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AN INVESTIGATION OF WASTAGE ON A COMMERCIAL SHEEP FARM IN NEW ZEALAND

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AN INVESTIGATION OF WASTAGE ON A COMMERCIAL SHEEP FARM IN NEW ZEALAND

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ABSTRACT

This dissertation reports the results from an investigation of wastage on a commercial sheep farm. This traditionally summer-dry 2,952 hectares farm runs an annual average of 21,000 breeding ewes and 1,100 cattle. High levels of wastage in both ewes and lambs have been observed over the past four years, and vaginal prolapse was considered to be the major cause of loss about lambing time. The investigation described in the dissertation comprised three main parts; database analysis and disease prevalence, Androvax® vaccination, and wastage in ewes and lambs.

Database analysis and prevalence studies were conducted to provide initial animal health and production information, and aimed to quantify the extent of wastage and disease prevalence. Two databases, a farm input form and Stockpol, were used. Despite poor quality animal health records and difficulties in extracting data, a temporal pattern of ewe wastage in different age groups and lamb wastage was able to be constructed and it showed consistently high wastage of ewes and lambs over the past five years. Prevalence of disease investigations confirmed high prevalences of infectious footrot and pneumonia, and a low but significant prevalence of Johne’s disease.

For a clinical trial to determine the effects of Androvax® vaccination, 300 mixed age control ewes selected in March 2006 were ultrasound scanned and their pregnancy status compared with vaccinated ewes running together in the same flock. The risk of carrying multiple lambs in vaccinates and controls was the same but vaccinates were about two times more likely to carry triplets than control ewes. A partial budget indicated that discontinuing Androvax® vaccination would result in savings of about $115.06 per 100 ewes.

For the wastage study, a total of 531 mixed age ewes were enrolled after ultrasound scanning on 15th June 2006 and observed from scanning to weaning for any deaths. From 22nd August to 12th September 2006, all ewes and lambs that died and were found were necropsied to determine the cause of death. The incidences of wastage were 3.1% and 12.1% for ewes and lambs respectively. Dystocia and starvation were the main causes of death in ewes and lambs respectively.
This study identified certain issues and constraints for on-farm investigations which included incomplete data, difficulties in quantifying disease prevalence and prioritising control measures, evaluation of existing management techniques and determining causes of deaths. Solutions were found for most of the issues and the study in particular highlighted the usefulness of sentinel groups for investigation of causes of wastage and the value of field trials for evaluating interventions.
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