

PASTURE INTAKE AND PRODUCTION OF MERINO WEANER SHEEP GRAZING PASTURES GROWING ON SALINE LAND IN SOUTHERN NSW

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Salinity can lead to salt scalds in pastures and erosion if left untreated, but some landowners are reluctant to address the issue because of a perceived lack of an economic benefit. There is a need to demonstrate the productive potential of saline lands. The following observations were undertaken to benchmark the performance of pastures sown in a remedial role on moderately saline land (soil salinity (EC_E) at 0-10 cm and at 10-60 cm was 3.5 and 7.0 dS/m, respectively; Southwell, 1999).

The site is located 40km north of Yass on the southern tablelands of NSW. Southwell (1999) gives a detailed description of the site and its management. Species sown in the pasture included tall wheat grass (*Thinopyrum elongatum*), tall fescue (*Festuca arundinacea*), puccinellia (*Puccinellia ciliata*), phalaris (*Phalaris aquatica*), perennial ryegrass (*Lolium perenne*), strawberry clover (*Trifolium fragiferum*), balansa clover (*T. balansae*) and subterranean clover (*T. subterraneum*).

Approximately 250 fine-wool Merino, mixed sex weaners grazed the 8 ha pasture for 48 days, commencing 1 March 2001. The initial liveweight of the weaners was 24.7 ± 3.2 kg, which increased (P < 0.05) to 28.3 ± 3.6 kg over the period at a rate of 77.3 g/d. Clean wool growth (from dye bands) over the same period was estimated to be 7.4 ± 0.6 g/d when measured on a sub-sample of 19 weaners from dye bands placed on midside staples at the start and end of the measurement period.

Pasture intakes were estimated in 11 weaners (from the 19 dye banded weaners) using the dual alkane technique. The mean intake was 1173 ± 305 g DM/d, of which 0.78 ± 0.05 was digestible, giving a digestible DM intake of 908 ± 212 g/d. Available green herbage declined over the grazing period from 1800 to 890 kg DM/ha, but the dead component remained at 200 kg DM/ha. The main species present (end point evaluation) were tall fescue (50.9%), tall wheat grass (21.7%), phalaris (7.5%), annual grasses (4.7%), ryegrass (2.8%) and legumes (9.4%). The *in vitro* digestibility of most of the species sampled on day 12 was in the 71-78% range.

Although the liveweight gain of the 19 weaners used for more intensive measurement gained was higher than the whole flock (4.6 ± 1.3 vs 3.7 ± 0.6 kg), this difference was not significant. The *Grazfeed*-predicted intake, digestibility and liveweight gains were all within 5% of the measured performance (Table 1). However, the predicted wool growth was nearly twice that of the wool growth estimated from the dye band samples.

The grazing system on this moderately saline land performed to expectations in terms of pasture intake and liveweight gains, given the availability and quality of the herbage on offer.

Table 1. Performance of Merino weaners grazing pasture on saline affected land

Measurement	Pasture intake (g DM/d)	DMD of diet (%)	Liveweight gain (g/d)	Clean wool growth (g/h/d)
Simulation	1210	75	101	14.1
Measured Data	1173	78	96	7.4

SOUTHWELL, A. (1999). *Proc. 14th Annual Conf. Grassl. Soc. NSW Inc.* p 73-7.

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