NVT
HARVEST REPORT

GRDC NATIONAL VARIETY TRIALS™

REVISED MAY 2024

Geraldton
Western Region

nvt.grdc.com.au

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PHOTO: Trevor Garnett, GRDC

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LEGEND: MEAN VARIETY YIELD PERFORMANCE

LOW **HIGH**

Long-term mean yield illustrated by colour gradient from low (red) to high (green)

DISEASE RATING COLOUR RANGE

VS	SVS	S	MSS	MS	MRMS	MR	RMR	R

Disease severity scale from very susceptible (VS) to resistant (R)

The disease ratings in the report are current at the time of publication.
Regularly visit nvt.grdc.com.au/nvt-disease-ratings to find the latest NVT disease ratings.

Refer to the latest *Crop Sowing Guide* for further information at
nvt.grdc.com.au/resources/crop-sowing-guides

INTRODUCTION

The NVT Harvest Report - Geraldton provides information to support growers and advisers with decisions on variety selection for **Geraldton**. The information has been generated from the Grains Research and Development Corporation's (GRDC) National Variety Trials (NVT) database. This publication provides a summary of the 2023 and long-term yield performance of varieties of crop species suitable for production in **Geraldton** together with their quality and disease responses.

The NVT program provides growers and advisers with comparative results on yield performance, quality and disease resistance ratings of commercially available grain varieties that is independent, consistent, timely and robust.

Conducted to a set of predetermined protocols, trials are sown and managed to reflect local best practice such as sowing time, fertiliser application, weed management, pest/disease control and fungicide application. The NVT is not designed to grow varieties to their maximum yield potential.

GRDC recognises that sustaining a project of this nature hinges on the collaboration of growers who willingly provide sites and often lend a hand in trial management on their properties. Equally significant is the partnership with seed companies who supply seed of commercial varieties and experimental lines to the program.

Interpreting long-term yield results

A factor analytic (FA) mixed model approach is used in the multi-environment trial (MET) analysis conducted by GRDC, supported by the Analytics for the Australian Grains Industry (AAGI).

This approach generates long-term MET values for varieties at an individual trial level.

This format provides more detailed results to better understand a variety's performance over several years at the individual trial/environment level, rather than just a single averaged value.

In the ***NVT Harvest Report - Geraldton***, results are presented in year groupings for yield for the past five years and quality for the past two years. Further detailed interrogation of the NVT Online results using the Long Term Yield Reporter will provide more specific performance results on all varieties of each crop species in each NVT location throughout **Geraldton**.

The results presented in this Harvest Report are based on the default filters in the Long Term Yield Reporter. In some cases, trial results are excluded because they do not meet the default standards for statistical validity. These are listed in the tables as 'Trial results below standard'. Trials below standard can be viewed by reducing the default VAF settings within the Long Term Yield Reporter.

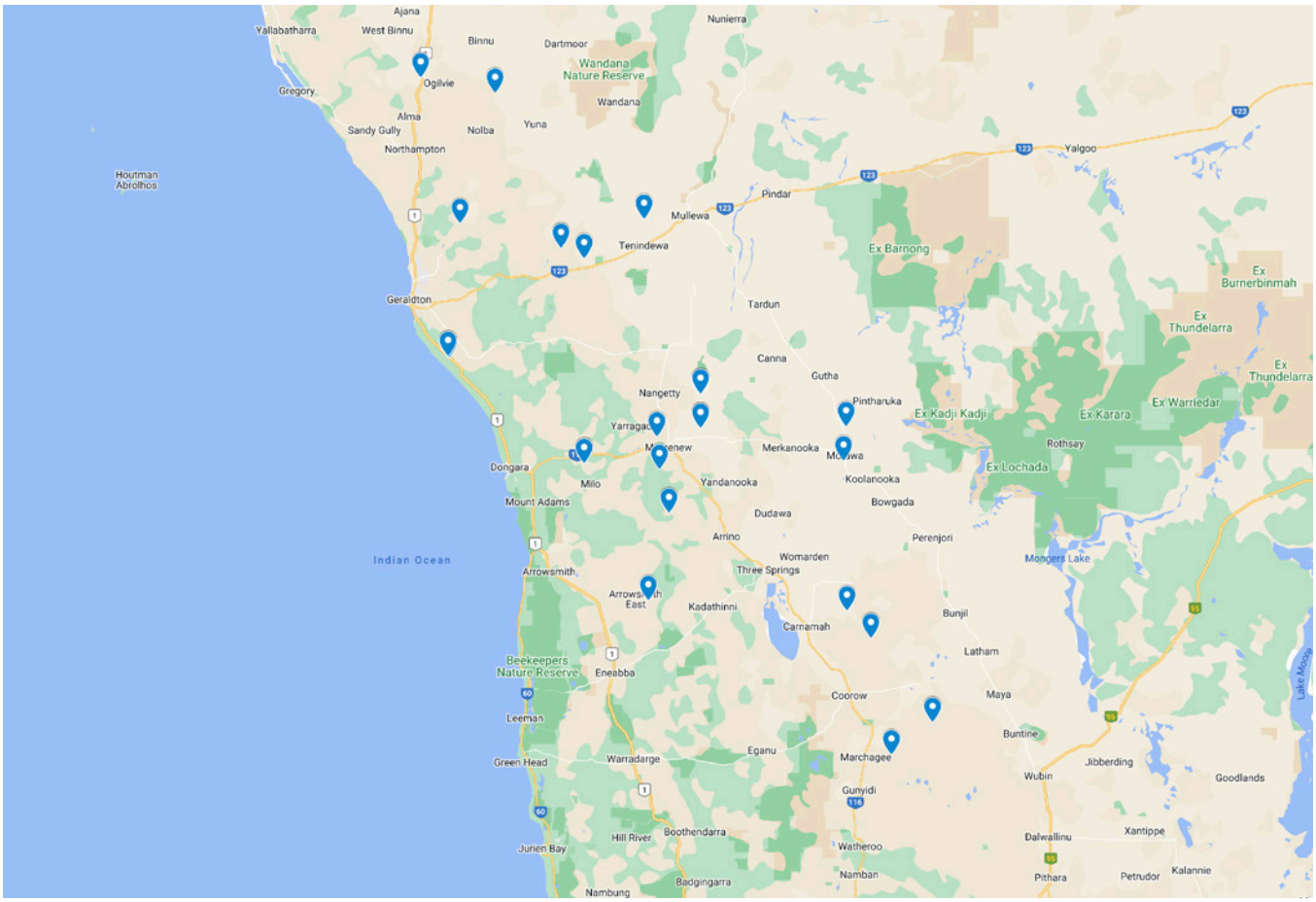
Trials listed as compromised are not suitable for making variety decisions. Results can be found in the Quarantined trial reports.

