MANAGEMENT SYSTEMS AT LAMBING AND LAMB SURVIVAL IN SOUTH AUSTRALIAN MERINO EWES

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Poor lamb survival, particularly of twins, is a major impediment to improving net reproductive efficiency in the Merino (Kleemann *et al.* 1991). A high proportion of Merino breeding flocks in South Australia lamb during autumn under poor nutritional conditions and it is common practice to supplement and inspect regularly. This system could increase ewe/lamb separation and lamb mortality. If so, the strategic placement of a 3 week supply of supplement together with no supervision of the lambing ewes may improve lamb survival.

Six-year old South Australian Merino ewes *(n* = 245), examined by real-time ultrasound during mid pregnancy, were categorised as bearing 0, 1 or 2 fetuses and allocated at random from within categories to 2 treatment groups (Table 1). Under 'normal management' a supplement of oat grain and cereal hay (50:50 w/w, 9.3 MJ ME/kg DM) was fed at 1140 g/head.day 3 times weekly during late pregnancy and lambing, with inspections during lambing at the time of feeding. 'New management' group ewes were treated as above except during the first 46 days of lambing large round bales of cereal hay (7.2 MJ ME/kg DM), fed at 1600 g/head.day, were put in the paddock on 4 occasions and ewes were not inspected. The number of single and twin born lambs were counted at marking using the 'marked udder method'. The number of ewes present at marking was recorded.

Table 1. Numbers of lambs and ewes surviving in the 'normal' and 'new' management groups (percentages in parenthesis)

	Lamb survival		Ewe survival		
Treatment	Single	Twin	Barren	Single	Twin
Normal management	37(86)	70(67)	26(96)	41(95)	51(98)
New management	34(75)	42(41)	27(100)	41(91)	39(76)

Lamb survival under normal management was superior to that in the newly devised system *($P < 0.01$)*. The interaction between treatment and litter size was not significant *($P < 0.05$)*. Lower lamb survival of the 'new management' group was partly due to increased ewe mortality, particularly of twin-bearing ewes *($P < 0.05$)*. Possible reasons for poor lamb survival are low body condition of the ewes prior to lambing, and an extended lambing period resulting in an inability of cereal hay to provide adequate nutrition. Further studies on the present treatments are required and should (i) incorporate the 'ram effect' to synchronise lambing and (ii) investigate the importance of ewe body condition prior to lambing on lamb survival.

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