Effect of bent grass (agrostic tenuis) control in pastures on the wool production of wethers

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Bent grass is a weed of pasture throughout central and southern Victoria, particularly because it suppresses clovers. Bent grass is a problem weed in pastures and crops in about 10,000 sq km of Victorian farmland in areas with more than 600 mm rainfall (1).

An experiment was established in 1979 at Yendon (near Ballarat) to compare the production of pastures dominated by bent grass with that of pastures treated to control the weed.

Methods

Corriedale wethers were continuously grazed at stocking rates of 8.6, 10.6 and 14.1 wethers/hectare on 20 hectares of bent grass dominated pasture subjected to four treatments, with two replicates, over 5 years (March 1979 to March 1984). The treatments were: Untreated Pasture; Kerb - 1.5 kg/ha of "Kerb" herbicide (pronamide 50%) applied in July 1979; "Instant Pasture" - 5-6 cm deep thorough summer cultivation of heavily grazed bent grass pasture in March 1979; and "Instant Pasture and Ryegrass" - as for "Instant Pasture" except that Victorian Perennial Ryegrass and Trikkala sub-clover were sown in April 1979. New groups of wethers were introduced each March after the sheep were shorn. The sheep were weighed monthly and fed in winter (if required) to prevent liveweight falling below 35 kg. Pasture composition was measured each spring using the Dry-Weight-Rank method (2).

Results and Discussion

The best treatment in the trial was "Instant Pasture and Ryegrass"; greasy wool production/head over the five years of the trial for this and the untreated pasture are shown in Table 1.

Table 1 Average Wool Production/Head, 1979-83, at Three Stocking Rates on Bent Grass Dominant Pasture and Treated Pasture

STOCKING RATE -	TREATMENT	1979	1980	1981	1982	1983	AVE.
8.6 wethers/ha	Untreated	5.0	4.3	4.5	5.1	6.2	5.0
	Inst. P&R	5.7	4.8	5.0	5.8	6.4	5.5
10.6 wethers/ha	Untreated	4.7	4.1	4.6	4.2	5.7	4.7
	Inst. P&R	6.1	4.8	4.7	5.1	5.9	5.3
14.1 wethers/ha	Untreated*	4.0*	4.6*	4.3*	3.7*	5.4*	4.4*
	Inst. P&R	5.0	4.5	4.9	4.9	5.6	5.0
L.S.D. (0.05)		0.50	0.74	0.39	0.65	NS	

*Sheep on this treatment required an average of 29 kg oats/head/year.

The sheep on both the untreated pasture at the low stocking rate and the treated pasture at the high stocking rate cut an average of 5.0 kg/head of wool.

The "Instant Pasture and Ryegrass" treatment raised the carrying capacity from 8.6 wethers/hectare to 14.1 wethers/hectare over a five year period. Other measurements (especially sheep liveweights) suggest that the main reason for the improved production is better winter growth of the pasture.

1. Seiffert, M.W. (1971) M.Ag.Sc. thesis - Melbourne University.

2. A'Mannetje, L.T., & Haydock, K.P. (1963) J.Brit.Grassland Soc. 28:268-275