

B5. Faba Bean Disease Management, Eyre Peninsula (Wanilla), South Australia

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Aim

To determine optimum disease management practices for faba bean varieties in a district characterised by acidic red soil types and traditionally not considered suited to faba bean production.

Treatments

Varieties: Nura, Farah and PBA Rana
Sowing date: 8 May
Treatments: Nil – no fungicide applied
Double Carb – 500ml/ha Carbendazim pre flowering/canopy closure (6 Aug) and mid-September.
Triple Carb – 500ml/ha Carbendazim pre flowering/canopy closure and mid-September, 500ml/ha Procymidone early October.
Complete – fortnightly Carbendazim.
Fertiliser: Map + Zn @ 90kg /ha at sowing

Results and Interpretation

- Due to the low disease pressure in 2012 there was no yield response from fungicide management in this trial.
- A variety response (Table 1) showed that the broad bean PBA Kareema (0.6t/ha) was significantly lower yielding than two faba beans, Nura (1.7t/ha) and PBA Rana (1.4t/ha).
- Yields decreased with increased plant height and later plant maturity.

Table 1: Yield of faba beans varieties, Wanilla 2012.

Variety	Plant Height	Maturity Rating*	Yield (t/ha)
Nura	Short	E-M	1.7 ^a
PBA Rana	Medium	M	1.4 ^b
PBA Kareema	Tall	L	0.6 ^c
LSD (P<0.05)			0.13

* E = early, M = mid, L = late

Key Findings and Comments

- Yield of faba beans (ignoring the broad bean PBA Kareema) averaged 1.5t/ha at Wanilla in 2012. Early establishment and growth was excellent, disease pressure was low, and beans showed high yield potential.
- Beans appeared to “hay off” late in the season due to high early season biomass production and the dry and rapid finish to the season, together with the occurrence of several high temperature events during late flowering.
- There was no yield response from disease management in this trial due to the low incidence of disease in general in the 2012 season. The dry finish to the season minimised onset of humidity-driven diseases such as chocolate spot and rust, and there was little ascochyta blight during the winter months.
- The three varieties included in the fungicide trial showed a differential response for grain yield whereby a yield penalty was associated with taller and later maturing varieties. Nura was the best suited variety to the seasonal conditions experienced in 2012 due to its earlier maturity

and shorter plant type, making it less prone to haying off. It is also well suited to sowing early due to its shorter plant type (allowing easier management and harvest than other varieties) and its favourable disease resistance profile.

- The broad bean PBA Kareema had the lowest yield, and is also the latest and tallest variety of the three. Current broad bean varieties are not as broadly adapted as faba beans and have a lower yield potential due to their later maturity and larger seed size in most environments, but generally attract higher grain prices. PBA Kareema is best suited to the higher rainfall, longer season areas where its late maturity is better suited