

Table 1: Harvest Traits for the Treatments

Cultivar	SeedingRate	Yield (t/ha)	Harvest DM
Amberley	10	6.01 ± 0.19 ab	16.52 ± 1.33 -
Fiesta	10	5.85 ± 0.19 a	16.85 ± 1.33 -
Amberley	18	6.22 ± 0.19 ab	16.61 ± 1.33 -
Fiesta	18	7.34 ± 0.19 c	18.04 ± 1.33 -
Amberley	24	6.64 ± 0.19 abc	17.29 ± 1.33 -
Fiesta	24	6.82 ± 0.19 bc	18.25 ± 1.33 -
Amberley	36	6.83 ± 0.19 bc	21.66 ± 1.33 -
Fiesta	36	7.31 ± 0.19 c	18.25 ± 1.33 -

Note: values expressed as mean ± standard error of prediction
 - no subscripts relevant for this response

A summary of the experiment statistics is below:

Table 2: Key statistics for each response analysed

Statistic	Yield (t/ha)	Harvest DM
LSD	0.509	3.636
Mean	6.600	17.900
Cultivar_p-value	0.021	0.898
SeedingRate_p-value	0.000	0.057
Interaction_p-value	0.013	0.164
CV	9.315	15.811

Trial 3. Disease Management Strategies for Faba Beans Grown Under Irrigation

Protocol Objective: To evaluate the yield influence and profitability of foliar fungicide programmes in faba beans grown under surface irrigation.

Location: Kerang, Victoria

FAR Code: ICC F21-07-2

Sown: 8th May 2021

Cultivar: PBA Amberley and Fiesta VF

Harvested: 17th December 2021

Rotation position: Wheaten Hay (2020), Dryland vetch/brown manure (2019), Barley (2018)

Soil Type: Neutral medium grey clay

Irrigation: Surface irrigation, 4 applications totalling 420mm (4.2ML/ha)

GSR: April-October 160mm. Total water available 580mm

Key Messages:

- *No fungicide strategy resulted in higher yields than the untreated crop.*
- *The fungicide strategies did result in reduced disease pressure (as measured by loss of green leaf) but this was not reflected in grain yield at harvest.*

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Table 1. Fungicide strategies tested

Strategy	Treatment		
	Vegetative (6 Aug)	Early Flowering (27 Aug)	Early Podding (26 Sep)
Untreated (control)	-	-	-
'Cheap'	145 ml/ha tebuconazole	1.0 l/ha chlorothalonil	1.0 l/ha chlorothalonil
'Expensive'	1.0 l/ha Veritas	0.6 l/ha Aviator	1.0 l/ha Veritas

Table 2. Influence of fungicide strategy and cultivar on grain yield (t/ha)

Fungicide Strategy	Yield t/ha			
	PBA Amberley		Fiesta	
	Yield t/ha		Yield t/ha	
Untreated	6.09	-	6.55	-
Cheap	5.95	-	6.95	-
Expensive	6.20	-	6.72	-
Mean	6.08	b	6.74	a
Fungicide Strategy	LSD P=0.05	ns	P val	0.818
Cultivar	LSD P=0.05	0.42	P val	0.005
Seed Rate x Cultivar	LSD P=0.05	ns	P val	0.484

Fiesta was a higher yielding cultivar than Amberley.

Highest yielding treatment was achieved with the chlorothalonil based strategy (cheap) on Fiesta, but this was not significantly different to either the 'Expensive' or untreated treatments. Fungicide application did not increase yield.