Refer to the latest ***Crop Sowing Guide*** for further information at **nvt.grdc.com.au/resources/crop-sowing-guides**

NVT SITE LOCATIONS – Geraldton

Figure 1: Locality of NVT trial sites in Geraldton from 2019 to 2023.

SOURCE: NVT Online



See all NVT trial locations and view trial results at nvt.grdc.com.au/trial-results.

WHEAT

New wheat varieties

The following information is for wheat varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	Grain classification	End point royalty* ($)	Comments supplied by breeding company[1]
Dozer(Φ) CL Plus	InterGrain	TBC	3.90	Dozer(Φ) CL Plus is a quick-mid maturing APW Clearfield® Plus wheat. Dozer(Φ) CL Plus pushes mid and quick-mid imidazolinone wheat yields and is an excellent alternative to Chief CL Plus. It is best suited to low-medium rainfall areas in Western Australia and South Australia. Dozer(Φ) CL Plus has strong lodging resistance, moderate early vigour, medium plant height and medium coleoptile length. Dozer(Φ) CL Plus offers good grain size and test weight. Proactive disease management of stripe rust and CCN in South Australia is recommended with Dozer(Φ) CL Plus to maximise yield and quality potential.
Firefly(Φ)	InterGrain	ANW	4.00	Firefly(Φ) is a high-yielding, mid-slow maturing ANW wheat, setting a new noodle yield benchmark for WA. Firefly(Φ) is suited to late April through to early May sowings, being similar in maturity to Zen(Φ) and Calingiri. Firefly(Φ) has an effective disease resistance profile, including good stripe rust and yellow spot resistance. Firefly(Φ) offers good physical grain characteristics, including good grain size.
Genie(Φ)	InterGrain	AH	3.50	Genie(Φ) is a mid-slow maturing wheat and is an excellent alternative to RockStar(Φ) in greater than three-tonne-per-hectare yield environments. In these environments, the variety offers medium-high rainfall growers a yield improvement compared with RockStar(Φ). Genie(Φ), with its slightly later maturity than RockStar(Φ) and long coleoptile, enables earlier sowing opportunities to be maximised. Genie(Φ) has an excellent disease resistance package including useful stem rust and stripe rust resistances. It offers good test weight, moderate grain size and has a medium plant height. Preliminary internal data indicates Genie(Φ) has good sprouting tolerance. Genie(Φ) has an AH classification in the western and southern zones and an AH classification is expected for the south-eastern and northern zones in 2024.
LRPB Matador(Φ)	LongReach Plant Breeders	FEED	3.50	Mid-maturity AH wheat that has consistently outperformed Scepter(Φ) with an improved shorter canopy and better lodging tolerance. Improved powdery mildew (MS) and stripe rust resistance (MS) over Scepter(Φ), adding some minor genes for both diseases. AH quality in SA and Victoria and commercialised by Pacific Seeds.
Thumper(Φ)	InterGrain	AH	3.50	Thumper(Φ) is an exceptionally high-yielding, mid-quick potential AH wheat for WA. It offers a yield improvement within the mid-quick maturity class for low-medium rainfall areas. Thumper(Φ) has a robust disease resistance package with good yellow spot resistance, useful for wheat-on-wheat rotations, and an excellent stripe rust resistance. Thumper(Φ) offers good grain size, reducing screenings risk, and has adequate test weight. Thumper(Φ) is currently classified as APW in the western zone with an AH classification expected soon.
Tomahawk CL Plus(Φ)	Australian Grain Technologies	FEED	4.15	Scepter(Φ)-type Clearfield® variety with increased yield over Scepter(Φ). The highest-yielding Clearfield® wheat variety in Western Australia, South Australia and Victoria. Tolerant to Clearfield® Intervix® herbicide. Similar disease resistance profile to Scepter(Φ). Similar grain size and test weight as Scepter(Φ). Mid-season maturity, similar to Scepter(Φ). APW quality classification in SA, Victoria, southern NSW, classification for WA pending.

* EPR amount is ex-GST, (Φ) denotes Plant Breeder's Rights apply. [1] All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

Refer to the latest *Crop Sowing Guide* for further information at nvt.grdc.com.au/resources/crop-sowing-guides

Wheat variety yield performance – Geraldton

Yield results are presented from the top-performing varieties within each NVT location in the region for the past five seasons. Results are presented (as a percentage) for each variety relative to the mean trial yield for the location within each year. Varieties are listed in descending order of average yield over the period.

The Long Term Yield Reporter provides additional information on varieties not listed and can be viewed as a table or chart with error bars. Rainfall is provided for January to March (J–M) and April to October (A–O) and, where relevant, irrigation from April to October.

Table 1: Coorow main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	**1.45**	**3.19**	**4.28**	**4.98**	**0.65**
Tomahawk CL Plus(Ꝺ)*				108	128
Vixen(Ꝺ)	116	109	109	101	160
Thumper(Ꝺ)					95
Calibre(Ꝺ)		104	102	109	135
Devil(Ꝺ)	112	104	105	111	108
Brumby(Ꝺ)			106	111	100
Sting(Ꝺ)	115	106	105	102	151
Scepter(Ꝺ)	110	105	107	106	115
LRPB Matador(Ꝺ)				108	105
Ballista(Ꝺ)	112		99	111	120
RockStar(Ꝺ)	104	102	106	113	67
Firefly(Ꝺ)			102		82
LRPB Havoc(Ꝺ)	103	107	111	94	135
LRPB Avenger(Ꝺ)	113	106		92	166
Ninja(Ꝺ)	102	102	104	109	81
Sowing date	**7 Jun**	**25 May**	**13 May**	**12 May**	**16 May**
Rainfall J–M (mm)	**17**	**91**	**98**	**58**	**23**
Rainfall A–O (mm)	**218**	**172**	**330**	**242**	**138**

