

INDUSTRY INNOVATIONS: PROVISIONAL HARVEST

YIELD RESULTS – April Sown Wheat

2025 NEV Crop Technology Centre (Yarrawonga)

Sown: April 30 2025

FAR Trial Code: FAR NEV W25-77

Harvested: 27 November 2025

Growing season rainfall: 210.5mm

Rotation position: 2024 – Canola, 2023 – Vetch

Soil type & management: Brown silty clay loam; canola stubble raked pre sow.

The Germplasm Evaluation Network (GEN) is a FAR Australia 'Industry Innovations' initiative that tests crop variety performance across FAR Australia's national network of Crop Technology Centres. GEN sites test variety performance with and without fungicide. FAR Australia provides the control varieties and breeders enter their chosen lines for evaluation.

Objectives

To assess the yield performance of a range of wheats, managed with and without fungicide against four regional controls (Scepter, Matador, Genie and Rockstar), sown in late April in the Yarrawonga (northeast Victoria) medium rainfall environment.

Key Points

- *There was very little disease pressure in the trial which has resulted in no statistical yield response to applied foliar fungicides.*
- *There were significant yield differences between varieties with yields ranging from 6.11t/ha to 5.39t/ha ($p < 0.001$).*
- *There were 4 varieties that exceeded 6t/ha, LPB20-8165, Rockstar, 19Q3H0499, and H16Q3x0336.SCI-097D yielding 6.11, 6.08, 6.06, and 6.05t/ha respectively.*
- *Of the three long season varieties tested (Mowhawk and Triple 2 being quick winters, and Mammoth a very slow spring), the red feed wheat Triple 2 was significantly higher yielding than Mowhawk and Mammoth.*
- *Scepter provided the largest response to fungicide (not statistically significant) with 0.55t/ha yield advantage where fungicides were applied.*
- *Both stripe rust (Yr) and Septoria tritici blotch (STB) were present in the trial, with Scepter, Rockstar and Mammoth having highest levels of Yr (11.3, 11.7, and 13.0% plot infection) and Scepter, Genie, 16Q2H0310, and RGT Marsh having the highest levels of STB (4.7, 6.7, 5.3, and 5.7% plot infection).*

Yield (t/ha) & quality data (% protein, test weight, % screenings)

Table 1. Influence of fungicide application on the grain yield (t/ha) of wheat varieties plus and minus fungicide.

Variety	Management Level		
	Untreated	Plus fungicide	Mean
	Yield t/ha	Yield t/ha	Yield t/ha
Scepter (<i>s</i>)	5.58 -	6.13 -	5.86 abc
Matador (<i>s</i>)	5.71 -	5.86 -	5.79 a-d
Genie (<i>s</i>)	5.87 -	5.88 -	5.88 abc
Rockstar (<i>s</i>)	6.12 -	6.03 -	6.08 a
Mowhawk (<i>w</i>)	5.60 -	5.24 -	5.42 e
LRPB Major (<i>s</i>)	5.54 -	5.66 -	5.60 cde
Boa (LPB19-8035) (<i>s</i>)	5.55 -	5.72 -	5.64 b-e
Packer (LPB19-3527) (<i>s</i>)	6.02 -	5.91 -	5.97 ab
LPB20-8165 (<i>s</i>)	6.06 -	6.16 -	6.11 a
AGT Rio (V15019-88) (<i>s</i>)	5.71 -	5.63 -	5.67 b-e
Triple 2 (<i>w</i>)	5.95 -	5.80 -	5.88 abc
RGT Ponsford (<i>s</i>)	5.79 -	5.82 -	5.80 a-d
19Q3H0499 (<i>s</i>)	6.17 -	5.96 -	6.06 a
19Q3H0393 (<i>s</i>)	5.43 -	5.56 -	5.49 de
16Q2H0310 (<i>s</i>)	5.42 -	5.45 -	5.43 e
RGT Marsh (H16Q3x0336.SCI-097D) (<i>s</i>)	6.10 -	6.01 -	6.05 a
Mammoth (<i>s</i>)	5.20 -	5.58 -	5.39 e
Mean	5.75 -	5.79 -	
LSD Cultivar $p = 0.05$	0.33	P value	<0.001
LSD Management $p = 0.05$	ns	P value	0.857
LSD Cultivar x Man. $p = 0.05$	ns	P value	0.471

