

Comparison of resowing techniques for perennial grass/subclover pastures in the Mt. Lofty Ranges

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The effects of contrasting sowing Methods on the initial establishment of perennial ryegrass, *Lolium perenne*, and subterranean clover, *Trifolium subterraneum*, were compared in a field trial at Flaxley SA. Several seeding machines suitable for the direct drilling of pastures were also compared in this trial.

Methods

The trial was on a hardsetting lateritic podzol and, prior to reseeding, was a pasture dominated by annual grass weeds, Yorkshire fog, *Holcus lanatus*, capeweed, *Arctotheca calendula* and sorrel. *Rumex acetosella*. The site was chemically topped in October 1989 and hard grazed over summer. Plots measuring 2.5x 10 m were then sown to perennial ryegrass cv. Ellen and subclover cv. Karridale (10 and 15 kg seed/ha respectively) in the following autumn, using one of three Methods;

Drilled into undisturbed ground on 6th April 1990, before the opening seasonal rains, Drilled into a prepared seedbed on 7th May 1990, after three cultivations.

Drilled into undisturbed ground on 7th May 1990, three weeks after the opening rains, and ten days after applying glyphosate and dicamba herbicides to control weeds.

Four different seeding machines were used to sow individual plots using Method (c). Sown plant and weed densities were measured on 17th July 1990.

Results and discussion

Method (c) resulted in the best combination of satisfactory emergence of sown cultivars and low weed densities, however method (b) provided significantly ($p < 0.05$) greater initial establishment of perennial ryegrass than other treatments.

Table 1. Plant densities (no./m²) for sown cultivars and weeds

Method	Sown cultivars		Weeds		
	Ellett	Karridale	capeweed	sorrel	Yorkshire fog
(a)	29	48	2	71	54
(b)	134	102	42	397	12
(c)	78	94	0	76	6
l.s.d. (5%)	32	30	14	121	12

The range of tined seeding machines trialled, fitted with either inverted T soil openers or narrow lucerne points, were equally effective however the single disc drill provided significantly lower densities of perennial ryegrass.