High pre-mating liveweights improve the lambing performance of merino ewes

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HIGH PRE-MATING LIVEWEIGHTS IMPROVE THE LAMBING PERFORMANCE OF MERINO EWES

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Analysis of lambing trials with Merino ewes has shown a highly significant association between pre-mating liveweight and lambing performance. With May-June lambing ewes there was a 2.9 per cent. lambing increase for every extra 10 lb. liveweight; for July-August-September lambing ewes there was a 6.9 per cent. increase for every 10 lb. liveweight increase.

With the May-June lambing there was a critical weight below which twinning was negligible.

Liveweight at mating time is known to affect the numbers of lambs born to groups of ewes. Increases of from 5 to 10 per cent. have been suggested for each 10 lb. increase in the flock's average liveweight at mating.

To examine the association between pre-mating liveweight and lambing performance under Western Australian conditions, liveweight and lambing data were drawn from lambing trials with Merino ewes. The trials had been conducted between 1964 and 1969 and involved 2,008 observations at Wongan Hills Research Station, and 1,711 observations at Merredin Research Station. Two times of lambing, May-June and mid-July to early September, were also included in the analysis.

Method
The ewes' liveweights were collected into the 18 categories ranging from 67.5 to 152.5 lb. The lambing performance of the ewes in each category was then determined and the data analysed to look for relationships between pre-mating liveweight and lambing performance.

Results
The figure indicates definite increases in lambing performance as pre-mating liveweight is increased. Regression analysis showed these increases to be highly significant (p<0.001) for both times of lambing.

The effect of lambing time and pre-mating liveweight on lambing results.

The results indicate that for May-June lambing there was a "critical" liveweight below which twinning was negligible. This was in the range of 95 to 100 lb. At the July-August-September lambing no such "critical" weight was observed.

Ewes in the lowest weight category in both time of lambing groups averaged 67.5 lb.

Examination of average pre-mating liveweights showed that the May-June lambing ewes were heavier than the July-August-September lambing ewes by 10 to 15 lb. at Wongan Hills and 16 to 22 lb. at Merredin.

Discussion
The results suggest that under Western Australian conditions there is a highly significant association between pre-mating liveweight and lambing performance of Merino ewes.

For each 10 lb. increase in pre-mating liveweight the number of lambs born increased by 2.9 per cent. at the May-June lambing, and 6.4 per cent. at the July-August-September lambing.

Within groups of equal pre-mating liveweights, later lambing gave a substantial increase in the percentage lambing. However, the large difference in average pre-mating liveweights in favour of the earlier time of lambing reduced the time-of-lambing response to a marginal level.

The relationships for pre-mating liveweight and percentage of lambs born were not statistically different between sites (Wongan Hills and Merredin), suggesting that it is more or less consistent over most of the wheat and sheep areas.

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