Note: w = Winter Wheat, s = Spring Wheat

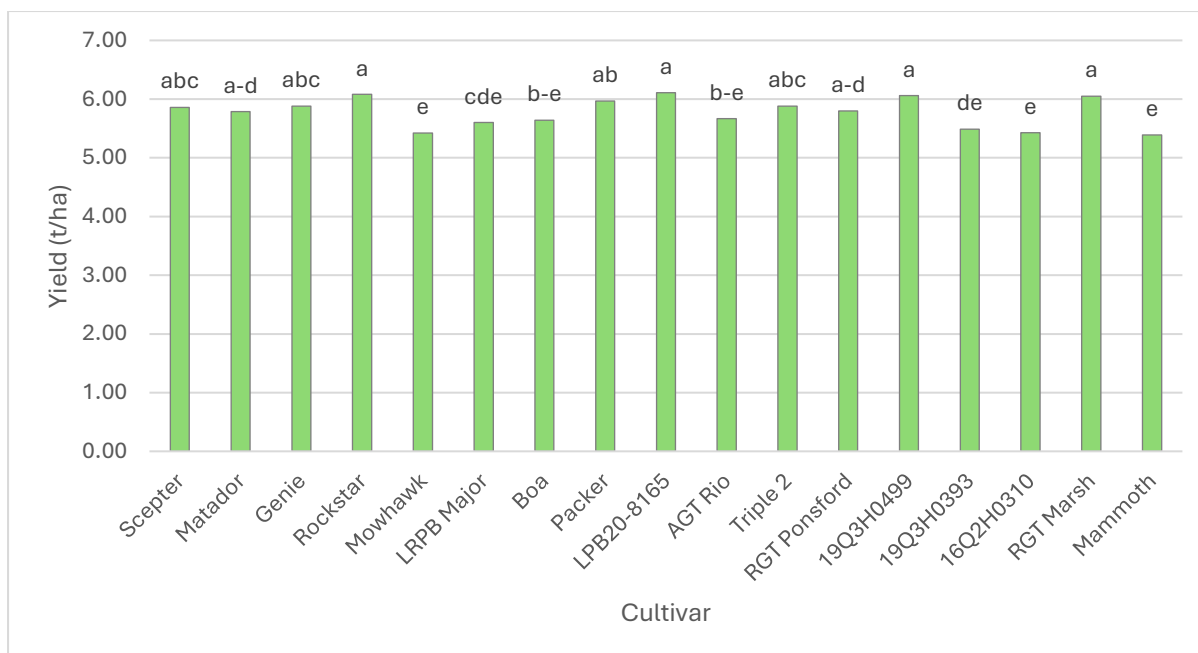


Figure 1. Influence of wheat cultivar choice on grain yield (t/ha). Cultivar means of plus and minus fungicide, $P < 0.001$, $LSD (p=0.05) = 0.33$.

Table 2. Influence of fungicide application and cultivar on grain quality (protein – corrected to 0% moisture, test weight, and screenings) of wheat varieties (mean of treated and untreated).

Grain Quality Assessment						
Fungicide Management		Protein (%)		Test Weight (kg/hL)		Screenings (%)
1	Untreated	12.0	-	76.4	-	12.8
2	Plus Fungicide	12.0	-	76.3	-	12.4
Pval		0.842		0.911		0.145
LSD P=.05		ns		ns		ns
Cultivar		Protein (%)		Test Weight (kg/hL)		Screenings (%)
1	Scepter	12.0	def	75.9	ef	11.4
2	Matador	12.6	abc	74.8	fg	16.8
3	Genie	12.1	c-f	79.0	ab	18.3
4	Rockstar	11.9	ef	74.8	fg	10.9
5	Mowhawk	12.3	b-e	78.2	a-d	13.4
6	LRPB Major	12.0	def	78.7	abc	12.2
7	Boa	12.5	a-d	73.3	gh	13.7
8	Packer	11.2	h	79.6	ab	11.7
9	LPB20-8165	11.6	fgh	76.4	def	10.6
10	AGT Rio	11.8	efg	77.9	b-e	9.8
11	Triple 2	12.2	b-e	80.1	a	7.2
12	RGT Ponsford	11.3	gh	76.7	c-f	11.4
13	19Q3H0499	11.2	h	72.5	h	14.8
14	19Q3H0393	12.7	ab	72.1	h	17.7
15	16Q2H0310	13.0	a	73.7	gh	13.9
16	RGT Marsh	11.6	fgh	76.7	c-f	10.8
17	Mammoth	12.3	b-e	77.7	b-e	9.4
Grand Mean		12.0		76.3		12.6
Pval		<0.001		<0.001		<0.001
LSD P=.05		0.6		2.1		1.8

