

Barellan site attributes

2025

Focus

- **Pulse species and variety comparison** – evaluate pulse species including faba bean, field pea, lentil, lupin and vetch to determine local suitability.
- **Phosphorus response** – determine the P efficiency of lentils and peas and determine if one species is more responsive to P than the other.
- **Field pea disease management** – determine the most cost-effective fungicide strategy for controlling foliar diseases in field peas in a variable rainfall environment.

Seasonal conditions

Conditions for the first 4 months were very dry, with below average rainfall and above average temperatures. Warm and dry conditions persisted into May, with some much-needed rain towards the end of the month (Table 1). Follow up rain occurred mid-late June, before the crop accessed stored soil moisture.

Below average rainfall continued throughout June, July and August combined with warm, windy days and cold frosty nights, as drought conditions strengthened. Much needed rain occurred in early September.

The Barellan trial received 148.4 mm growing season rainfall (April–October; GSR) compared with average GSR of 263.6 mm. Thirty percent or 45 mm of the GSR was received in September & October.

Table 1: Monthly rainfall for 2024 and 2025, long-term average (LTA) and total annual and growing season (April–October; GSR) at Barellan Post Office (BOM Number 74005).

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	GSR
2024	112.6	48.7	5.4	45.4	59.2	18.9	32.2	31.0	22.4	27.2	69.4	34.6	507.0	236.3
2025	17.0	15.7	29.0	0.2	31.0	31.2	28.0	13.0	36.4	8.6	19.1	47.2	276.4	148.4
LTA	38.7	33.9	37.9	34.5	37.6	40.2	36.4	37.8	34.9	42.2	35.2	31.6	440.9	263.6

Crop sequence and key management

Table 2: Key management activities at the pulse trial site at Barellan in 2025.

Date	Activity	Trials
28 May	Sowing	Pulse species and variety comparison Phosphorus response Field pea disease management
27 June	Establishment scores	All trials
15 July	Post emergent herbicide applied	All trials
1 August	Fungicide applied	Pulse species and variety comparison Phosphorus response
24 August	Fungicide applied	Pulse species and variety comparison Phosphorus response
2 September	NDVI – late vegetative/start flowering	All trials
1 October	Insecticide applied	All trials
10 November	Desiccation	All trials
20 November	Harvest	All trials

Table 3: Paddock crop sequence history at Barellan.

Year	Crop	Cultivar
2024	wheat	Scepter [®]
2023	canola	Hyola Blazer TT
2022	lupins	Mandelup [®]

Soil characteristics

Table 4: Soil pH at 4 depth segments at Barellan in May 2025.

Soil depth (cm)	pH CaCl ₂	Salinity EC 1:5 (dS/m)
0–5	5.84	0.18
5–10	5.42	0.23
10–15	4.74	0.18
15–20	5.53	0.063



**Sowing at Barellan,
28 May 2025**

Table 5: Soil chemical characteristics at Barellan in February 2025.

Characteristic	Unit	Soil depth (cm)	
		0–10	10–60
Nitrate (NO ₃) N	ppm	20.0	2.6
Ammonium (NH ₄) N	ppm	1.3	<1.0
Phosphorus [Colwell]	ppm	31.0	
Potassium [Am. Acet.]	meq/100g	1.18	
Magnesium [Am. Acet.]	meq/100g	0.713	
Calcium [Am. Acet.]	meq/100g	2.99	
Sulfur [MCP]	ppm	11.0	
Manganese [DTPA]	ppm	49.0	
Boron [CaCl ₂]	ppm	0.46	
Copper [DTPA]	ppm	0.49	
Iron [DTPA]	ppm	28.0	
Zinc [DTPA]	ppm	0.37	
Organic Matter	%	1.3	
CEC	cmol/kg	5.17	
Ca:Mg Ratio		4.2	
Potassium	%	23.0	
Magnesium	%	13.8	
Calcium	%	57.9	
Sodium	%	0.7	
Aluminium	%	2.9	
Exchangeable aluminium	cmol/kg	0.15	
Chloride	mg/kg	11.0	
Sodium [Am. Acet.]	cmol/kg	0.037	
Soil N	kg N/ha	26	17
Total N (0-60)	kg /ha	43	

Field pea disease management

2025 – Barellan

Key findings

- There was no difference in observed disease incidence between treatments at any assessment timing through the season.
- Vegetative growth and canopy development was similar across all treatments.
- Despite the lack of differences in disease severity and NDVI, grain yield varied between treatments. Miravis® Star at 500 mL/ha (1.96 t/ha) or 750 mL/ha (1.91 t/ha) resulted in the highest yield, with other treatments including the Nil averaging 1.71 t/ha.

Background

A trial was conducted to determine if foliar fungicides can be used effectively to manage foliar fungal disease in field peas and to identify the most cost effective strategy in low rainfall environments.

Seasonal conditions were warmer and drier than average, conditions not conducive to fungal disease development. As a result there was very little disease observed in the trial.

Seasonal conditions

Conditions for the first 4 months of the year were very dry, with below average rainfall and above average temperatures. Warm and dry conditions persisted into May, with some much-needed rain towards the end of the month (Table 1). Follow up rain occurred mid-late June, before the crop accessed stored soil moisture.

With warmer, windy days and cold, frosty nights impacting topsoil moisture, below average rainfall continued throughout June, July and August as drought conditions strengthened. Much needed rain occurred in early September.

The Barellan trial received 148.4 mm growing season rainfall (GSR) from April–October (263.6mm GSR average) with 45 mm (30%) of this rainfall received during September and October.



