

4. Faba Beans

B1. Sowing Time x Row Space, MRZ Wimmera (Vectis), Victoria

Aim

To investigate the adaptability of a range of faba bean varieties and breeding lines to wider row spacing's sown inter-row in to standing stubble compared with conventional cropping systems (narrow row spacing with slashed stubble). The interaction sowing times is also compared.

Note: Trial is a comparison of systems, not just row space. In the wider row spacing's plots were sown with narrow lucerne points, press wheels and chemicals applied pre-sowing. In the narrow row spacing's plots were sown with narrow lucerne points, harrows and chemicals applied post-sowing, pre-emergent.

Treatments

Varieties: Nura, Farah, AF03063, AF03109, AF05054, AF05073, 1269*483/6-1, 974*(611*974)/15-1.
Sowing dates: 16 May (Early), 21 June (Late).
Row Spacings/Stubble: 17.2 cm row spacing, slashed stubble (s117),
30 cm row spacing, inter-row, standing stubble (ST30),
30 cm row spacing, inter-row, slashed stubble (s130),
60 cm row spacing, inter-row, standing stubble (ST60).

Other Details

Fertiliser: MAP + Zn @ 60 kg/ha at sowing.
Plant Density: 20 plants/m².

Results and Interpretation

- Key Message: Genotypes compared in this trial responded differently to sowing dates. Early sowing was optimal for all genotypes, particularly for AF05073, which was the highest yield genotype when sown early.
- Plant establishment – Similar to the lentil and chickpea trials at Vectis, there were significant issues with stubble dragging and mouse damage (Figure L2.1). Overall establishment for all faba bean genotypes in all treatments was between 13 and 31 plants/m². There were no major effects of genotype or sowing date on plant establishment, however at narrow row spacings (s117) there was generally higher plant establishment than observed in the wider row spacings (Table B1.1).

Table B1.1. The main effect row space treatment on plant establishment in faba beans at Vectis in 2010.

Row Space	Plants/m ²
s117	25
s130	19
ST30	18
ST60	17

lsd(P<0.05)RS = 1.6

- Grain Yield – There was an interaction between sowing date and genotype. At the May 16 sowing date AF05073 yielded significantly more than all other genotypes, what at the June 21 sowing date the was no difference among the genotypes (Table B1.2). Row spacing had no effect on grain yield.

Table B1.2. The effect of the interaction between sowing date and faba bean genotype on grain yield (t/ha) at Vectis in 2010.

	1269*483/6-1	974*(611*974)/15-1	AF03063	AF03109	AF05054	AF05073	Farah	Nura	Average
16 May	3.26	3.10	3.54	3.14	3.41	3.97	3.40	3.26	3.38
21 June	2.62	2.67	2.47	2.70	2.57	2.40	2.60	2.37	2.55
Average	<i>2.94</i>	<i>2.89</i>	<i>3.00</i>	<i>2.92</i>	<i>2.99</i>	<i>3.19</i>	<i>3.00</i>	<i>2.82</i>	

lsd(P<0.05)SDxGen = 0.43, except when comparing genotypes within a sowing date = 0.36

Key Findings and Comments

Genotypes compared in this trial responded differently to sowing dates. Early sowing was optimal for all genotypes, particularly for AF05073, which was the highest yield genotype when sown early.