Disease assessments

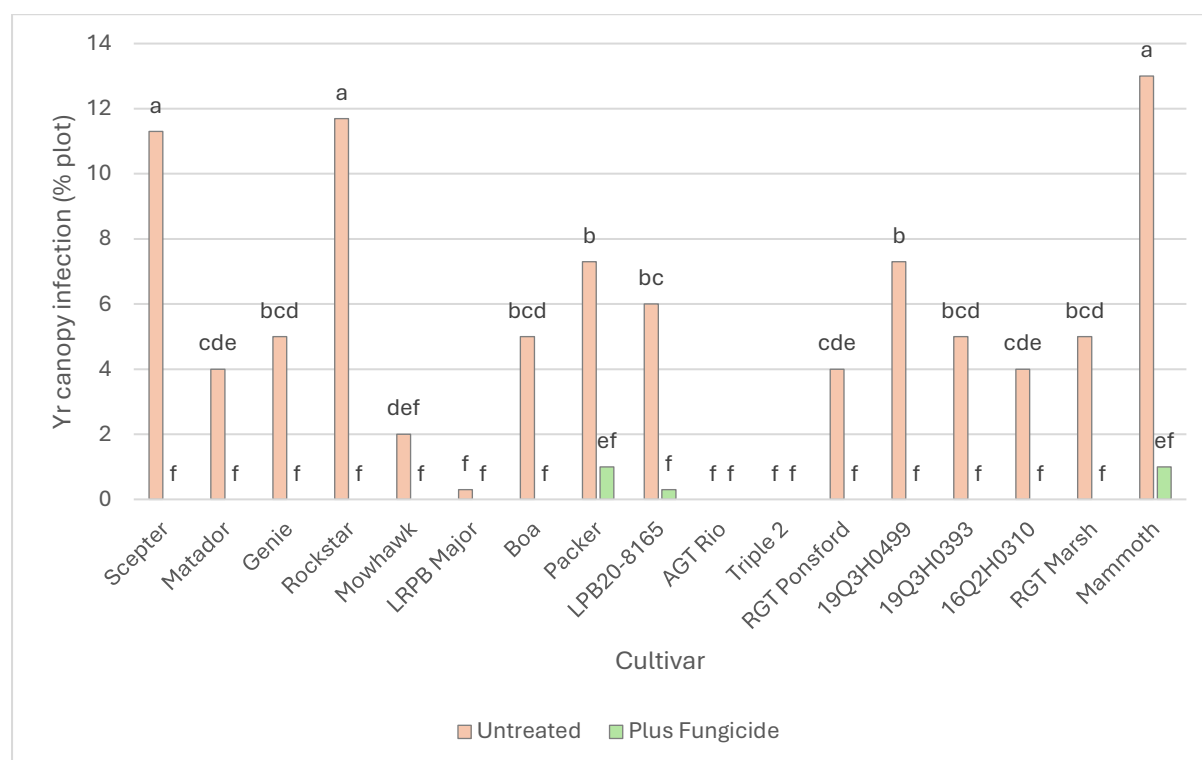


Figure 2. Influence of variety and fungicide application stripe rust (Yr) plot infection (% plot) assessed 21 October. $P < 0.001$, $LSD (p=0.05) = 3.0$.

