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INFLUENCES ON VARIATION IN FERTILITY OF SOWS

by

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Abstract

This thesis presents the results from a series of studies related to factors influencing fertility of sows in New Zealand. The conclusion from an analysis of longitudinal pig reproductive performance data is that summer-autumn infertility was not a significant problem on the farms included in this study during the time period investigated. In New Zealand there are probably certain specific conditions when seasonal infertility does become a problem for a particular pig herd, and this may be more evident on farms in the South Island which are using a group housing husbandry system for their sows. The intervention trials into increased dry sow ration in newly mated sows and of the management technique of split weaning both failed to demonstrate these techniques improved reproductive performance. Economic simulation modelling suggests that while there does not seem to be an overall benefit from the increased dry sow feed intake, it would yield an economic benefit on some farms. Possible explanations for this are discussed in this thesis. The investigation into the usefulness of ultrasound scanning for determining early pregnancy status in sows demonstrated the effectiveness of this diagnostic technique in detecting pregnancy, but did not show a level of loss of early pregnancies sufficient to justify more intensive investigation of embryonic mortality. Cull sows sent to slaughter were examined for their pregnancy status and any pathological changes. A large proportion of these animals showed endometritis and urinary tract pathology, indicating that both of these conditions were more common in the cooperating herds than had been suggested by earlier clinical evidence.

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