Special thanks to 2023 trial cooperator, Clint Hunt.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 2: Eneabba main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	**2.69**	**4.41**	**3.88**	**5.76**	**1.90**
Thumper(Ꝺ)					110
RockStar(Ꝺ)	108	112	106	115	104
Tomahawk CL Plus(Ꝺ)*				106	120
Brumby(Ꝺ)			104	110	110
Devil(Ꝺ)	110	109	102	109	111
Firefly(Ꝺ)			101		104
Kinsei(Ꝺ)	102	110	102	114	97
LRPB Matador(Ꝺ)				107	110
Ninja(Ꝺ)	104	107	102	111	104
Calibre(Ꝺ)		108	100	105	114
Scepter(Ꝺ)	109	106	104	105	112
Ballista(Ꝺ)	107		95	110	111
Denison(Ꝺ)	100	109	108	110	89
Catapult(Ꝺ)	103	107	102	106	97
Vixen(Ꝺ)	112	101	103	97	121
Sowing date	**7 Jun**	**7 May**	**15 May**	**6 May**	**31 May**
Rainfall J–M (mm)	**12**	**70**	**79**	**70**	**18**
Rainfall A–O (mm)	**273**	**275**	**477**	**429**	**212**

Special thanks to 2023 trial cooperator, Jim Heal.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 3: Eradu main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	**0.33**		**2.07**	**3.69**	**2.05**
Tomahawk CL Plus(Ꝺ)*		Compromised trial		113	111
RockStar(Ꝺ)	97		110	112	109
Brumby(Ꝺ)			113	109	109
Vixen(Ꝺ)	115		118	106	107
Devil(Ꝺ)	107		112	108	109
Scepter(Ꝺ)	106		113	108	107
LRPB Matador(Ꝺ)					108
Thumper(Ꝺ)					112
Calibre(Ꝺ)			112	104	109
Firefly(Ꝺ)			106		108
Sting(Ꝺ)	114		113	103	106
Ninja(Ꝺ)	97		106	107	106
LRPB Havoc(Ꝺ)	103		112	105	101
Kinsei(Ꝺ)	94		102	107	106
Denison(Ꝺ)			100	110	103
Sowing date	**7 Jun**	**25 May**	**26 May**	**21 May**	**10 May**
Rainfall J–M (mm)	**3**	**63**	**79**	**46**	**69**
Rainfall A–O (mm)	**270**	**201**	**343**	**329**	**151**

Special thanks to 2023 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 4: Mingenew main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	**1.56**	**4.31**	**4.09**	**5.02**	**1.56**
Tomahawk CL Plus(Ꝺ)*				108	116
Thumper(Ꝺ)					109
RockStar(Ꝺ)	111	108	111	108	107
Brumby(Ꝺ)			110	108	109
Devil(Ꝺ)	112	107	108	108	109
Calibre(Ꝺ)		106	106	108	108
LRPB Matador(Ꝺ)					109
Scepter(Ꝺ)	111	105	109	105	110
Vixen(Ꝺ)	113	102	110	104	114
Firefly(Ꝺ)			105		105
Ballista(Ꝺ)	108		100	108	107
Ninja(Ꝺ)	106	107	105	105	106
Sting(Ꝺ)	111	103	105	104	111
Kinsei(Ꝺ)	105	107	104	106	101
Denison(Ꝺ)		102	109	104	96
Sowing date	**7 Jun**	**7 May**	**13 May**	**19 May**	**31 May**
Rainfall J–M (mm)	**12**	**104**	**68**	**69**	**7**
Rainfall A–O (mm)	**370**	**203**	**434**	**314**	**221**

Special thanks to 2023 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 5: Morawa main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.57	1.35	2.25	4.27	
Tomahawk CL Plus(b)*				111	
Vixen(b)	133	117	118	103	
Sting(b)	128	114	112	104	
Calibre(b)		110	104	108	
Brumby(b)			101	112	
Scepter(b)	110	109	106	108	
Devil(b)	108	108	101	111	
Ballista(b)	111		99	111	Trial failed
LRPB Havoc(b)	116	112	118	97	
LRPB Avenger(b)	136	109		93	
RockStar(b)	88	101	95	114	
Razor CL Plus(b)*	122	111	113	96	
Ninja(b)	92	104	98	110	
LRPB Anvil(b) CL Plus*			121	86	
Hammer CL Plus(b)*		104	105	97	
Sowing date	**7 Jun**	**25 May**	**15 May**	**13 May**	**31 May**
Rainfall J–M (mm)	**5**	**111**	**78**	**83**	**24**
Rainfall A–O (mm)	**186**	**145**	**297**	**329**	**99**

Special thanks to 2023 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 6: Mullewa main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.53	1.85	4.68	5.13	2.31
Vixen(b)	139	129	114	115	109
Tomahawk CL Plus(b)*				115	109
LRPB Havoc(b)	113	127	114	111	104
Sting(b)	137	122	110	111	107
Razor CL Plus(b)*	129	122	109	107	104
LRPB Avenger(b)	138	120		105	106
Ballista(b)	126		106	110	105
Scepter(b)	111	111	108	109	105
Calibre(b)		109	105	108	107
Thumper(b)					105
Devil(b)	111	106	106	109	106
LRPB Anvil(b) CL Plus*		119	105	102	105
LRPB Matador(b)					105
Brumby(b)			106	108	105
Dozer(b) CL Plus*			103		102
Sowing date	**7 Jun**	**25 May**	**11 May**	**18 May**	**11 May**
Rainfall J–M (mm)	**3**	**81**	**126**	**63**	**94**
Rainfall A–O (mm)	**152**	**209**	**278**	**268**	**107**