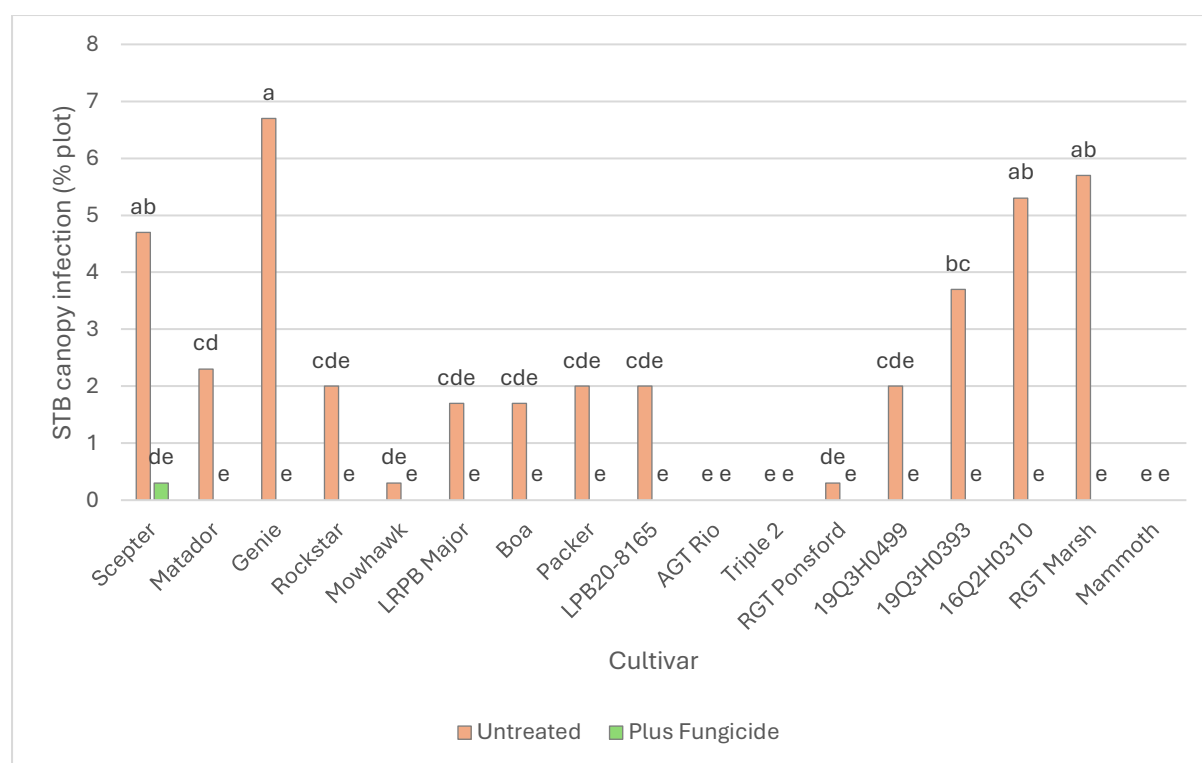


Figure 3. Influence of variety and fungicide application Septoria tritici blotch (STB) plot infection (% plot) assessed 21 October. $P = 0.006$, $LSD (p=0.05) = 2.3$.

Development (Phenology)

Table 3. Phenology assessments (Zadoks stage) conducted throughout the growing season.

	15-Jul	25-Jul	12-Aug	25-Aug	10-Sep	18-Sep	6-Oct	21-Oct
Scepter	24	24	31	32	39	43	61	77
Matador	23	23	31	32	37	43	65	85
Genie	23	24	31	32	37/ 39	45	59	85
Rockstar	24	25	31	32	41	43	65	85
Mowhawk	23	26	30	31	37	45	59	75
LRPB Major	24	25	31	32	37	43	59	77
Boa	22	24	31	32	41	49	61	83
Packer	23	26	30	31	33/37	39	59	77
LPB20-8165	24	24	31	32	37/ 39	45	65	83
AGT Rio	23	23	31	32	37	45	65	83
Triple 2	23	25	30	31	32/33	37	55	73
RGT Ponsford	24	24	31	32	37/ 39	45	59	77
19Q3H0499	23	24	31	32	39/41	45	65	85
19Q3H0393	25	25	31	32	45	49	65	85
16Q2H0310	24	24	31	32	37	45	65	77
RGT Marsh	24	24	31	32	37	41	61	85
Mammoth	22	25	30	31	33	37	56	73

Trial inputs

Table 4. Trial input and management details.

Sowing date:		30 April	
Harvest date:		27 November	
Seed rate:		180 seeds/m ²	
Basal fertiliser:	30 April	100 kg MAP/ha	
Pre-em herbicide:	29 April	Treflan 2.5L/ha	
		Reglone 200 1.8L/ha	
		Gramoxone 360 1.2L/ha	
		Boxer Gold 2.5L/ha	
		BS1000 0.16%	
Post-em herbicide:	1 July	Mateno Complete 750mL/ha	
	23 Sep	Dimethoate 400 200mL/ha	
Nitrogen:	23 July	Urea 217 kg/ha (100kg N/ha)	
	28 Aug	Urea 109 kg/ha (50kg N/ha)	
Fungicide:		Untreated	Plus fungicide
	GS31	----	Prosaro 300 mL/ha Wetter 1000 0.2%
	GS39	----	Revystar 750mL/ha

