

**DIET SELECTION OF MERINO WETHERS GRAZING VEGETATIVELY-ESTABLISHED GRASSES FOR PRODUCTIVE REVEGETATION OF SALINE SITES IN NEW SOUTH WALES**

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Landholders with salt-affected sites want productive options for rehabilitating those sites together with information on the grazing capacity of revegetated saline sites. Perennial grasses should utilise more soil moisture and have a longer growing season than many of the annual species that are typically found on saline sites. The West Hume Landcare Group assessed the performance of warm-season, salt-tolerant perennial grasses on a severely salinised site near Burrumbuttock, NSW. Most of these species were rhizomatous/stoloniferous and were established vegetatively. They can be used on severely affected sites where surface characteristics limit establishment from seed in areas with winter-dominant rainfall. A number of these perennial species are adapted to saline conditions (Semple *et al.* in review). Three of the most productive species, common couch (CC, *Cynodon dactylon*), Australian salt grass (ASG, *Distichlis distichophylla*) and saltwater couch (SC, *Paspalum vaginatum*), were selected for further evaluation. The selected species are C4 (i.e. summer growing) and may provide producers with more forage over summer than the exotic C3 species capable of summer growth such as tall fescue (TF, *Festuca arundinacea* cv. Demeter) and tall wheat grass (TWG, *Thinopyrum ponticum* cv. Tyrrell). However, for these species to contribute to productive saline options they must be both selected by grazing livestock and be of higher nutritional value than the alternative naturalised annual species. This study is assessing the relative acceptability of ASG, CC, SC, TWG and TF to grazing sheep.

The experimental block of 60 x 60 m was split equally into 4 plots, each containing eighteen 5 x 10 m subplots into which the 5 species were sown/planted (replicated 3 times within each plot) in August 2004. Three untreated control subplots were also included in each plot. The whole area was heavily grazed (360 sheep/ha) for 4 days twice in spring 2005 to manage herbage mass. All subplots included annual grass species (such as sea barley grass and annual beard grass), and the control plots were almost exclusively annual grasses.

In January 2006, as an initial assessment of the acceptability to sheep of the species, 4 groups of 4 wethers grazed each of the plots for 30 minutes. The location and activity of each animal were recorded at 2 minute intervals. This procedure will be repeated throughout the year. Preliminary results are shown in Table 1.

**Table 1. Preference of Merino wethers grazing plots of species of saline tolerant grasses expressed as the time spent grazing each species as a proportion of the total time grazing during the test period**

Plot	Tall fescue	Tall wheat grass	Common couch	Australian salt grass	Saltwater couch	Control
1	0.038	0.025	0.468	0.082	0.114	0.272
2	0.271	0.109	0.339	0.059	0.145	0.077
3	0.171	0.081	0.355	0.123	0.057	0.213
4	0.200	0.082	0.294	0.171	0.041	0.212
<b>Sheep group</b>						
1	0.341	0.011	0.112	0.134	0.084	0.318
2	0.146	0.036	0.516	0.141	0.115	0.047
3	0.106	0.034	0.466	0.106	0.125	0.163
4	0.138	0.238	0.320	0.044	0.033	0.227
<i>Mean</i>	0.179	0.078	0.361	0.107	0.091	0.186

Overall, CC was preferred to TWG, ASG and SC, although variation between plots and between groups of sheep was large. SC in earlier qualitative analyses had the highest digestibility between October and May (Semple *et al.* in review), but it appeared the least acceptable of all treatments in January 2006. The overall acceptability of TF was similar to that of the annuals on the control plots.

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