Special thanks to 2023 trial cooperator, Spring Park Farms.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 7: Nabawa main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.10	4.80	6.30	5.67	3.14
RockStar(b)	113	111	107	115	105
Thumper(b)					107
Tomahawk CL Plus(b)*				104	112
Brumby(b)			105	108	107
Kinsei(b)	108	110	102	114	101
Ninja(b)	108	108	107	107	104
Firefly(b)			103		103
Devil(b)	110	108	104	107	107
Denison(b)		108	99	118	97
LRPB Matador(b)					106
Scepter(b)	109	104	106	103	107
Valiant(b) CL Plus*			96	117	93
Ballista(b)	105		101	102	105
Zen(b)	105	99	109	102	102
Calibre(b)		105	99	103	107
Sowing date	**7 Jun**	**25 May**	**15 May**	**10 May**	**31 May**
Rainfall J–M (mm)	**3**	**35**	**40**	**39**	**18**
Rainfall A–O (mm)	**305**	**279**	**404**	**445**	**226**

Special thanks to 2023 trial cooperator, Jason Stokes.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 8: Ogilvie main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.48	4.18	5.38		1.37
Tomahawk CL Plus(b)*					108
Vixen(b)	118	113	107		102
LRPB Havoc(b)	108	110	106		106
Sting(b)	115	110	105		99
Scepter(b)	110	107	106		104
Thumper(b)					99
Devil(b)	110	106	105		103
LRPB Matador(b)				Compromised trial	104
Brumby(b)			105		105
Ballista(b)	107		105		96
Calibre(b)		106	103		98
Razor CL Plus(b)*	107	108	103		98
Ninja(b)	101	105	105		104
RockStar(b)	104	102	105		109
LRPB Avenger(b)	116	105			100
Sowing date	**7 Jun**	**25 May**	**12 May**	**4 May**	**1 Jun**
Rainfall J–M (mm)	**7**	**30**	**61**	**22**	**14**
Rainfall A–O (mm)	**195**	**227**	**510**	**403**	**128**

Special thanks to 2023 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 9: Yuna main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.94	3.24	5.57	4.23	
Tomahawk CL Plus(ↀ)*				110	Compromised trial
RockStar(ↀ)	115	104	107	117	
Brumby(ↀ)			108	111	
Vixen(ↀ)	111	110	113	99	
Scepter(ↀ)	111	106	109	107	
LRPB Havoc(ↀ)	100	112	113	99	
Devil(ↀ)	115	104	107	109	
Zen(ↀ)	100	108	108	107	
Ninja(ↀ)	107	103	105	110	
Boree(ↀ)			105		
Denison(ↀ)		100	99	117	
Firefly(ↀ)			103		
Chief CL Plus(ↀ)*	98	108	106	104	
Sting(ↀ)	110	106	108	98	
Corack(ↀ)	99	110			
Sowing date	**7 Jun**	**25 May**	**11 May**	**5 May**	**1 Jun**
Rainfall J–M (mm)	**7**	**37**	**71**	**32**	**22**
Rainfall A–O (mm)	**195**	**174**	**340**	**270**	**95**

Special thanks to 2023 trial cooperator, Helenore Farms.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 10: Eneabba early season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		4.33	4.62	5.52	1.94
Denison(ↀ)	No trial	113	108	105	132
Valiant(ↀ) CL Plus*			104	106	128
Kinsei(ↀ)		111	107	97	138
RockStar(ↀ)		113	106	92	146
Catapult(ↀ)		111	110	90	142
IGW6755					123
Brumby(ↀ)					143
Cutlass(ↀ)		105	103	100	115
Stockade(ↀ)				115	87
Longsword(ↀ)		96	99	122	63
Yitpi		98	101	91	111
Illabo(ↀ)		93	91	118	57
Magenta(ↀ)		99	101	86	109
Sheriff CL Plus(ↀ)*		99	106	74	127
EG Jet(ↀ)		92	102	79	111
Sowing date		**22 Apr**	**21 Apr**	**12 Apr**	**19 Apr**
Rainfall J–M (mm)		**70**	**79**	**70**	**18**
Rainfall A–O (mm)		**275**	**477**	**429**	**212**
Irrigation A–O (mm)					**10**

Special thanks to 2023 trial cooperator, Jim Heal.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 11: Ogilvie early season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.91			5.30	1.09
Denison(ↀ)		Compromised trial	Trial results below standard	107	130
Longsword(ↀ)	99			124	60
Valiant(ↀ) CL Plus*				104	130
Catapult(ↀ)	117			95	135
Stockade(ↀ)				109	105
Kinsei(ↀ)	107			98	134
RockStar(ↀ)	111			92	150
IGW6755					137
Cutlass(ↀ)	105			100	116
Illabo(ↀ)	89			114	66
Brumby(ↀ)					128
Magenta(ↀ)	104			87	108
Yitpi	93			90	104
Sheriff CL Plus(ↀ)*	105			79	115
EG Jet(ↀ)	88			81	94
Sowing date	**17 Apr**	**4 May**	**21 Apr**	**14 Apr**	**21 Apr**
Rainfall J–M (mm)	**7**	**30**	**61**	**22**	**14**
Rainfall A–O (mm)	**195**	**227**	**510**	**403**	**128**
Irrigation A–O (mm)		**10**			**10**

Special thanks to 2023 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Wheat variety quality – Geraldton

Grain quality for individual varieties varies from site to site and from year to year. However, long-term and across-site trends highlight varieties that can consistently achieve high protein percentage, high test weight or low grain screenings under a wider range of environments.

The following figures show the grain quality trends as histograms from 2022 and 2023 NVT averaged for trials in the Geraldton region. Only the varieties evaluated at every site are included. These are plotted in order of performance, up to a maximum of 20.

Protein and yield comparisons

Figure 1: Protein (%) and yield (t/ha) comparisons for main season wheat varieties from eight NVT sites in Geraldton in 2022.

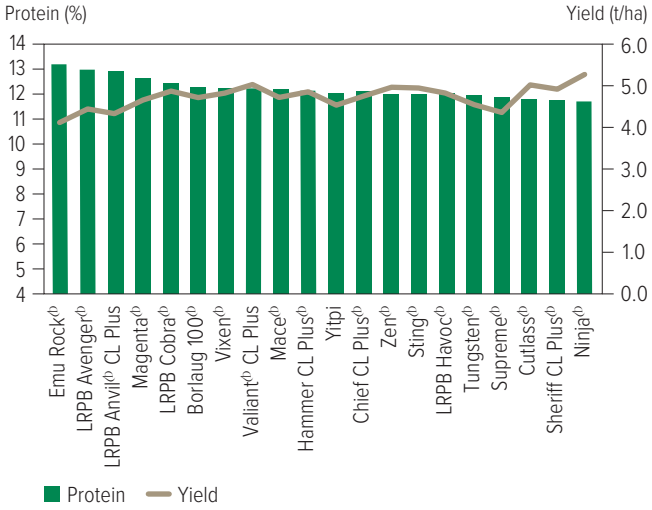


Figure 2: Protein (%) and yield (t/ha) comparisons for main season wheat varieties from seven NVT sites in Geraldton in 2023.

