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ANNUAL PATTERN OF OVULATION RATES IN MERINOS IN SEMI-ARID TROPICAL QUEENSLAND

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Low reproductive rates are the major problem of the sheep industry of tropical Queensland. Traditionally animals are joined during the annual spring drought so that ewes will lamb in autumn when nutrition is adequate. Conception rates during this period are low (Entwistle 1972), however any attempt to change the time of joining requires a knowledge of ovulation rates at other times of the year.

A group of 250 aged Merino ewes at D.P.I. "Toorak" Sheep Research Station, Julia Creek, were allocated at random to 25 groups each of 10 ewes. Every fortnight for 50 weeks one group of ewes was weighed and then slaughtered and the ovaries examined for evidence of recent corpora lutea. Some deaths occurred between allocation and slaughter.

The proportion of ewes ovulating and ovulation rates, as a proportion of ewes ovulating are shown in Figure 1. Although the proportion of ewes ovulating varied significantly with time ($P<0.01$), this proportion did not fall below 0.78. Although the body weights of ewes with multiple ovulations was higher (42.3 kg) than for ewes with either one (39.4 kg) or no (39.5 kg) corpus luteum, these differences were not significant. The proportion of ovulating ewes with 2 or more corpora lutea, varied greatly from observation to observation but there were no significant time trends.

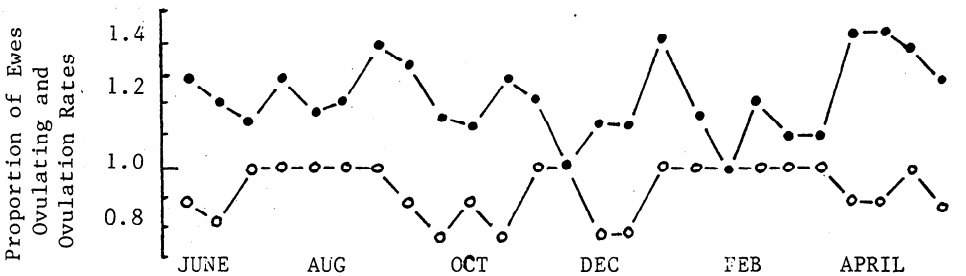

Figure 1. Proportion of ewes ovulating (o — o) and ovulation rate as proportion of ewes ovulating (● — ●).

Although oestrus data was not available from this experiment, the results indicate that a large proportion of the ewes were cycling at any period of the year. It should be possible therefore to mate Merino sheep successfully in the tropics at any time of the year. By the use of conserved fodder and provision of shade trees (Hopkins and Pratt 1976) joining could be delayed until after the first rains, when a good season could be assured for subsequent pregnancy and lambing.

ENTWISTLE, K.W. (1972). Aust. vet. J. 48: 395.
HOPKINS, P.S. and PRATT, M.S. (1976). Proc. Aust. Soc. Anim. Prod. 11: 153.

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