INDUSTRY INNOVATIONS 2025: PROVISIONAL HARVEST RESULTS – April Sown Canola

2025 VIC Crop Technology Centre (HRZ Gnarwarre)

Sown: 24 April 2025
Harvested: 16 December 2025
Soil Type: Grey Clay
Previous Crop: Wheat

Management: Stubble burnt
FAR Code: FAR VIC II C25-70
GSR (Apr-Nov): 371.6mm

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:

- *Oilseed yields ranged from 3.60 – 5.27 t/ha depending on variety and fungicide application with significant differences recorded in variety performance (p=<0.001).*
- *There was a significant interaction between variety and fungicide application (p=0.045) on seed yield, meaning that not all varieties responded to fungicide in the same way.*
- *The average response to the two-spray fungicide programme was 8%, however the range of response was 0 -21% with Pioneer 45Y95 CL, AN23LR014, 223907 and Hyola Regiment XC giving higher responses (10 – 21%).*
- *RGT-9636TF and Pioneer 45Y95 CL were significantly higher yielding than any of the other varieties, although the latter was more responsive to fungicide application.*
- *Oil content was highest with AGFCA015124 which yielded over 4.5t/ha with fungicide. Of the two higher yielding varieties RGT-9636TF had significantly higher oil content than Pioneer 45Y95 CL (44.7% v 43.4).*
- *Fungicide application reduced blackleg canker infection incidence in the stem by 56% from 48.5% severity to 21.5% (significant) but did not have a great effect on test weight or oil content. Hyola Regiment XC (48.7%) gave significantly higher oil contents than all other varieties but was not amongst the high yielding cultivars.*
- *The season was associated with high levels of blackleg canker, fungicide application provided good disease control at the 4-8 leaf stage; Pioneer 45Y95 CL and RGT65-074CL has significantly higher incidence than other varieties (p=<0.001).*
- *Pioneer 45Y95 CL had significantly higher incidence of blackleg canker in both the stems and raceme (p=<0.001)*
- *CT222309 (TT) had significantly higher incidence of upper canopy infection (UCI) on the racemes (p=<0.001), and for sclerotia on the stems (p=<0.001).*
- *RGT-9636TF was the only variety with significant lodging (p=0.004).*