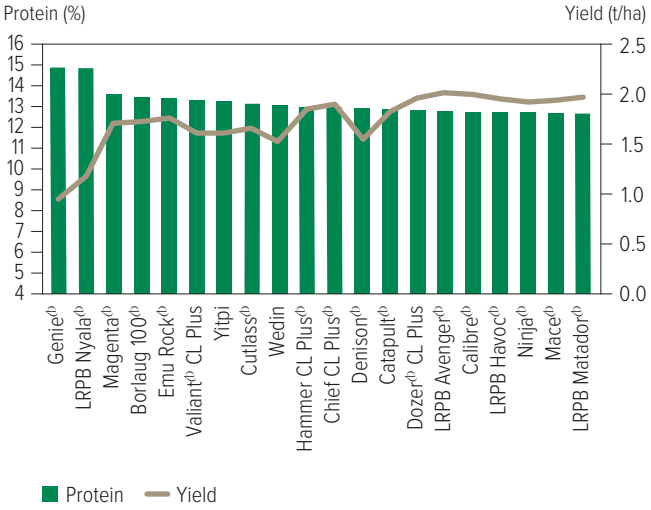


Figure 3: Protein (%) and yield (t/ha) comparisons for early season wheat varieties from two NVT sites in Geraldton in 2022.

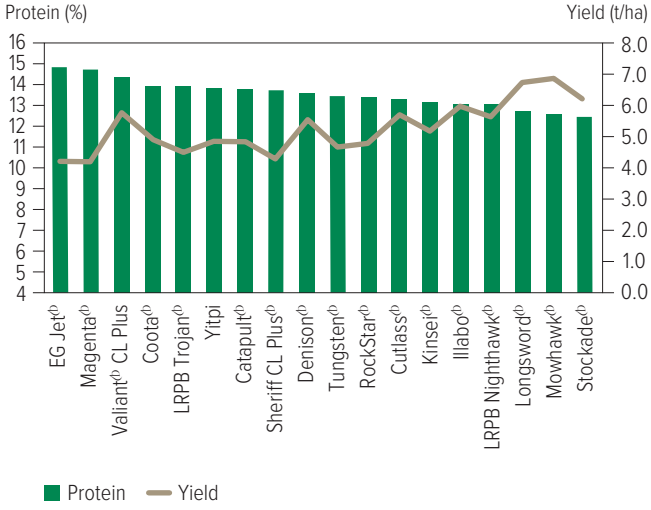
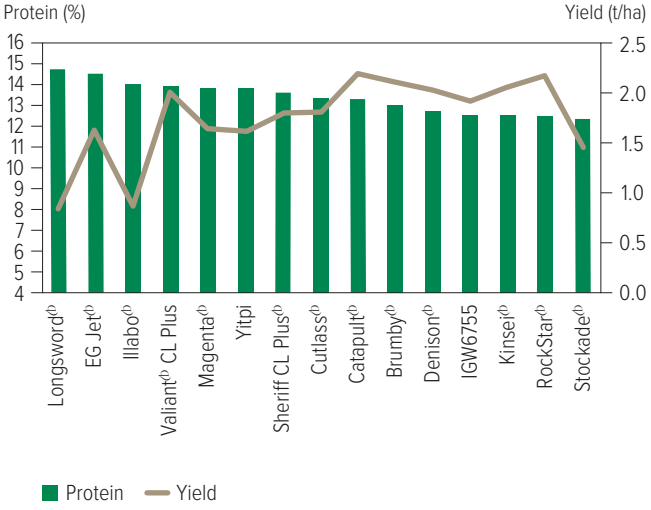


Figure 4: Protein (%) and yield (t/ha) comparisons for early season wheat varieties from two NVT sites in Geraldton in 2023.



Test weight comparisons

Figure 5: Test weight (kg/hL) comparisons for main season wheat varieties from eight NVT sites in Geraldton in 2022.

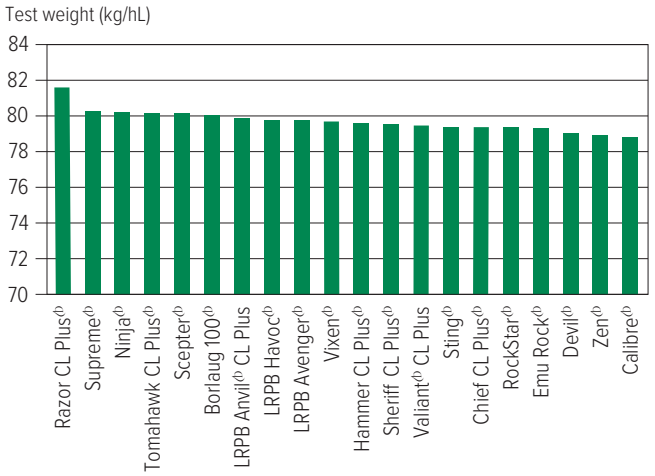


Figure 6: Test weight (kg/hL) comparisons for main season wheat varieties from seven NVT sites in Geraldton in 2023.

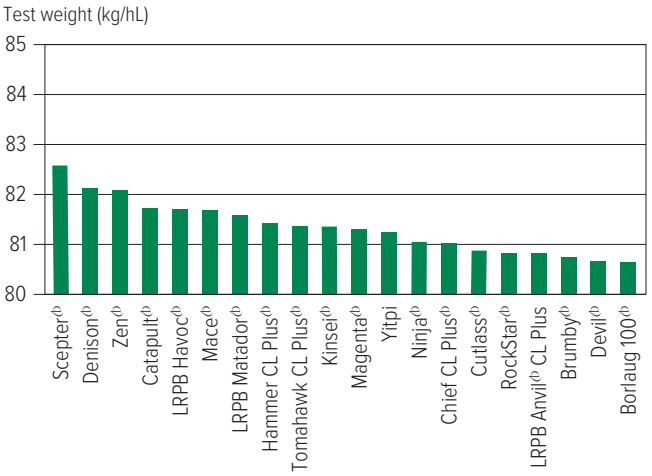


Figure 7: Test weight (kg/hL) comparisons for early season wheat varieties from two NVT sites in Geraldton in 2022.

