

## Evaluation of yellow serradella accessions in southern Victoria

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Yellow serradella (*Ornithopus compressus*) is an annual legume with potential for Victoria's deep acid sands (1). Two cultivars are available. Pitman, a naturalised ecotype from the South west of Western Australia is productive in spring but makes little growth in winter. Uniserra, an earlier maturing cultivar is not productive. Approximately 400 lines have recently been screened by Dr. J.S. Gladstones of the Western Australian Department of Agriculture and distributed for testing. In Victoria 77 lines were sown in 1982 at Dartmoor and Bairnsdale.

### Methods

Seed was inoculated and sown in 1-2 m ungrazed rows with two replicates at each site. Fertilizer at sowing was 300 kg/ha of 2 and 1 super potash and 100 kg/ha of super + Cu (0.5%), Zn (0.5%), Co (0.015%) and Mo (0.015%). Fertiliser in year 2 was 100 kg/ha super potash 2 and 1 and 100 kg/ha super + Mo (0.015%). Rows were rated for yield during 1982 and 1983. Seedling density was measured and the date at which =50% of plants were flowering was recorded.

Site	Soil type	pH	Avail. K (Skene)	Avail. P (Olsen)	Av. rainfall
			ppm	ppm	mm/yr
Dartmoor	Loamy sand	5.1	200	11	924
Bairnsdale	Sandy loam	5.5	79	24	686

### Results and Discussion

All lines established well; most regenerated in 1983. When subjected to analysis of variance, line/ear interactions were not significant ( $P < 0.05$ ) so results, pooled over years, are given for the cultivars and better lines (Table 1).

**Table 1.** Dry matter yield ratings (mean for 1982 and 1983) for selected lines

Line	Days to flowering <sup>†</sup>	Dartmoor		Bairnsdale	
		Winter	Spring	Winter	Spring
M 133	128	6.8 abc*	5.8 ab	5.5 ab	7.3 a
MC 2	132	5.5 bcd	5.8 ab	3.8 bc	6.0 ab
Uniserra	134	4.5 d	5.0 b	3.3 c	4.7 b
GM 016	134	6.0 abcd	5.8 ab	4.8 abc	7.3 a
GM 107	134	5.8 bcd	6.3 ab	4.0 abc	6.3 ab
GM 065.3	134	8.0 a	6.8 ab	4.3 abc	6.0 ab
GM 064	136	7.5 ab	8.0 a	4.0 abc	6.0 ab
CPI 53136.1	140	5.8 bcd	6.8 ab	4.5 abc	7.3 a
CPI 47250	142	6.8 abc	5.5 ab	5.8 a	7.3 a
CPI 44708	142	5.8 bcd	5.8 ab	4.5 abc	6.0 ab
GS 046.1	145	6.0 abcd	6.3 ab	4.5 abc	7.0 ab
Pitman	147	5.1 cd	5.4 ab	3.8 bc	6.6 ab

<sup>†</sup> Days after sowing on 5.5.1982 at Dartmoor

\* Means within a column having a common letter do not differ ( $P < 0.05$ )

In winter and spring, at both sites, Uniserra was less productive than at least one of the lines of similar flowering time. Similarly, at both sites, at least one line was more productive than Pitman in winter and at least as productive as Pitman in spring. These lines vary considerably in pod segmentation. This may have implications for seed yield and grazing escape. Examination of promising lines as grazed swards will precede future recommendations.

1. Clark, S.G. (1983). Dept. Agric. Vic., Tech. Report Series No. 83.

