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Innovations**

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WA CROP
TECHNOLOGY
CENTRE (ESPERANCE)

INDUSTRY INNOVATIONS 2025: PROVISIONAL HARVEST RESULTS – May Sown Barley

2025 WA Esperance Crop Technology Centre (MRZ Scaddan)

WA Barley MRZ (FAR WAE II B25-55)

Sown: 06 May 2025

Harvested: 29 October 2025

Soil Type: Shallow sand over clay duplex
soil

Previous Crop: 2024 Canola

FAR Code: FAR WAE II B25-55

GSR (Apr-Oct): 324mm

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.

Key Points

- *A wetter growing season overall resulting in barley yields that were on average 0.5t/ha higher than 2024 for a similar sowing date. Yields ranged from 4.8 – 6.1t/ha.*
- *There was no interaction between variety and fungicide management, which means all varieties responded in a similar way to management. However, overall varieties yielded slightly higher with fungicides applied, likely driven by low Net Form Net Blotch (NFB) and Spot Form Net Blotch (SFNB) infections*
- *Neo CL was the highest yielding variety, averaging 5.94 t/ha across fungicide treated and untreated plots.*
- *Fungicide management did not affect any grain quality parameters measured, with the main differences generated by variety.*
- *No variety was able to achieve malt status with only Neo CL and RP21011 producing proteins <12% or Minotaur, Rosalind and AGT-Bunyip IA the only varieties to achieve test weights above 65 kg/hl. Most notably the trial suffered from high screenings and low retention with Minotaur and AGT-Bunyip IA producing the best results however still considerably outside the malt status parameters. These results are likely due to the drier and hotter than average conditions experienced during grain fill.*
- *At the time of writing RGT Planet, Neo CL and Minotaur are malt accredited varieties while AGT-Bunyip IA and RGT Atlantis have entered the Grains Australia malt accreditation program, with a target decision date in 2027.*

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

There were significant differences in yield and quality due to variety ($p < 0.001$), but fungicide application had only small effects on yield (0.16t/ha) and no effect on grain quality.

Table 1. Influence of fungicide on the grain yield (t/ha) of barley varieties plus and minus fungicide – May 6 sown.

		Yield (t/ha)					
Variety		Untreated		Plus fungicide		Mean	
1	RGT Planet	4.86	-	5.21	-	5.03	d
2	Neo CL	5.75	-	6.13	-	5.94	a
3	Minotaur	5.56	-	5.78	-	5.67	b
4	Rosalind	5.06	-	5.41	-	5.23	cd
5	AGT-Bunyip IA (Tested as AGTB0530)	5.34	-	5.33	-	5.34	c
6	RGT Atlantis	4.93	-	5.06	-	5.00	d
7	RP19034	4.41	-	4.27	-	4.34	e
8	RP21011	4.94	-	5.01	-	4.97	d
Mean		5.11	b	5.27	a	5.19	
LSD Variety $p = 0.05$		0.27		P value		<0.001	
LSD Management $p = 0.05$		ns		P value		0.128	
LSD Variety x Man. $p = 0.05$		ns		P value		0.382	

