Management Strategies Affecting Perinatal Lamb Mortality in Southern NSW

Project Summary

High perinatal lamb mortality rates in Australia are a major source of reproductive wastage, resulting in economic loss and increased animal welfare concerns for the Australian sheep industry. Research has shown lamb mortality to be heavily dependent on individual, maternal and environmental factors. The association between lamb mortality and peri-parturient management strategies provides the opportunity to reduce lamb mortality rates. As a result the association between different management strategies and perinatal lamb mortality was examined along with factors influencing lamb survival.

An online survey was conducted, with producers in Southern NSW targeted who had pregnancy scanned their ewes for lambing in 2014. Demographic data, scanning and marking results as well as information on management practices was collected. Records from 74 mobs, consisting of 37, 032 ewes were used to determine the average perinatal lamb mortality of 18%. Fifty one lamb post mortems also took place on six properties to ascertain the major cause of postnatal lamb death and determine the role BWT plays in lamb mortality.

The perinatal lamb mortality rate for maiden ewes (< 1 yr old) was significantly greater ($P < 0.05$) than mixed aged ewes. Hair breeds reported a greater ($P < 0.05$) perinatal lamb mortality rate compared to wool breeds. Twin mobs had a significantly greater perinatal lamb mortality rate than single mobs and mobs which were not separated during the scanning to marking interval. Post mortem examinations reported a significant interaction ($P < 0.05$) between birth weight (BWT) and cause of death (COD), with the mean BWT of lambs dying from dystocia greater (5.4 ± 0.3 kg) than those dying from low BWT (2.2 ± 0.6 kg), predation (4.4 ± 0.3 kg) and greater than those dying from starvation, mismothering and exposure (SME) (4.3 ± 0.2 kg). The mean BWT for male (4.9 ± 0.2 kg) lambs was significantly greater than female (4.2 ± 0.2 kg) lambs ($P < 0.05$). It was also revealed that the mean BWT for Merino x Merino (3.7 ± 0.5 kg) lambs was lower than that for Merino x Other (5.9 ± 0.7 kg) lambs ($P < 0.05$).

It was concluded that ewe age, breed type and the separation of mobs into different mob types, significantly affects perinatal lamb mortality. It is also evident from the results that lamb BWT varies between sex and breed, with BWT playing a significant role in the COD. This study also confirms that high perinatal lamb mortality rates remain an issue for the Australian Sheep Industry and warrants further study.