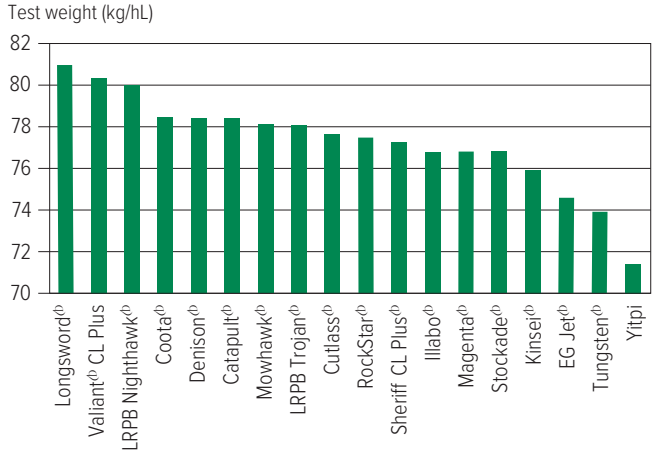
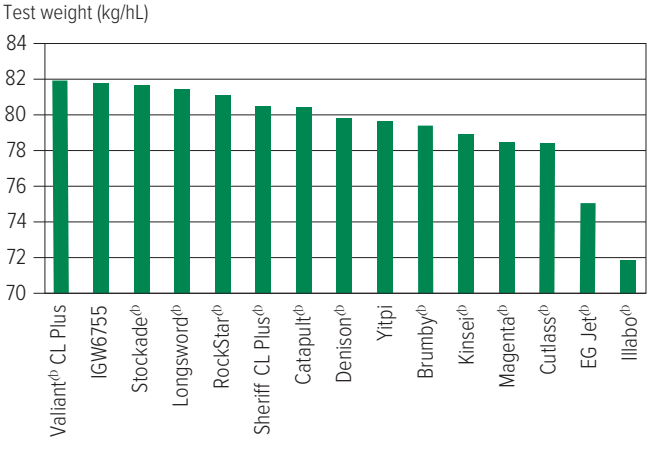


Figure 8: Test weight (kg/hL) comparisons for early season wheat varieties from two NVT sites in Geraldton in 2023.



Screenings comparisons

Figure 9: Screenings (<2.0mm) comparisons for main season wheat varieties from eight NVT sites in Geraldton in 2022.

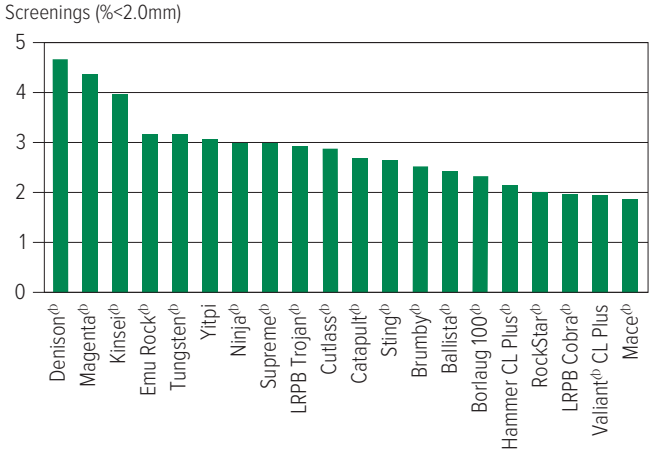


Figure 10: Screenings (<2.0mm) comparisons for main season wheat varieties from seven NVT sites in Geraldton in 2023.

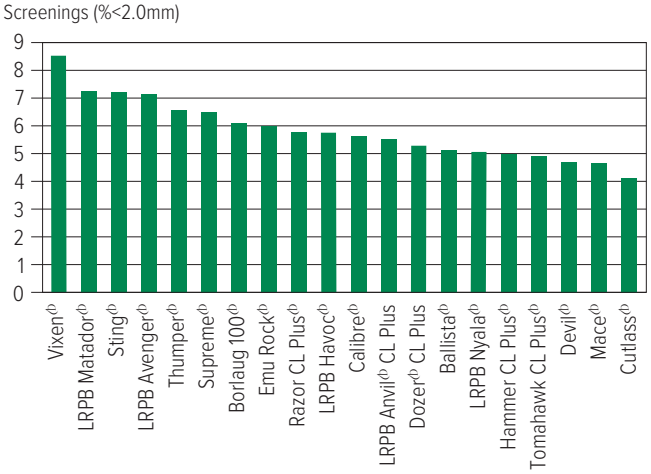


Figure 11: Screenings (<2.0mm) comparisons for early season wheat varieties from two NVT sites in Geraldton in 2022.

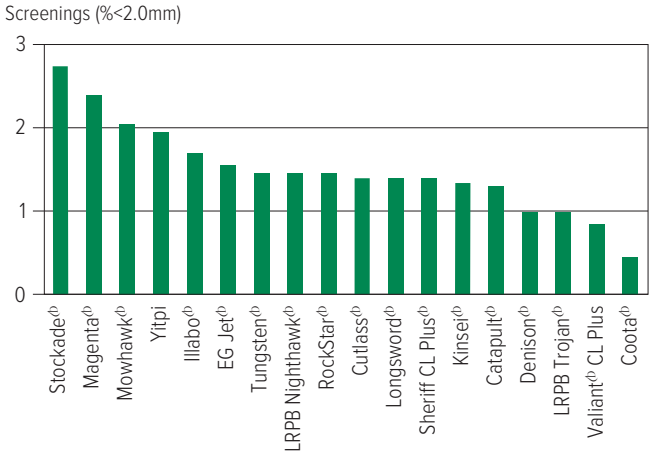
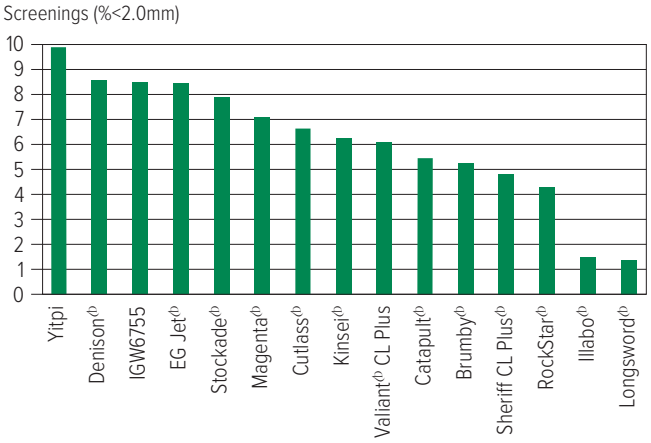


Figure 12: Screenings (<2.0mm) comparisons for early season wheat varieties from two NVT sites in Geraldton in 2023.