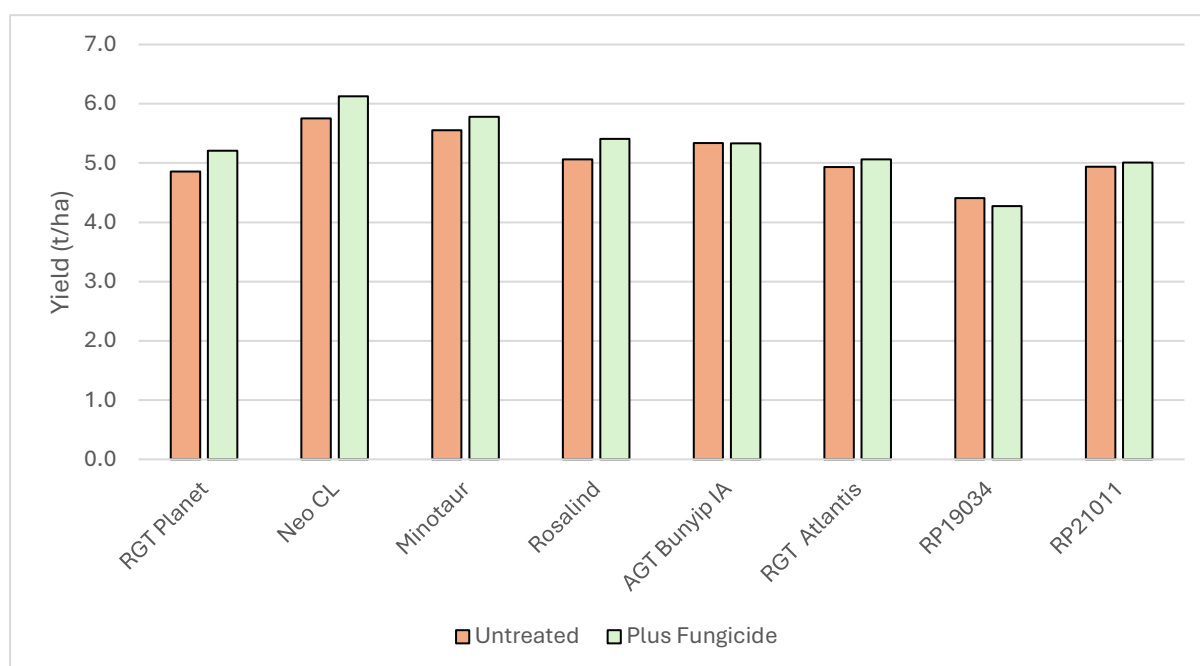


Figure 1. Influence of fungicide and variety on yield (t/ha). (P value=0.382, LSD=ns)

Table 2. Influence of variety and fungicide application on the grain protein (%) - 29 October harvest.

Protein (%)							
Variety		Untreated		Plus fungicide		Mean	
1	RGT Planet	12.1	-	12.1	-	12.1	bc
2	Neo CL	11.8	-	11.5	-	11.6	c
3	Minotaur	11.9	-	12.0	-	12.0	bc
4	Rosalind	13.5	-	13.5	-	13.5	a
5	AGT-Bunyip IA	13.0	-	13.5	-	13.3	a
6	RGT Atlantis	12.3	-	12.3	-	12.3	b
7	RP19034	13.4	-	13.4	-	13.4	a
8	RP21011	11.6	-	12.0	-	11.8	bc
Mean		12.5	-	12.5	-	12.5	
LSD Variety p = 0.05		0.61		P Value		<0.001	
LSD Management p = 0.05		ns		P Value		0.807	
LSD Variety x Man. p = 0.05		ns		P Value		0.931	

Table 3. Influence of variety and fungicide application on the test weights (kg/hL) - 29 October harvest.

Test Weight (Kg/hL)							
Variety		Untreated		Plus fungicide		Mean	
1	RGT Planet	57.1	-	59.0	-	58.1	cd
2	Neo CL	57.2	-	59.9	-	58.6	cd
3	Minotaur	67.7	-	67.3	-	67.5	ab
4	Rosalind	65.4	-	67.2	-	66.3	b
5	AGT-Bunyip IA	69.6	-	69.2	-	69.4	a
6	RGT Atlantis	58.7	-	60.7	-	59.7	c
7	RP19034	59.9	-	60.2	-	60.0	c
8	RP21011	55.8	-	57.2	-	56.5	d
Mean		61.4	-	62.6	-	62	
LSD Variety p = 0.05		2.33		P Value		<0.001	
LSD Management p = 0.05		ns		P Value		0.051	
LSD Variety x Man. p = 0.05		ns		P Value		0.811	

Table 4. Influence of variety and fungicide application on the retention (% > 2.5mm) - 29 October harvest.

Retention (%)							
Variety		Untreated		Plus fungicide		Mean	
1	RGT Planet	15.8	-	23.7	-	19.8	cd
2	Neo CL	38.9	-	49.3	-	44.1	b
3	Minotaur	54.8	-	57.1	-	55.9	a
4	Rosalind	37.5	-	39.9	-	38.7	b
5	AGT-Bunyip IA	58.5	-	50.0	-	54.2	a
6	RGT Atlantis	23.8	-	27.8	-	25.8	c
7	RP19034	9.0	-	11.0	-	10.0	d
8	RP21011	22.9	-	21.5	-	22.2	c
Mean		32.6	-	35.0	-	33.8	
LSD Variety p = 0.05		9.89		P Value		<0.001	
LSD Management p = 0.05		ns		P Value		0.551	
LSD Variety x Man. p = 0.05		ns		P Value		0.684	

Table 5. Influence of variety and fungicide application on the screenings (% < 2.2mm) - 29 October harvest.

