

Euabalong field pea variety and sowing rate trial

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Key Messages

- » Although there was a very late break to the season, cooler conditions through September and October maintained good yields.
- Yield varied from 0.83 - 2.13t/ha. Yarrum, Kaspas and Parafield were the highest yielding varieties.
- There was no significant difference between seeding rates, except for 16 plants/m² which yielded significantly less than the other seeding rates. There were not enough plants to compensate for yield in the short season.

Background

The aim of this trial was to provide localised data on optimum plant density for 6 different varieties of field peas.

Methods

Growing season rainfall for Euabalong was 335mm (June - November).

The trial was sown on 15th June 2005 into wheat stubble with good soil moisture and harvested on the 8th December 2005.

The trial consisted of 6 varieties and was sown at 5 sowing rates on a red loam soil.

The varieties included Excell, Kaspas, Moonlight, Morgan, Parafield and Yarrum. Each variety was sown at seeding rates targeting plant populations of 16, 32, 48, 64 and 80 plants/m².

80kg/ha of Triphos fertiliser (ON; 21P; 1S; 15Ca) was sown with the trial and seed was inoculated.

The treatments were replicated 3 times. Plot size was 2m X 15m.

Results

Table 1. Yields of field pea varieties and plant populations

Variety	Plants/m ²	Yield (t/ha)
Excell	16	0.86
Excell	32	1.29
Excell	48	1.42
Excell	64	1.31
Excell	80	1.74
Kaspa	16	1.55
Kaspa	32	1.64
Kaspa	48	1.98
Kaspa	64	1.91
Kaspa	80	1.99
Moonlight	16	0.83
Moonlight	32	0.95
Moonlight	48	1.24
Moonlight	64	1.43
Moonlight	80	1.56
Morgan	16	1.22
Morgan	32	1.54
Morgan	48	1.39
Morgan	64	1.52
Morgan	80	1.59
Parafield	16	1.37
Parafield	32	1.95
Parafield	48	1.71
Parafield	64	1.72
Parafield	80	1.57
Yarrum	16	1.38
Yarrum	32	1.72
Yarrum	48	2.06
Yarrum	64	2.13
Yarrum	80	2.08
Lsd (5%)		0.16

Table 2. Yields of field pea varieties.

Variety	Yield (t/ha)
Yarrum	1.88
Kaspa	1.81
Parafield	1.66
Morgan	1.45
Excell	1.33
Moonlight	1.2
Lsd (5%)	0.18

Table 3. Yields of field pea plant populations.

Plants/m ²	Yield (t/ha)
16	1.2
32	1.51
48	1.64
64	1.67
80	1.78
Lsd (5%)	0.16

Values that vary less than the Lsd (5%) are not considered to be different.

Discussion

Although this is a relatively high growing seasonal rainfall, periods of dry weather, especially during flowering, resulted in variable yield results between varieties. Later flowering types were able to utilise rainfall late in the season.

Yarrum, Kaspa and Parafield were the highest yielding varieties. Yields are generally good compared to the district average and ranged from 0.83t/ha - 2.13t/ha (Table 1). There were significant differences between varieties (Table 2).

There was no significant difference between seeding rates of 48, 64 and 80 plants/m². 16 plants/m² was significantly less than all the other seeding rates. 32 plants/m² was significantly less than 48, 64 and 80 plants/m², but significantly more than 16 plants/m² (Table 3). This highlights that there was not enough plants (at the lower sowing rates) to compensate for yield in the short season.

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