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**Effects of ewe age
on offspring development and
performance**

A thesis presented in partial fulfilment of the requirements for the degree of
Doctor of Philosophy in Animal Science
at Massey University, Turitea, Palmerston North, New Zealand.

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Abstract

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In New Zealand only approximately 30% of ewe-lambs are bred each year despite the advantages this practice can offer. Farmers have indicated a reason for not breeding ewe-lambs is that the offspring born to ewe-lambs are typically smaller and lighter to at least weaning. However, there is a lack of information on the post-weaning performance of ewe-lamb progeny in New Zealand. The objective of this thesis was to examine the effects of maternal age (ewe-lamb dams vs. adult ewe dams) on the performance of singleton and twin progeny and also the growth of their progeny to weaning. Progeny born to these two dam age classes were monitored to approximately 3.5 years of age. The results of this thesis have demonstrated that the growth and therefore live weight of offspring born to ewe-lamb dams was in general lower compared with those born to adult ewe dams, especially in twins. However, results also show that there is little impact of maternal age on offspring reproductive and lactational performance. Interestingly, there was a reversal of the influence on grand-offspring birthweight, whereby lambs with ewe-lamb granddams were actually heavier at birth. The lighter live weight of ewe-lamb progeny without negative effects on performance may even suggest these animals are more efficient; however, longer-term studies would be required to confirm this. In conclusion, these results indicate farmers can utilise progeny born to ewe-lamb dams without a negative impact on production, and in fact there may be a positive effect on production efficiency.

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