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

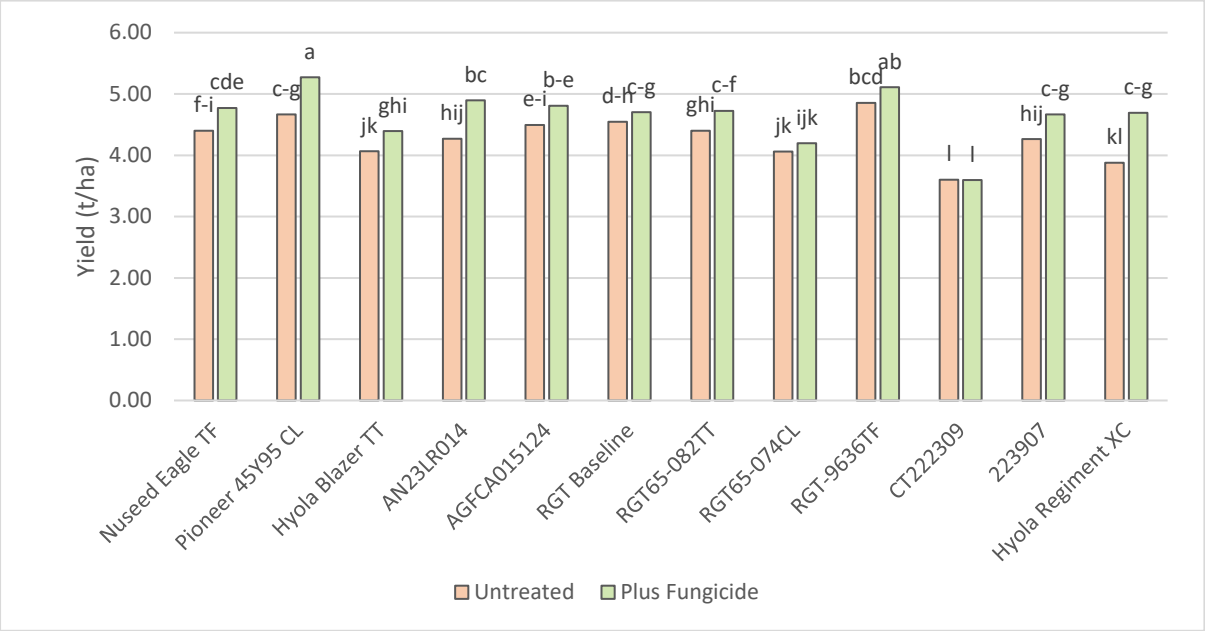

Figure 1. Influence of variety and fungicide application on seed yield (t/ha).

Table 1. Influence of fungicide application on the seed yield (t/ha) of canola (varieties grown plus and minus fungicide) – April 19 sown (emerged late April).

		Yield t/ha					
	Variety	**Untreated**		**Plus fungicide**		**Mean**	
1.	Nuseed Eagle TF	4.40	f-i	4.77	cde	**4.59**	**b**
2.	Pioneer 45Y95 CL	4.67	c-g	5.27	a	**4.97**	**a**
3.	Hyola Blazer TT	4.07	jk	4.40	ghi	**4.23**	**d**
4.	AN23LR014	4.27	hij	4.90	bc	**4.58**	**b**
5.	AGFCA015124	4.50	e-i	4.81	b-e	**4.65**	**b**
6.	RGT Baseline	4.55	d-h	4.70	c-g	**4.62**	**b**
7.	RGT65-082TT	4.40	ghi	4.73	c-f	**4.56**	**b**
8.	RGT65-074CL	4.06	jk	4.20	ijk	**4.13**	**d**
9.	RGT-9636TF	4.86	bcd	5.11	ab	**4.98**	**a**
10.	CT222309	3.60	l	3.60	l	**3.60**	**e**
11.	223907	4.26	hij	4.67	c-g	**4.46**	**bc**
12.	Hyola Regiment XC	3.88	kl	4.69	c-g	**4.29**	**cd**
	Mean	**4.29**	**b**	**4.65**	**a**		
	LSD Variety p = 0.05	0.23		**P value**		<0.001	
	LSD Management p = 0.05	0.16		**P value**		0.006	
	LSD Variety x Man. p = 0.05	0.33		**P value**		0.045	

Table 2. Influence of variety and fungicide application on the oil content % – December 12 harvest.

Oil %							
Variety		**Untreated**		**Plus fungicide**		**Mean**	
1.	Nuseed Eagle TF	43.4	-	43.1	-	**43.2**	**g**
2.	Pioneer 45Y95 CL	43.6	-	43.2	-	**43.4**	**fg**
3.	Hyola Blazer TT	44.3	-	44.2	-	**44.3**	**cd**
4.	AN23LR014	43.9	-	43.8	-	**43.8**	**ef**
5.	AGFCA015124	46.0	-	46.0	-	**46.0**	**a**
6.	RGT Baseline	45.6	-	44.9	-	**45.3**	**b**
7.	RGT65-082TT	44.2	-	43.6	-	**43.9**	**de**
8.	RGT65-074CL	40.4	-	40.8	-	**40.6**	**h**
9.	RGT-9636TF	45.0	-	44.3	-	**44.7**	**c**
10.	CT222309	43.7	-	44.1	-	**43.9**	**de**
11.	223907	45.1	-	45.2	-	**45.1**	**b**
12.	Hyola Regiment XC	45.9	-	45.8	-	**45.9**	**a**
	Mean	**44.3**	**a**	**44.1**	**b**		
	LSD Variety p = 0.05	0.4		**P value**		<0.001	
	LSD Management p = 0.05	0.1		**P value**		0.004	
	LSD Variety x Man. p = 0.05	ns		**P value**		0.197	

Table 3. Influence of variety and fungicide on the test weights (kg/hL) – December 12 harvest.

