Survival and Growth of Damara, Dorper, Dorset, Rambouillet, South African Meat Merino First Cross Lambs in Semi Arid Queensland

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The recent introduction to Australia of superior sheep meat breeds from South Africa provides a basis for improving the quality and amount of sheep meat grown in Queensland's semi arid area. Alternatively suitable breeds from existing Australian stocks of dual purpose and traditional terminal meat sheep may bring the desired attributes required by the market place. There has been no critical assessment of sheep meat breeds suitably adapted to the rangeland environment of western Queensland.

Three rams from each of six breeds (Queensland Merino, Damara, Dorper, Dorset, Rambouillet and South African Meat Merino), will be single sire mated to groups of 28 Queensland medium wool Merino ewes in the autumn and spring in each of three years (1999, 2000, 2001). New rams will be used in the second and third years, except one ram from each breed will be used in a subsequent year to provide a link between years. Ewes will be scanned during mid pregnancy to determine number of fetuses and liveweight of lambs and carcase attributes will be monitored at regular intervals. Results for the survival and growth of lambs produced from the autumn mating of 1999 were analysed using procedures CATMOD and GLM in SAS (1996). Lamb survival was calculated as the number of lambs present at marking over the number present at scanning. The statistical model for survival included breed while that for growth parameters included breed, sex, type of birth and the first order interactions. Day of birth was used as a covariate for the analysis of marking and weaning weight.

Table 1. Survival and growth of sheep meat breeds from birth to marking and weaning

Breed	Lamb survival - birth to marking (%)	Liveweight (kg)			Growth rate - birth to weaning (g/day)
		birth	marking	weaning	
Queensland Merino (M)	61.3 bc	3.37 a	12.4 c	16.1 a	129 a
Damara x M	82.6 a	3.44 a	13.5 ad	17.2 ac	136 a
Dorper x M	66.3 bc	3.65 ac	14.9 be	18.8 b	161 b
Dorset x M	67.0 bc	3.85 bcd	14.4 de	18.6 bc	151 b
Rambouillet x M	72.1 ac	3.77 bce	14.0 de	17.1 ad	132 a
SA Meat Merino x M	64.6 bc	3.59 ade	14.1 de	18.1 bcd	155 b

Least squares means with letters in common are not significantly different (P>0.05).

Survival rate of first cross Damara lambs was higher (P<0.05) than that of most other breeds. Dorset x Merino and Rambouillet x Merino were heavier (P<0.05) at birth than purebred Merino and Damara x Merino lambs; values for Dorper x Merino and South African Meat Merino x Merino were intermediate. The comparative advantage in weight held by the Rambouillet cross lambs at birth was not apparent 10 and 14 weeks later at marking and weaning, respectively. Growth of Dorper cross and South African Meat Merino cross lambs was greater (P<0.05) than that of other breeds from birth to weaning. These results should be viewed with caution because of the small number of sires representing the breeds. Nevertheless, these results indicate potential breed variation exists for characteristics of both survival and growth. These traits may be used to advantage in generating lambs in western Queensland that are suitable for both the domestic and export markets.

SAS. 1996. SAS User's Guide, Statistics. SAS Institute Incorporated, Cary, North Carolina.

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