

THE EFFECTS OF AGE, YEAR AND LAMBING PERFORMANCE ON LIVE WEIGHT
OF MERINO EWES IN NORTH WEST QUEENSLAND

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Live weight is an important criterion in a breeding flock because of its phenotypic correlation with wool production and its high genetic correlation with reproduction rate (Turner and Young 1969). It is also the chief determinant of the value of cast-for-age animals so age-specific data are important in deciding the profitable age structure of a breeding flock.

Estimates were made of the effects of age, year and lambing performance on live weight in Merino ewes aged 2.5 to 10.5 years for the period 1966-70. The experimental flock was run on Toorak Research Station, Julia Creek. The environment and the history of this flock, and the model used for analysis have been described previously (Rose 1972, 1974, 1982).

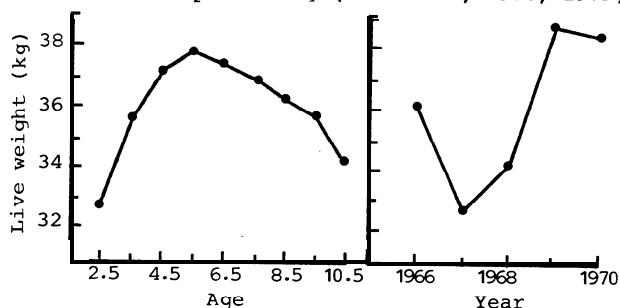


Fig. 1. The effects of age and year on live weight of Merino ewes. S.F. range (0.18-0.34).

Figure 1 shows that live weight increased with age till 5.5 years and thereafter declined rapidly. Differences between years were very marked. The maximum between-year difference of 6.3 kg (1967 and 1969) was equivalent to 17.3% of the mean for all years. The effects of pregnancy and lactation were -1.9 and -1.0 kg (5.0 and 2.8% less than the mean for ewes which failed to lamb).

These data differ from those of Merino ewes at Cunnamulla in south west Queensland (Brown et al. 1966). The Toorak ewes were generally much lighter at 2.5 years and showed a smaller rise in live weight with age. However, at both locations the live weights of aged ewes declined steeply. The effect of pregnancy was greater and of lactation less than that for Cunnamulla ewes. These data and earlier ones (Pose 1972, 1974, 1982) reveal aged ewes show a dramatic decline in reproductive performance, wool production, wool quality and live weight. If a market could be found for aged ewes it may be possible to enhance the production of a smaller flock by improved husbandry.

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