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**THE EFFECT OF SHEARING EWES AT
MID-GESTATION ON REPRODUCTION
AND PERFORMANCE**

**A thesis presented in partial fulfilment
of the requirements for the degree of
Master of Science in Zoology
at Massey University**

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ABSTRACT

This study tested the hypothesis that shearing ewes in mid-gestation causes an increase in lamb birth weight. Growth rates of lambs were calculated to test for any additional trade-off between investment at gestation limiting investment at lactation. Liveweights and growth rates of lambs were analysed for a difference between the sexes with the expectation that sheep may put extra investment into male lambs, compared to female lambs. Experiments were conducted with mixed-sex twin pairs to determine if the male lamb was able to receive more milk than the female lamb.

Sixty ewes were selected after synchronised mating and pregnancy diagnosis: 30 were twin-bearing and 30 were single-bearing. Half of each group (twin- and single-bearing) were shorn at mid-gestation (approximately 77 days before lambing) and observations of their behaviour and estimations of their food intake were made.

Shorn ewes adjusted rapidly to shearing, exhibiting no apparent difference in behaviour one week after shearing. Shearing led to an increase in ewe weight and lamb birth weight. Rearing twins was costly for the twin-bearing ewes: they were lighter, had lower condition scores and less wool growth than ewes with singletons during late-gestation and lactation.

Twin lambs were born lighter and grew slower than single lambs. There was no evidence of sex-biased investment in this study. A slight trade-off between gestation and lactation was apparent for shorn, single-bearing ewes. There was no difference between twin lambs born to shorn or full fleece dams. Shearing ewes at mid-gestation appears to be a useful tool for increasing the birth weight of lambs which could lead to an increase in survival of newborn lambs.

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