Wheat variety disease ratings – Western Australia

The following tables contain varietal ratings for the predominant diseases of wheat in Western Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and tolerance ratings.

Table 12: Wheat disease guide for Western Australia.

Variety	Yellow spot	Nodorum blotch (leaf)	Nodorum blotch (glume)	Stem rust	Stripe rust (west coast resistance)	Leaf rust	Powdery mildew	*Septoria tritici* blotch	RLN resistance (*Pratylenchus neglectus*)	RLN resistance (*Pratylenchus quasitereoides*)	CCN	Crown rot
Ballista(b)	MS	MS	MRMS	MR	RMR	S	S	SVS	S		MRMS	S
Boree(b)	MRMS	MS	MRMS	MR	MR	S	S	S	S		MSS	S
Borlaug 100(b)	MRMS	MRMS	MRMS	MR	RMR	MR	S	MS	S		MS	MSS
Brumby(b)	MRMS	MRMS	MS	MR	RMR	SVS	R	MSS (P)	MRMS	MS (P)	MRMS	S
Calibre(b)	MRMS	MSS	MSS	MR	RMR	S	MSS	S	S	MRMS (P)	MRMS	S
Catapult(b)	MRMS	MRMS	MS	MR	RMR	S	S	MSS	S	MRMS	R	MSS
Chief CL Plus(b)	MRMS	MS	MRMS	MR	S	MR	S	MSS	MRMS	MRMS	MS	MSS
Coota(b)	MSS	MRMS	MS	RMR	RMR	MR	S	MSS	MR		MR	MSS
Cutlass(b)	MSS	MRMS	MRMS	R	R	RMR	S	MSS	MSS	MS	MR	S
Denison(b)	MRMS	MR	MRMS	MS	MRMS	S	S	MS	S	MRMS (P)	MS	MSS
Devil(b)	MRMS	MRMS	MS	S	MR	SVS	SVS	SVS	MSS	MRMS	MSS	MSS
Dozer(b) CL Plus	MS	MRMS (P)	MSS (P)	MS	MRMS	MSS	MSS (P)	MSS (P)	MRMS		MS (P)	S
DS Bennett(b)	MRMS	MRMS	MR	MS	RMR	SVS	RMR	MR	S		S	VS
DS Pascal(b)	MS	MRMS	MRMS	MSS	RMR	MRMS#	RMR	MS	S		S	S
EG Jet(b)	MRMS	MSS		S	RMR	S	MS	MSS	S		MRMS	S
EG Titanium	MSS	MRMS		MS	RMR	MS	MSS	MSS	MSS		R	MSS
EGA Wedgetail(b)	MSS	MRMS	MRMS	MRMS	MRMS	MSS	MRMS	MRMS	S		S	S
Emu Rock(b)	MS	S	MS	MS	MRMS	SVS	MSS	S	MSS	MS (P)	S	MSS
Firefly(b)	MRMS	MRMS (P)	MSS (P)	S	MS	MSS	MSS (P)	MSS (P)	MS		S (P)	S
Genie(b)	MRMS (P)			MS (P)	MR (P)	S (P)						
Hammer CL Plus(b)	MRMS	MRMS	MRMS	MR	RMR	S	S	MSS	MSS	MS (P)	MRMS	MSS
IGW6755	MRMS	MRMS	MR	MRMS	MRMS	MS	S	MRMS	MSS		MSS	S
Illabo(b)	MS	MR	MR	MRMS	RMR	S	R	MR	MSS	RMR	MRMS	S
Jillaroo(b)	MS	MS	MS	MS	MR	S	S	MRMS (P)	S		MS	S
Kinsei(b)	MS	MRMS	MRMS	MSS	MRMS	MSS	S	MS	S	S	MSS	MSS
Longsword(b)	MRMS	MRMS	MRMS	MR	RMR	MS	MS	MRMS	MRMS		MRMS	MSS
LRPB Anvil(b) CL Plus	MSS	MSS	MSS	MR	RMR	SVS	MSS	SVS	MSS	S (P)	MS	MSS
LRPB Avenger(b)	MS	MSS	MS	MS	MRMS	S	S	S	MSS	MS (P)	MRMS	S
LRPB Havoc(b)	MRMS	MS	MS	S	MR	S	MS	MRMS	S	MRMS	S	MSS
LRPB Kittyhawk(b)	MRMS	MR (P)		MRMS (S)	RMR	MR	MRMS	MR	S		S	SVS
LRPB Matador(b)	MRMS	MRMS (P)	MSS (P)	MS	RMR	MSS	MS (P)	MSS (P)	S		MS (P)	S
LRPB Nighthawk(b)	MS	MRMS	MRMS	RMR	RMR	MSS	MSS	MR	MSS	MRMS (P)	MS	MSS
LRPB Nyala(b)	MS	MSS	MR	SVS	RMR	S	R	SVS	S		MSS	MSS
LRPB Oryx(b)	MSS	S	MSS	MR	RMR	RMR#	RMR	SVS	MSS	MSS (P)	S	MSS
LRPB Trojan(b)	MSS	MS	MS	MRMS	MR	MR#	S	S	MSS	MS (P)	MS	MS
Mace(b)	MRMS	MS	MS	MRMS	RMR	S	MSS	S	MS	MRMS	MRMS	S
Magenta(b)	MRMS	MRMS	MS	MR	MS	RMR	MRMS	MS	MSS	MSS	S	MSS
Ninja(b)	MRMS	MRMS	MS	S	MS	S	S	MSS	S	S	MS	S
Razor CL Plus(b)	MSS	MS	MS	MRMS	RMR	S	MSS	SVS	S		MR	S

Continued on next page

Table 12: Wheat disease guide for Western Australia (continued).

