Faba Bean, Disease Management, HRZ Southern Wimmera (Telangatuk), Victoria

Aim

To evaluate potential foliar fungicide spray strategies, new breeding lines and varieties for management of fungal diseases in faba bean.

Treatments

Disease Management

Treatment	Chemical and Application Rate	Timing
Nil	No fungicide applied	
Budget	Tebuconazole 430 @ 350ml/ha (+Agridex 1000ml/ha)	At 4 weeks after emergence and canopy closure
Complete	Tebuconazole 430 at @ 350ml/ha (+Agridex 1000ml/ha) + Chlorothalonil 720 @1.5L/ha and then Chlorothalonil 720 @1.5L/ha + Carbendazim 500 @ 500ml/ha	Tebuconazole 430 at @ 350ml/ha (+Agridex 1000ml/ha) + Chlorothalonil 720 @1.5L/ha at 4 weeks after emergence and then Chlorothalonil 720 @1.5L/ha +Carbendazim 500 @ 500ml/ha, fortnightly (x7)

P-Pickle T® fungicide seed treatment was applied to all treatments except the 'Nil' at 200ml/100kg seed (360 g/L Thiram and 200 g/L Thiabendazole)

*****Some of the treatments in this research contain unregistered fungicides, application rates and timings and were undertaken for experimental purposes only. The results within this document do not constitute a recommendation for that particular use by the author or author's organisation.***

Other Site Details	
Sowing Date	01 May
Stubble (height cm)	Standing (20)
Row Spacing (cm)	25.4
Plant Density (plant/m²)	20
Fertilizer (kg/ha)[1]	100

1. MAP (9.2, 20.2, 0, 2.7) + Zn (2.5)

Results and Interpretation

- **Key Message:** Despite very low disease pressure in 2018, there was a significant and profitable grain yield increase of between 40 and 55% with the use of fungicide strategies.

- **Establishment, Plant Growth and Disease:** Despite the relatively dry start, establishment was adequate and early growth acceptable. Rainfall through the middle of the season resulted in significant waterlogging in parts of the trial and nodulation failure. A very acid soil was a significant issue, resulting in poor and variable growth and resultant grain yields. Nodulation failure was scored in late October and data used as a covariate for grain yield analysis. Minimal disease was noted throughout the season and no scores recorded as no visual differences between varieties and fungicide strategies were observed.

- **Grain Yield and Profitability:** Grain yields were relatively low in 2018, ranging between 1.00 and 2.00 t/ha (Table 1). Surprisingly, there was a significant grain yield increase of between 40 and 55% with the use of both budget and complete fungicide strategies. Based on estimated production costs the Nil strategy returned $970/ha compared with $1425 for the budget and $1360 for the complete strategy.

Table 1. Grain yield (t/ha) of faba bean breeding lines and varieties sown in a disease management trial at Telangatuk in 2018.

Variety	**Nil**	**Budget**	**Complete**	*Average*
AF11023	1.38	1.73	2.00	*1.70*
AF12025	1.06	1.66	1.94	*1.55*
Farah	1.22	1.67	2.10	*1.66*
PBA Marne	1.36	2.00	1.69	*1.68*
PBA Samira	1.18	1.63	1.91	*1.58*
PBA Zahra	1.13	1.53	1.82	*1.50*
Average	*1.22*	*1.71*	*1.91*	*1.61*

$Lsd_{(P<0.05)}$ ChemicalTrtxVariety = ns; ChemicalTrt = 0.49; Variety = ns; CV (%) = 15.9