Test Weight Kg/hL							
Variety		**Untreated**		**Plus fungicide**		**Mean**	
1.	Nuseed Eagle TF	63.5	-	63.4	-	**63.5**	**d**
2.	Pioneer 45Y95 CL	62.7	-	62.5	-	**62.6**	**e**
3.	Hyola Blazer TT	65.6	-	66.2	-	**65.9**	**b**
4.	AN23LR014	62.9	-	63.0	-	**62.9**	**e**
5.	AGFCA015124	63.4	-	63.6	-	**63.5**	**d**
6.	RGT Baseline	65.4	-	65.4	-	**65.4**	**c**
7.	RGT65-082TT	66.3	-	65.8	-	**66.0**	**ab**
8.	RGT65-074CL	65.6	-	66.4	-	**66.0**	**ab**
9.	RGT-9636TF	60.2	-	59.9	-	**60.0**	**f**
10.	CT222309	65.9	-	66.1	-	**66.0**	**ab**
11.	223907	66.4	-	66.4	-	**66.4**	**a**
12.	Hyola Regiment XC	64.9	-	65.4	-	**65.1**	**c**
	Mean	**64.4**	**-**	**64.5**	**-**		
	LSD Variety p = 0.05	0.5		**P value**		<0.001	
	LSD Management p = 0.05	ns		**P value**		0.549	
	LSD Variety x Man. p = 0.05	ns		**P value**		0.241	

Disease assessment data

Table 4. Influence of variety and fungicide on Blackleg severity (% plant infection) – assessed 28 November at crop maturity.

Severity (% plant infection)								
Variety		**Rating**	**Untreated**		**Plus fungicide**		**Mean**	
1.	Nuseed Eagle TF	R	10.6	-	2.7	-	**6.6**	**a**
2.	Pioneer 45Y95 CL	RMR	6.2	-	3.2	-	**4.7**	**abc**
3.	Hyola Blazer TT	RMR	13.3	-	2.8	-	**8.0**	**a**
4.	AN23LR014	---	1.5	-	0.3	-	**0.9**	**cd**
5.	AGFCA015124	---	11.1	-	3.7	-	**7.4**	**a**
6.	RGT Baseline	MRMS	8.5	-	0.8	-	**4.6**	**abc**
7.	RGT65-082TT	---	8.7	-	1.8	-	**5.2**	**ab**
8.	RGT65-074CL	---	3.7	-	0.1	-	**1.9**	**bcd**
9.	RGT-9636TF	---	0.6	-	0.6	-	**0.6**	**cd**
10.	CT222309	---	0.6	-	0.2	-	**0.4**	**d**
11.	223907	---	3.8	-	0.0	-	**1.9**	**bcd**
12.	Hyola Regiment XC	R	2.5	-	1.4	-	**2.0**	**bcd**
		Mean	**5.9**	**-**	**1.4**	**-**		
LSD Variety p = 0.05			4.1		**P value**		0.001	
LSD Management p = 0.05			ns		**P value**		0.086	
LSD Variety x Man. p = 0.05			ns		**P value**		0.178	

Ratings derived from GRDC, Blackleg Management Guide Fact Sheet Autumn 2025 update, Issued February 2025. R=Resistant, RMR= resistant-moderately resistant, MRMS= moderately resistant-moderately susceptible, --- = not available.

Table 5. Influence of variety and fungicide on Blackleg incidence (%) – assessed 28 November at crop maturity.

