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# OBSERVATIONS ON THE PREDICTION OF LAMBING DATES

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## SUMMARY

With a flock of approximately 1,000 ewes, consideration was given to using a sample of 80 ewes run with a harnessed ram for 30 days to predict the dates of lambing and the occurrence of high and low periods of reproductive activity. The scheme was successfully used in one year as an aid to farm management and required no special skill, a minimum of labour, and negligible cost.

ARISING from a study of ovulation in 120 Romney and Border Leicester  $\times$  Romney six-year-old ewes (experimental group) which grazed on a farm in the sand country of Manawatu, the daily incidence of mating marks was recorded and used to predict the spread of lambing dates for 1,040 ewes also kept on this farm. These sheep comprised 340 five-year-old Romney and 700 Border Leicester  $\times$  Romney ewes of 1 to 5 years of age. Both flocks were separated from the experimental ewes a few days prior to joining with rams on March 7, 1966.

On March 15, 20 ewes from each breed experimental group were slaughtered and similar groups at succeeding 14-day intervals. Only 2 ewes were marked during the first 7 days and these went to the freezing-works with the first consignment. All 40 sheep in the second consignment had been raddled, so that 80 was the effective number of ewes whose matings were recorded.

Daily records were taken of the number of ewes lambing in the flocks remaining on the farm.

Figure 1 shows the predicted time of parturition based on the mating times recorded for the experimental ewes and the dates of lambing in the crossbred flock. Thus the distribution of mating and subsequent lambing was similar to that reported by Edgar and Bilkey (1963) following introduction of rams near the start of the breeding season. Those authors studied sheep in the Waikato and Central North Island and reported a critical period for joining rams with ewes to synchronize breeding effectively and

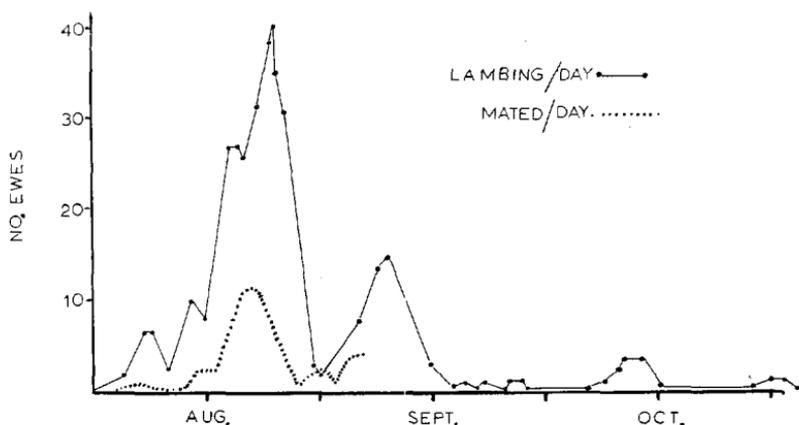


Fig. 1: Estimated dates of lambing for experimental ewes recorded for mating activity and dates of actual lambing in Border Leicester  $\times$  Romney flock on the same farm.

this time was earlier than the joining date in the present trial. Differences in onset of breeding season owing to district seem likely and some simple sampling technique to record mating in the flock would be helpful to farmers in relation to the planning of farm work.

The initial peak of breeding activity followed by diminishing peaks at 17-day intervals suggested the possibility of predicting peaks of lambing followed by periods when few lambs would be born. Modifications in farm management to utilize such information might therefore be made. For example, it is recommended practice to mob up two-tooth ewes and rams daily during the mating season. However, if high and low periods of activity do occur, it may be wasteful of time and labour to do this when activity is negligible. Knowledge of the peaks of lambing might aid in deciding when, for how long, or the ways to use supplementary or saved feed to best advantage, or when to engage extra labour. It could also have some influence on the latitude available for such jobs as crutching, vaccinating or sorting ewes into lambing groups.

Figure 1 shows that a close relationship existed between the anticipated and the actual peak lambing period. This relationship was predicted and gave some confidence to decisions regarding the grazing management adopted close to the time of lambing.

The use of a sample group of ewes to provide information on mating performance in the whole flock has proved useful in the one year it has been used. From a practical farming point of view, the prediction of lambing was satisfactory; about half of the ewes in the recorded flock lambing within the first expected peak period, and, by estimation only, an even higher proportion within the Romney flock. Important points in the suggested use of a sample group of about 80 ewes run with a harnessed ram for about 30 days are that, as a tool of farm management, it requires no special skills, a minimum of labour and negligible cost.

## REFERENCE

Edgar, D. G.; Bilkey, D. A., 1963: *Proc. N.Z. Soc. Anim. Prod.*, 23: 79.