

Faba Bean, Germplasm, HRZ Western District (Cavendish), Victoria

Aim

To evaluate new breeding lines of faba beans for the Victorian high rainfall zone (HRZ).

Treatments

Varieties: See Table 2

Table 1. Other Site Details

Sowing date	April 28, 2018
Stubble management	Burnt
Row spacing (cm)	20
Plant density (pl/m²)	25
Fertiliser¹ (kg/ha)	60

1. MAP

Results and Interpretation

- **Key Messages:** Across four years of trials, PBA Samira and PBA Zahra appear to have consistently shown higher grain yields than older varieties in the Victorian HRZ.
- PBA Bendoc, a new faba bean variety with Group B imidazoline herbicide tolerance, has been released. It was bred from Nura and PBA Samira, has similar flowering time and maturity to these varieties and has yielded similarly to PBA Samira in 2015-2018.
- The breeding line AF11023 is a standout of the new breeding lines for the Victorian HRZ. It has yielded equal to or greater than PBA Samira and PBA Zahra and has a higher level of resistance to chocolate spot than either variety.
- **Summary:** The high rainfall zone (HRZ) of southwest Victoria is a growth zone for pulse production. Of the pulse crops, faba beans are the most widely grown pulse in the region due to their greater tolerance of waterlogging. Varieties suited to the longer and wetter seasons have been developed in recent years and there is still scope to develop new lines with greater disease resistance and adaptation to the new environment. This trial was established to continue to evaluate upcoming breeding lines.
- There was low disease pressure in 2018 and no significant difference in disease scores between breeding lines.
- Grain yields ranged from 2.6 to 4.2 t/ha with a site mean of 3.8 t/ha. Higher yields of 5 to 6 t/ha have been observed at Hamilton in seasons where there was a wetter spring than 2018. Newer varieties such as PBA Samira, PBA Bendoc and PBA Marne had higher grain yields than the older varieties Nura and Farah. However, PBA Zahra had a particularly low yield in 2018 and it is not clear why this was the case. In 2015 to 2017 it was equal to or greater than the site mean.

Table 2. Grain yield of faba bean varieties and breeding lines at Cavendish, Victoria.

Variety/Breeding Line	Grain Yield (t/ha)	
AF14075	4.2	a
AF13071	4.2	a
AF14061	4.1	ab
AF14063	4.1	ab
AF11023	4.0	abc
AF13029	3.8	a-d
PBA Bendoc	3.7	a-d
AF14068	3.7	a-d
PBA Rana	3.7	a-e
PBA Samira	3.6	a-e
AF13190	3.6	a-e
AF14039	3.6	a-e
AF14066	3.6	a-e
AF14105	3.6	a-e
PBA Marne	3.5	a-e
AF12025	3.5	a-e
AF14092	3.5	a-e
AF14033	3.4	b-e
AF14084	3.4	b-e
Nura	3.3	cde
Farah	3.3	def
AF10089	3.2	def
AF14062	3.0	ef
PBA Zahra	2.6	f
LSD (P<0.05)	0.7	