Incidence (%)								
Variety		**Rating**	**Untreated**		**Plus fungicide**		**Mean**	
1.	Nuseed Eagle TF	R	62.5	-	25.0	-	**43.8**	**bc**
2.	Pioneer 45Y95 CL	RMR	60.0	-	45.0	-	**52.5**	**b**
3.	Hyola Blazer TT	RMR	72.5	-	27.5	-	**50.0**	**b**
4.	AN23LR014	---	42.5	-	15.0	-	**28.8**	**cd**
5.	AGFCA015124	---	90.0	-	55.0	-	**72.5**	**a**
6.	RGT Baseline	MRMS	77.5	-	25.0	-	**51.3**	**b**
7.	RGT65-082TT	---	55.0	-	40.0	-	**47.5**	**b**
8.	RGT65-074CL	---	32.5	-	5.0	-	**18.8**	**de**
9.	RGT-9636TF	---	20.0	-	10.0	-	**15.0**	**de**
10.	CT222309	---	20.0	-	5.0	-	**12.5**	**e**
11.	223907	---	35.0	-	0.0	-	**17.5**	**de**
12.	Hyola Regiment XC	R	15.0	-	5.0	-	**10.0**	**e**
		Mean	**48.5**	**a**	**21.5**	**b**		
LSD Variety p = 0.05			15.7		**P value**		<0.001	
LSD Management p = 0.05			16.0		**P value**		0.013	
LSD Variety x Man. p = 0.05			ns		**P value**		0.108	

Ratings derived from GRDC, Blackleg Management Guide Fact Sheet Autumn 2025 update, Issued February 2025. R=Resistant, RMR= resistant-moderately resistant, MRMS= moderately resistant-moderately susceptible, --- = not available.

Table 6. Influence of variety and fungicide on Sclerotinia severity (% plant infection) – assessed 28 November at crop maturity.

Severity (% plant infection)							
Variety		**Untreated**		**Plus fungicide**		**Mean**	
1.	Nuseed Eagle TF	2.6	ef	0.1	f	**1.4**	**e**
2.	Pioneer 45Y95 CL	15.2	bc	2.5	ef	**8.8**	**abc**
3.	Hyola Blazer TT	5.3	ef	0.0	f	**2.7**	**de**
4.	AN23LR014	7.8	de	1.3	f	**4.5**	**cde**
5.	AGFCA015124	2.4	ef	0.0	f	**1.2**	**e**
6.	RGT Baseline	6.3	def	0.0	f	**3.2**	**de**
7.	RGT65-082TT	12.7	cd	0.0	f	**6.3**	**bcd**
8.	RGT65-074CL	5.9	ef	0.0	f	**2.9**	**de**
9.	RGT-9636TF	17.7	abc	0.0	f	**8.9**	**abc**
10.	CT222309	15.9	bc	0.0	f	**7.9**	**abc**
11.	223907	22.5	a	0.0	f	**11.3**	**a**
12.	Hyola Regiment XC	20.1	ab	0.0	f	**10.1**	**ab**
	Mean	**11.2**	**a**	**0.3**	**b**		
	LSD Variety p = 0.05	4.6		**P value**		<0.001	
	LSD Management p = 0.05	6.8		**P value**		0.015	
	LSD Variety x Man. p = 0.05	6.5		**P value**		<0.001	

Table 7. Influence of variety and fungicide on Sclerotinia incidence (%) – assessed 28 November at crop maturity.

Incidence (%)							
Variety		**Untreated**		**Plus fungicide**		**Mean**	
1.	Nuseed Eagle TF	8.8	fgh	1.3	h	**5.0**	**cd**
2.	Pioneer 45Y95 CL	31.3	abc	2.5	gh	**16.9**	**a**
3.	Hyola Blazer TT	13.8	efg	0.0	h	**6.9**	**bcd**
4.	AN23LR014	23.8	cde	1.3	h	**12.5**	**abc**
5.	AGFCA015124	2.5	gh	0.0	h	**1.3**	**d**
6.	RGT Baseline	15.0	def	0.0	h	**7.5**	**bcd**
7.	RGT65-082TT	26.3	bcd	0.0	h	**13.1**	**ab**
8.	RGT65-074CL	11.3	fgh	0.0	h	**5.6**	**bcd**
9.	RGT-9636TF	35.0	abc	0.0	h	**17.5**	**a**
10.	CT222309	36.3	ab	0.0	h	**18.1**	**a**
11.	223907	38.8	a	0.0	h	**19.4**	**a**
12.	Hyola Regiment XC	35.0	abc	0.0	h	**17.5**	**a**
	Mean	**23.1**	**a**	**0.4**	**b**		
	LSD Variety p = 0.05	8.0		**P value**		<0.001	
	LSD Management p = 0.05	13.2		**P value**		0.012	
	LSD Variety x Man. p = 0.05	11.3		**P value**		<0.001	

