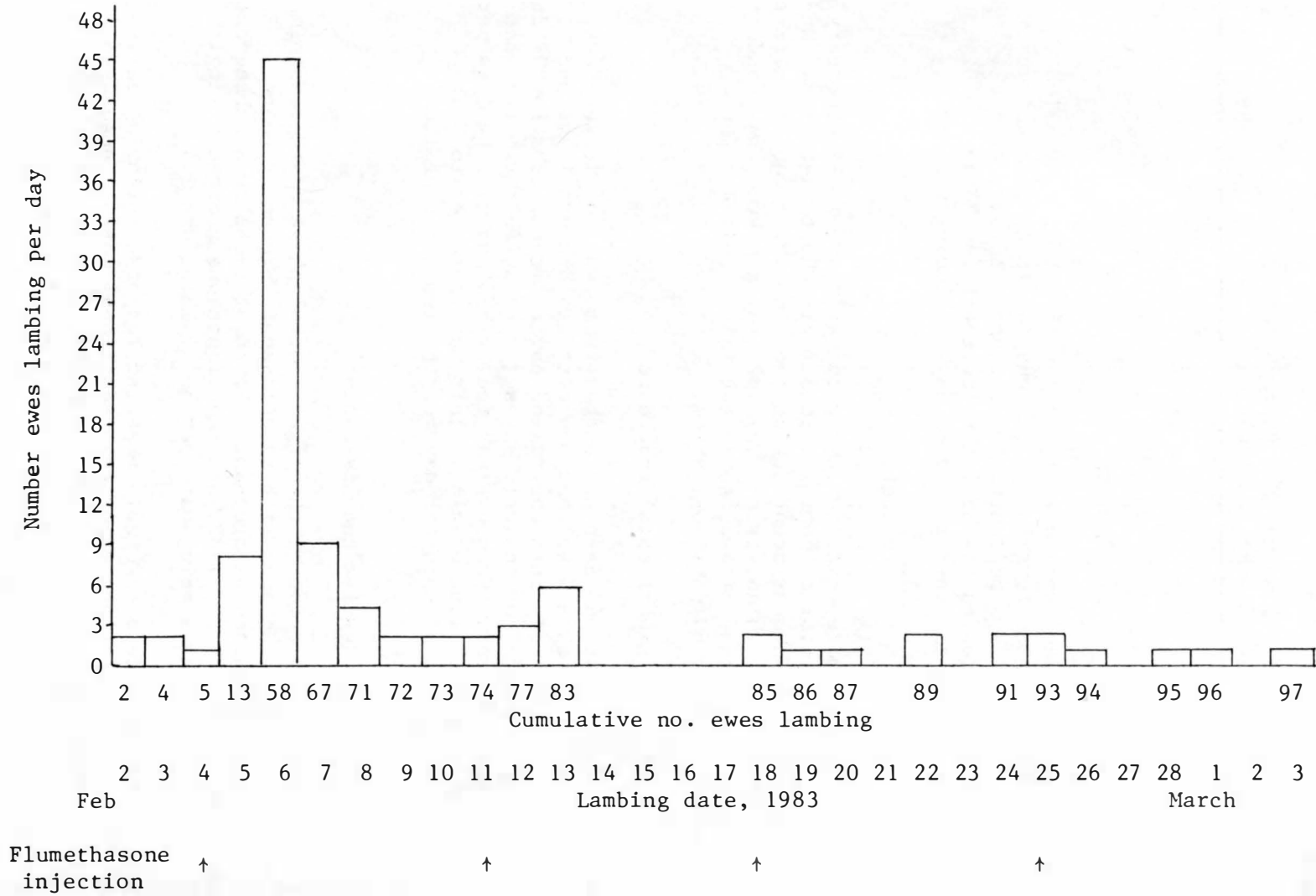


Figure 1. Number ewes lambing per day and cumulative number ewes lambing.