

F2. Sowing Time, MRZ Wimmera (Vectis), Victoria

Aim

To investigate the adaptability of a range of field pea varieties and breeding lines to differing sowing dates.

Treatments

Varieties: Kaspia, Morgan, OZP0703, OZP0804, OZP0805, PBA Gunyah, PBA Twilight, Sturt.
Sowing dates: 16 May (Early), 21 June (Late).

Other Details

Row Spacing/Stubble: 30 cm row spacing, inter-row, standing stubble.
Fertiliser: MAP + Zn @ 60 kg/ha at sowing.
Plant Density: 35 plants/m².

Results and Interpretation

- Key Message: OZP0703 which has bacterial blight resistance was one of the higher yielding genotypes sown early and the highest yielding genotype sown later.
- Plant establishment – Establishment range between 20 and 30 plants/m² for field peas at Vectis in 2010 (Data not shown). No significant varietal or treatment differences were observed.
- Grain Yield – Yields ranged between 2.0 and 3.3 t/ha and a significant interaction between sowing date and genotype was observed. The late flowering varieties, Kaspia, Morgan and OZP0805 showed the most significant increase grain yield with delayed sowing of 38-52% (Table F2.1). This is possibly due to their ability to more effectively utilise late season rainfall that we observed. Alternatively, the early sown treatments of the genotypes were more severely affected by the rain as grain was not as mature as the early to mid flowering genotypes. It is important to note that these observations are not generally consistent with trials in previous seasons and at Curyo this year, where we have generally observed increased yield with early sowing and this is often more pronounced in the later flowering genotypes. OZP0703, which has improved bacterial blight resistance, was one of the higher yielding genotypes sown early and the highest yielding genotype sown later, with a relatively small difference between sowing dates. This line has previously demonstrated good general adaptation to a range of environments, as well as its bacterial blight resistance, and shows a lot of potential for the field pea industry.

Table F2.1. The effect of the interaction between sowing date and field pea genotype on grain yield (t/ha) at Vectis in 2010 (Number in brackets indicates percentage yield loss or gain relative to the early sown treatment).

Sowing Time	Kaspia	Morgan	OZP0804	OZP0805	OZP0703	Sturt	PBA Gunyah	PBA Twilight	Average
16 May	2.00	2.29	2.25	3.03	2.87	2.65	3.28	2.27	2.58
21 June	3.05 (+52%)	3.21 (+40%)	3.10 (+38%)	2.58 (-15%)	3.34 (+16%)	2.84 (+7%)	2.69 (-18%)	2.63 (+16%)	2.93
Average	2.52	2.75	2.67	2.80	3.11	2.75	2.98	2.45	

lsd(P<0.05)SDxGen = 0.77, except when comparing genotype within a sowing date = 0.70.

Key Findings and Comments

OZP0703, which has improved bacterial blight resistance was one of the higher yielding genotypes sown early and the highest yielding genotype sown later. The relatively small difference between sowing dates at this site indicates good yield stability, combined with high yields under difficult seasonal conditions.