

Calibration of internal pelvic callipers against carcase measures and to estimate the probabilities of lamb survival, dystocia between ewes with different pelvic dimensions

Abstract

The Australian sheep industry experiences significant production losses due to dystocia. Ewes that experience dystocia have significantly smaller pelvic sizes than ewes with eutocic histories. A modified calliper has been developed in South Africa to conduct internal pelvic measurements in sheep, with encouraging predictions of lambing difficulty. Two studies were undertaken to examine the potential of the pelvimeter to predict lambing difficulty and lamb survival outcomes. The first study examined the correlation of live and post-mortem pelvic dimensions in 46 sevenyear-old Merino ewes. The second study examined the relationships between live animal pelvic dimensions on lambing difficulty and lamb survival outcomes, using 388 pregnant maiden Merino hoggets. Data collected on new born lambs included weight, the length of the nose, the length of the skull, width of shoulders and depth of chest. Lambs found dead within 5 days of birth were presented for autopsy.

No correlation was found in the first study using mature ewes. Therefore, no conclusion can be drawn as to whether a relationship exist between pelvic size and lambing ease and survival. However, the parameters of litter size, ewe condition score, lamb nose to skull ratio and skull depth are significant in determining the likelihood of problematic birth