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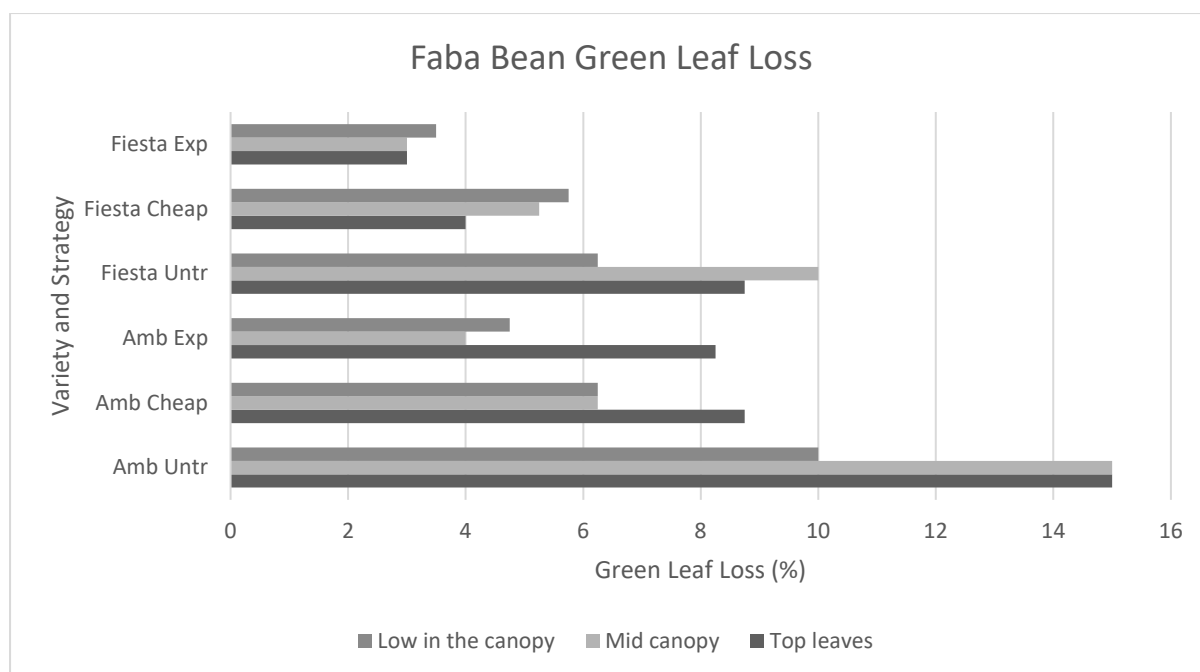


Figure 1. % Green leaf area loss in the three crop canopy segments - late pod fill (17 October)

Disease assessments through the early part of the season only found low levels of disease on the lower leaves, which was predominantly *Cercospora zonata*. Some *Ascochyta* did develop later in the season and was the main cause of green leaf loss at the time of assessment. Overall, the level of disease appeared to be quite minor, with PBA Amberley having slightly higher levels of disease. It is unlikely that the differences observed in green leaf loss between the two varieties were significant enough to reduce yield as the % of the canopy affected 10-15%. The nearby ICC variety trial saw similar yield differences between Fiesta and PBA Amberley where disease was controlled.

SAGI statistical analysis (Predicted values for Yield)

The following statistical analysis of key harvest assessments has been carried out by SAGI. This analysis uses spatial statistical analysis to refine predicted values for key assessment values.

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Table 1: Harvest Traits for the Treatments

Cultivar	DiseaseManagement	Yield (t/ha)
Amberley	Cheap	5.91 ± 0.26 -
Fiesta	Cheap	6.86 ± 0.26 -
Amberley	Expensive	6.17 ± 0.26 -
Fiesta	Expensive	6.71 ± 0.26 -
Amberley	Untreated	5.93 ± 0.26 -
Fiesta	Untreated	6.57 ± 0.26 -

Note: values expressed as mean ± standard error of prediction
 - no subscripts relevant for this response

A summary of the experiment statistics is below:

Table 2: Key statistics for each response analysed

Statistic	Yield (t/ha)
LSD	0.634
Mean	6.400
Cultivar_p-value	0.088
DiseaseManagement_p-value	0.577
Interaction_p-value	0.446
CV	9.222

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