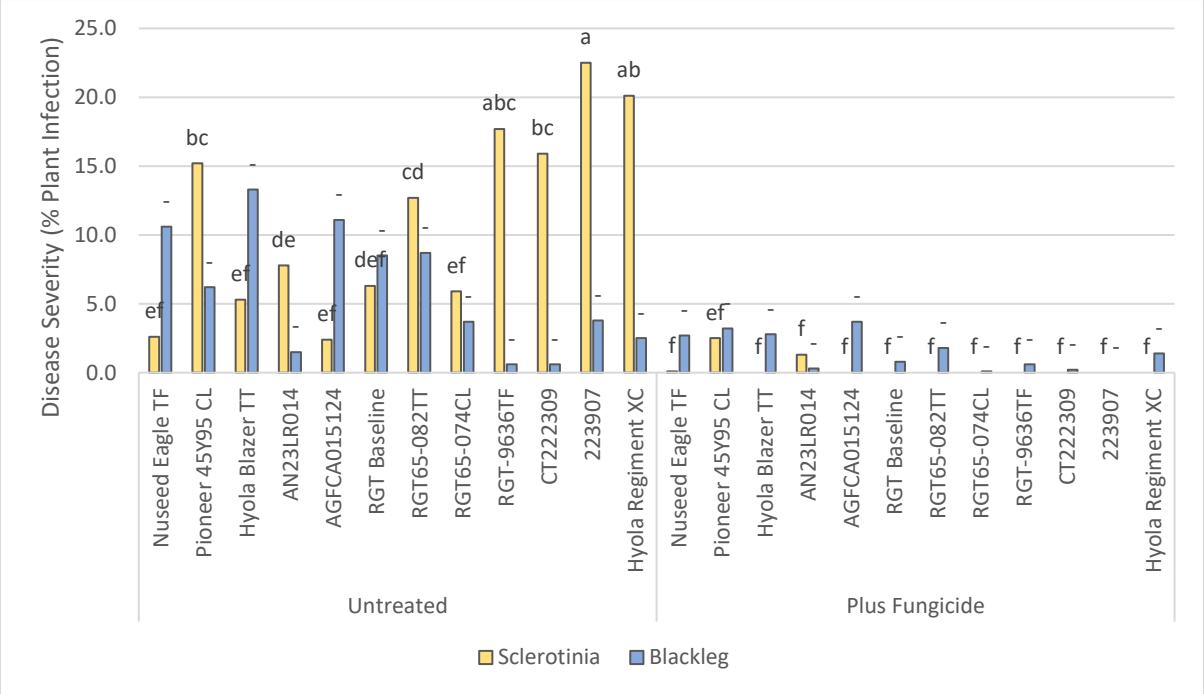

Figure 2. Influence of variety and fungicide management on Sclerotinia and Blackleg severity (% plant infection)- assessed on 28 November at crop maturity.

Trial inputs

Table 6. Trial input and management details for the trial

Sowing date:		**24 April**	
Harvest date:		**16 December**	
Seed rate:		60 plants/m^2	
Basal fertiliser:		100 kg/ha MAP	
Nitrogen:	16 July	113 kg N/ha	
	2nd App	TBC	
Fungicide:		**Untreated**	**Fungicide Protection**
	4-6 leaf	---	Prosaro 450ml/ha
	20% Flower	---	Aviator Xpro 650 mL/ha