Meteorological Data

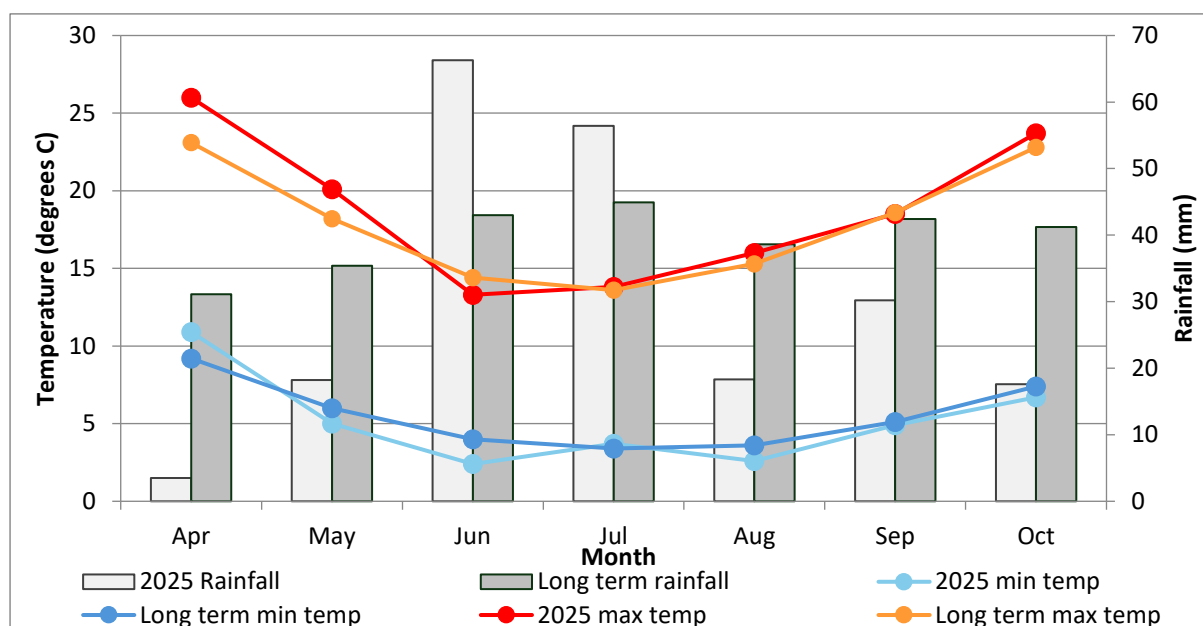


Figure 4. 2025 growing season rainfall recorded on site and long-term rainfall recorded at Yarrawonga (1993 to 2025) and 2025 minimum and maximum temperatures and long-term mean recorded at Yarrawonga (1993 to 2025) for the growing season (Apr-Oct). Rainfall June to October = 210.5mm.

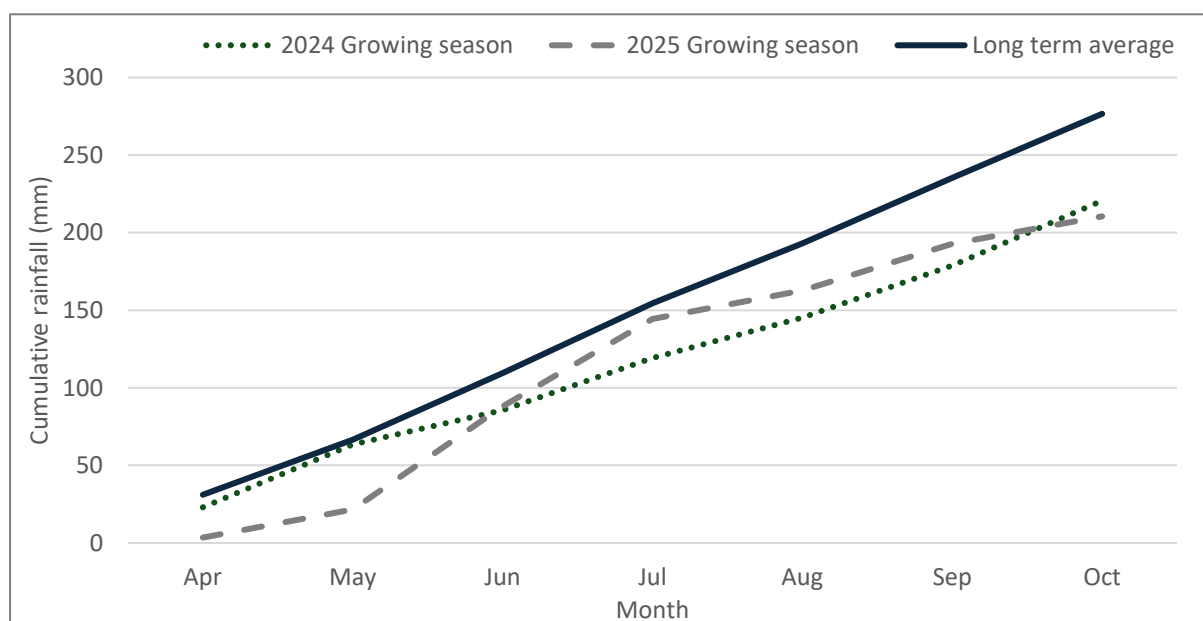


Figure 5. Cumulative growing season rainfall for 2025 (recorded on site), 2024 and the long-term average recorded at Yarrawonga.

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