

F6 Disease Management, HRZ (Rokewood), Victoria

Aim

To investigate the impact of fungicide use to control disease in a range of field pea breeding lines and varieties (focusing on blue peas).

Treatments

Varieties: See figure 1

Disease Management:

Treatment	Detail
Nil	No fungicides applied
Complete	Apply mancozeb 800 @ 2kg/ha + chlorothalonil 720 @ 2L/ha fortnightly from 6-8 weeks after emergence (see table below) plus carbendazim (500ml/ha) fortnightly during flowering (Total of 6 applications)

Other Details

Rokewood	
Sowing Date	23 April
Stubble (height cm)	Standing (30)
Row Spacing (cm)	36
Plant Density (plant/m²)	40
Fertiliser (kg/ha)¹	100

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

Results and Interpretation

- Key Message: Despite the lack of significant disease, grain yields were reduced by 20% (0.54t/ha) in a 'nil' treatment compared with a fortnightly fungicide application regime.
- Plant Growth and Grain Yield – Growth throughout the season was generally excellent and little disease was present in all treatments lower in the canopy. Similar to other sites PPT phytotoxicity affected a number of lines, with Excell showing severe symptoms, OZB1320, OZB1324 and PBA Pearl moderate symptoms and Maki and OZB1308 slight symptoms.

Despite the lack of obvious disease symptoms, all varieties except Bluey showed a yield loss in the 'nil' treatment compared with a fortnightly fungicide application (Figure 1). Over the whole trial the average yield loss was 20% (0.54t/ha), with lines such as OZB1303 and OZB1311 showing losses of 38% and 35% respectively. These results confirm previous findings showing that field peas may benefit from fungicide application in higher rainfall zones.

In this trial, while the fungicide strategy using a complete package of 3 fungicides was unlikely to be a profitable option, it clearly indicates there are opportunities to refine our fungicide use to ensure maximum yield and profitability in peas in the High rainfall zone.

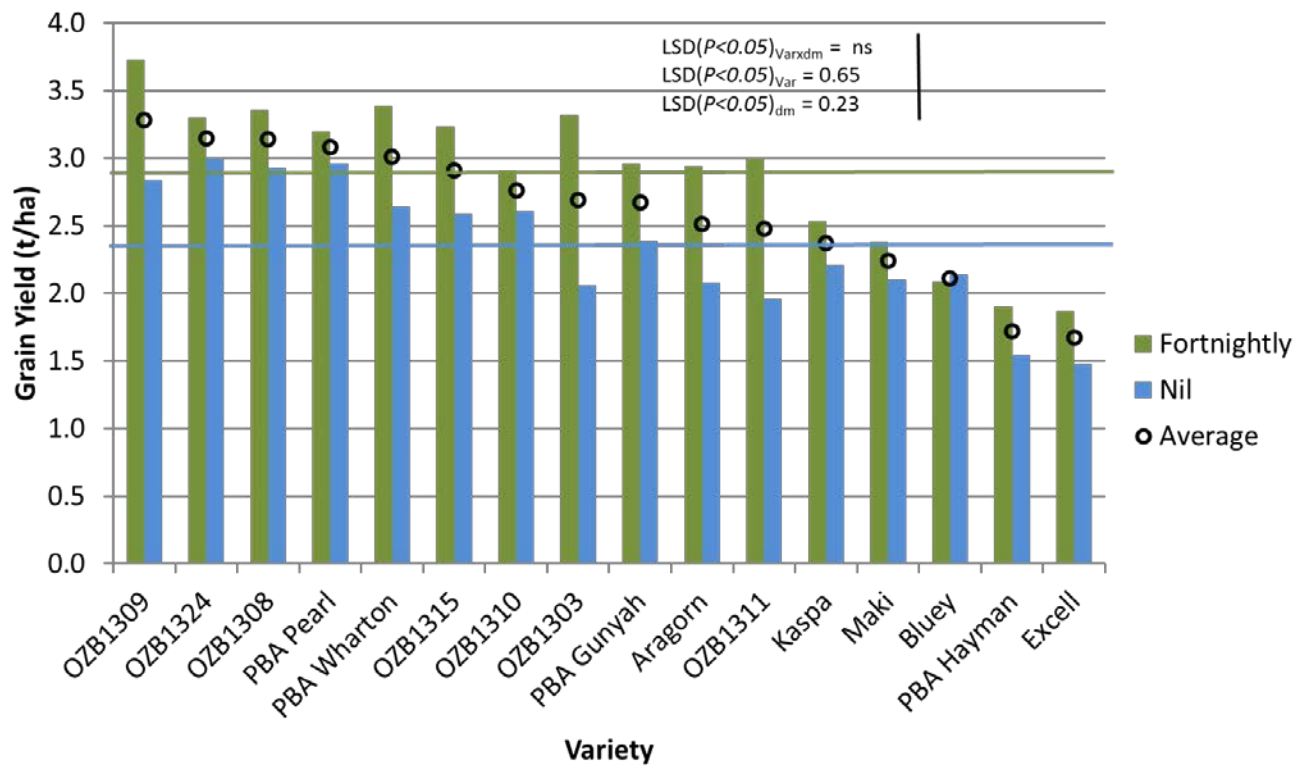


Figure 1. Grain yield (t/ha) of field pea blue breeding lines and varieties grown at Rokewood in 2015 with and without disease management.