Table 1: Monthly rainfall at Barellan Post Office (BOM Number 74005) in 2025.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2025	17.0	15.7	29.0	0.2	31.0	31.2	28.0	13.0	36.4	8.6	19.1	47.2	276.4

Trial details, management and treatments

Table 2: Trial management of the pulse phosphorus response trial at Barellan in 2025.

2025	Management
Pre-sow herbicides	Terbyne® Xtreme @ 0.86 L/ha + Reflex® @ 0.75 L/ha + Paraquat 250 g/L @ 2 L/ha
Sowing date	28 May
Starter fertiliser	120 kg/ha Superfect
Variety	APB Bondi [®]
Sowing rate	Calculated from seed size for target plant population 40 plants/m ²
Post-emergent herbicides	15 July: Brodal® Options @ 0.2 L/ha 1 August: Status® @ 0.5L/ha + Factor® @ 80 g/ha + AMS @ 0.5kg/100L + sodium molybdate @ 25 g/ha + Hasten™ @ 1%
Fungicide	17 September: as per treatment (Table 3)
Insecticide	1 October: Alpha-Scud® 300SC @ 0.1 L/ha + BS 1000 @ 0.2%
Desiccation	10 November
Harvest Date	20 November

Table 3: Fungicide treatments applied at canopy closure (17 September) of APB Bondi[®] field peas at Barellan in 2025.

Fungicide treatments			
Number	Product	Active ingredient concentration	Application rate
1	Nil		
2	Amistar® Xtra	200 g/L azoxystrobin + 80 g/L cyproconazole	800 mL/ha
3	Miravis® Star	150 g/L fludioxonil + 100 g/L pydiflumetofen	250 mL/ha
4	Miravis® Star	150 g/L fludioxonil + 100 g/L pydiflumetofen	500 mL/ha
5	Miravis® Star	150 g/L fludioxonil + 100 g/L pydiflumetofen	750 mL/ha
6	Bravo® Weatherstik®	720 g/L chlorothalonil	1.1 L/ha

Results

Seasonal conditions in 2025 were not conducive to disease development. As such there was very minimal disease in the trial, with no difference in disease scores between any of the treatments at each timing. There were also no differences in NDVI between any of the treatments.

Despite this there were differences in grain yield (Figure 1). The application of Miravis® Star at either 500 mL/ha or 750 mL/ha resulted in the highest yield, ~1.94 t/ha. Amistar® Xtra, Bravo® Weatherstik® and the lowest rate of Miravis® Star were equal to the nil treatment, yielding 1.7 t/ha.



**Applying fungicide treatments to field peas,
17 September 2025 at Barellan**

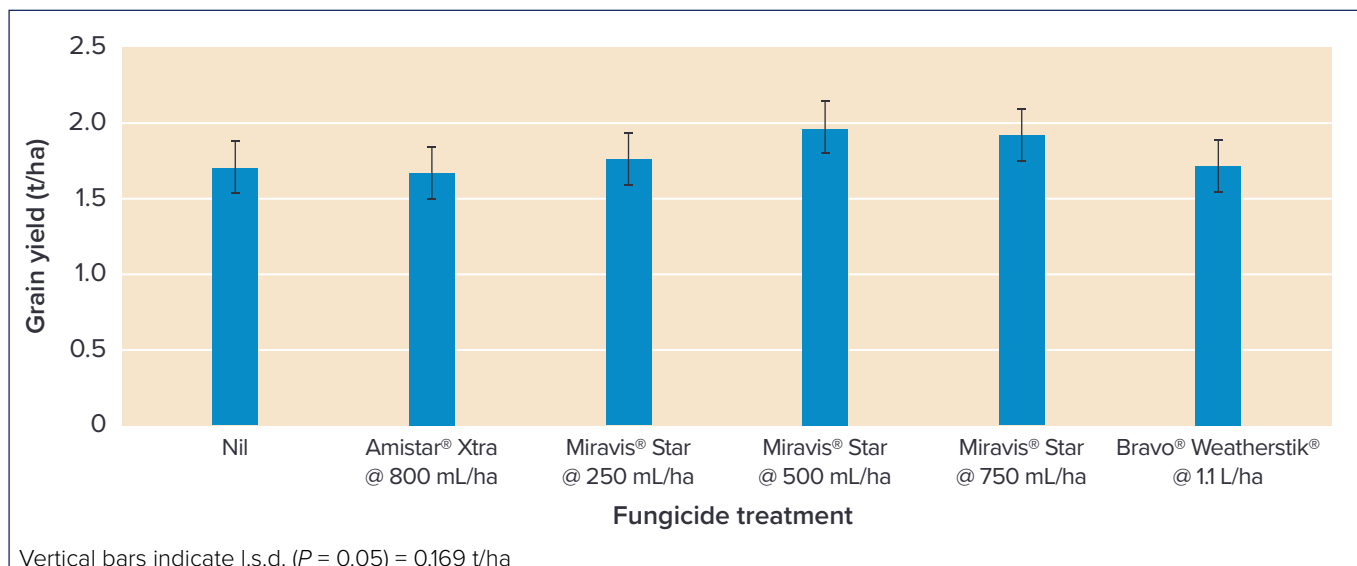


Figure 1: Grain yield of APB Bondi[®] for each fungicide treatment at Barellan in 2025.

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Contributors

Barry Haskins and Rachael Whitworth – Ag Grow Agronomy and Research rachael@aggrowagronomy.com.au

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