Screenings (%)							
Variety		Untreated		Plus fungicide		Mean	
1	RGT Planet	33.3	-	23.9	-	28.6	b
2	Neo CL	15.6	-	11.9	-	13.7	de
3	Minotaur	11.9	-	10.2	-	11.0	e
4	Rosalind	21.1	-	17.0	-	19.1	cd
5	AGT-Bunyip IA	9.5	-	12.5	-	11.0	e
6	RGT Atlantis	27.3	-	20.8	-	24.0	bc
7	RP19034	42.3	-	42.7	-	42.5	a
8	RP21011	23.5	-	26.1	-	24.8	bc
Mean		23.1	-	20.6	-	21.8	-
LSD Variety p = 0.05		7.11		P Value		<0.001	
LSD Management p = 0.05		ns		P Value		0.348	
LSD Variety x Man. p = 0.05		ns		P Value		0.614	

Disease assessment data

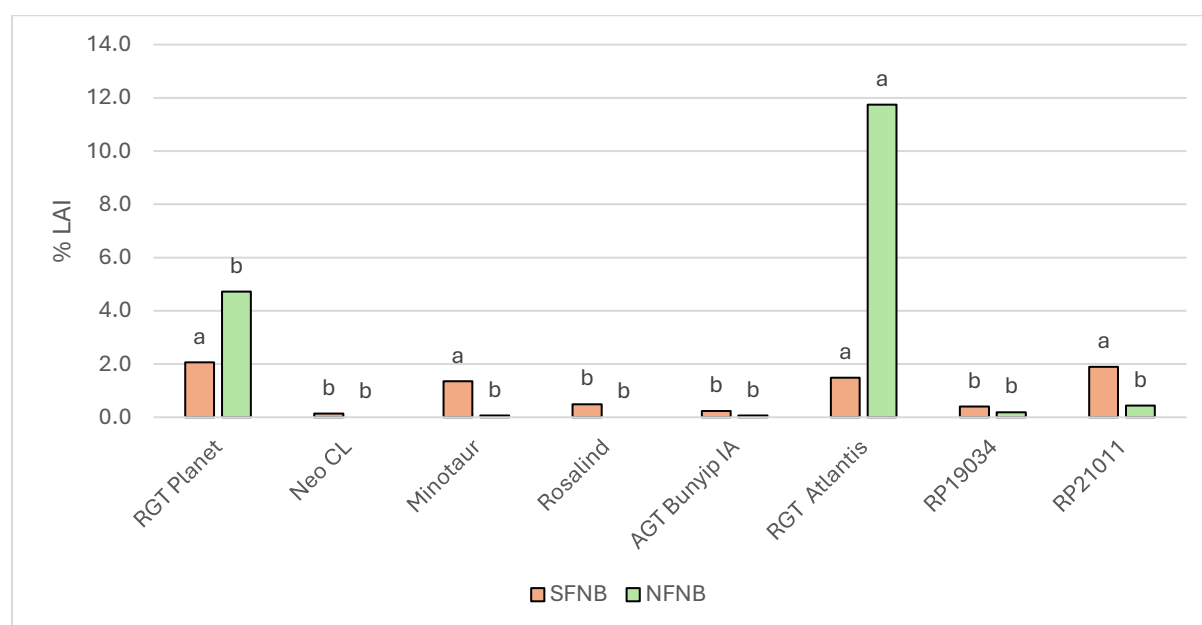


Figure 1. Influence of varieties (mean of plus and minus fungicide) on Spot form net blotch (SFNB) and Net form net blotch (NFNB) % Leaf area infection (%LAI) assessed on 17 September. (SFNB P value=<0.001, LSD=1.01 NFNB P value=0.006, LSD=6.54)

Trial inputs

Table 6. Trial input and management details.

Sowing date:		6 May 2025
Harvest date:		29 October 2025
Seed rate:		200 seeds/m ²
Basal fertiliser:	6 May	80 kg/ha Agflow Manganese (14.4kg P/ha and 8.48kg N/ha)
Pre-em herbicide:	6 May	TriflurX 2.00 L/ha Overwatch 1.2 L/ha
Post-em herbicide:	30 Jun	Saracen 0.1 L/ha MCPA 570 LVE 0.5 L/ha
Insecticide	30 Jun	Trojan 0.013 L/ha
Nitrogen:	2 Jul	39.6kg N/ha Urea Sustain
	14 Jul	20.7kg N/ha Urea Sustain
	30 Jul	20.7kg N/ha Urea Sustain
Fungicide:		Untreated Fungicide Protection
	GS31	---- Prosaro 0.30 L/ha
	GS39	---- Aviator 0.50 L/ha