Variety	Yellow spot	Nodorum blotch (leaf)	Nodorum blotch (glume)	Stem rust	Stripe rust (west coast resistance)	Leaf rust	Powdery mildew	*Septoria tritici* blotch	RLN resistance (*Pratylenchus neglectus*)	RLN resistance (*Pratylenchus quasitereoides*)	CCN	Crown rot
RGT Accroc(b)	MRMS			MS	RMR	SVS	RMR (P)	MRMS	MS		S	SVS
RGT Zanzibar	MS	MR		VS	RMR	SVS	R	MR	S		MSS	S
RockStar(b)	MRMS	MRMS	MRMS	MRMS	RMR	S	MSS	S	MRMS	MS	MSS	S
Scepter(b)	MRMS	MRMS	MSS	MRMS	RMR	MSS	S	S	S	MS	MRMS	MSS
Severn(b)	MRMS	MR	MR (P)	MS	R	MRMS	R	MS (P)	S		MSS (P)	S
Sheriff CL Plus(b)	MRMS	MRMS	MRMS	MS	MRMS	SVS	SVS	S	MRMS	MRMS	MS	S
Sting(b)	MRMS	MS	MS	MRMS	MRMS	SVS	MSS	S	MS	MSS (P)	MS	MSS
Stockade(b)	MRMS	MRMS	MR	MS	RMR	MR	SVS	MS	S		MRMS	S
Supreme(b)	MS	S		MRMS	RMR	MR	MS	MSS	MSS		S	MSS
Thumper(b)	MS (P)			MS (P)	MR (P)	S (P)						
Tomahawk CL Plus(b)	MRMS	MRMS (P)	S (P)	MR	RMR	S	S (P)	MSS (P)	S		MRMS (P)	S
Valiant(b) CL Plus	MRMS	MR	MRMS	MR	R	S	SVS	MRMS	S	MSS (P)	MSS (P)	MSS
Vixen(b)	MRMS	MS	MSS	MRMS	MRMS	SVS	SVS	MSS	MRMS	MSS (P)	MSS	S
Wedin	MSS (P)	MSS		RMR		MSS (P)	S	MR	MSS			
Willaura(b)	MS	MRMS	MS	MR	R	MRMS	SVS	MRMS	MSS		MS	S
Yitpi	SVS	MS	MRMS	S	MRMS	S	MS	MS	MSS	MS	MR	S
Zen(b)	MRMS	MS	MRMS	S	MR	S	S	S	MRMS	MRMS	S	S

Learn more via the NVT Disease Ratings.
R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible,
(P) = provisional rating, # warning, may be more susceptible to alternate pathotypes, ( ) show outlier.

BARLEY

New barley varieties

The following information is for barley varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	Grain classification	End point royalty* ($)	Comments supplied by breeding company[1]
Neo(Φ) CL	InterGrain	Under malt evaluation	4.25	Neo(Φ) CL is a mid-maturing, imidazolinone-tolerant spring barley, ideally suited to medium-high rainfall environments. Neo(Φ) CL provides an outstanding disease resistance profile with excellent resistance to cereal cyst nematode, powdery mildew and the spot form of net blotch, and useful resistance to the net form of net blotch and leaf scald. Neo(Φ) CL has a semi-prostrate early growth habit, medium plant height, good tolerance to lodging, good grain retention and tolerance to head loss, and very good levels of grain plumpness. Neo(Φ) CL has been accepted into Grains Australia's malting accreditation program with earliest potential final accreditation in March 2025.
Spinnaker(Φ)	Secobra Recherches		TBC	Released under code name SCA21-Y003.

* EPR amount is ex-GST, (Φ) denotes Plant Breeder's Rights apply. [1] All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

Refer to the latest *Crop Sowing Guide* for further information at nvt.grdc.com.au/resources/crop-sowing-guides

Barley variety yield performance – Geraldton

Yield results are presented from the top-performing varieties within each NVT location in the region for the past five seasons. Results are presented (as a percentage) for each variety relative to the mean trial yield for the location within each year. Varieties are listed in descending order of average yield over the period.

The Long Term Yield Reporter provides additional information on varieties not listed and can be viewed as a table or chart with error bars. Rainfall is provided for January to March (J–M) and April to October (A–O) and, where relevant, irrigation from April to October.

Table 1: Eradu main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.11		2.41	4.55	2.14
Combat(ɒ)		Compromised trial	122	110	118
Rosalind(ɒ)	136		113	106	112
Beast(ɒ)	111		117	105	107
Neo(ɒ) CL*					107
Compass(ɒ)	94		115	103	106
Leabrook(ɒ)	90		111	105	105
Fathom(ɒ)	127		115	99	109
Cyclops(ɒ)			107	107	102
Titan AX(ɒ)*				105	104
Minotaur(ɒ)			106	105	105
Buff(ɒ)	119		106	102	108
Spinnaker(ɒ)				105	106
La Trobe(ɒ)	106		105	100	103
Maximus(ɒ) CL*	117		105	101	100
Commodus(ɒ) CL*			107	99	102
Sowing date	**7 Jun**	**25 May**	**26 May**	**21 May**	**10 May**
Rainfall J–M (mm)	**3**	**63**	**79**	**46**	**69**
Rainfall A–O (mm)	**270**	**201**	**343**	**329**	**151**

Special thanks to 2023 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 2: Mingenew main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.16	5.04	4.65	5.74	1.60
Combat(ɒ)			117	110	124
Rosalind(ɒ)	123	105	118	107	121
Neo(ɒ) CL*					107
Beast(ɒ)	125	102	106	105	125
Minotaur(ɒ)		104	112	105	109
Cyclops(ɒ)		105	107	107	114
Maximus(ɒ) CL*	108	99	116	103	117
Fathom(ɒ)	131	100	105	100	114
Spinnaker(ɒ)				104	99
Buff(ɒ)	113	103	103	102	104
Leabrook(ɒ)	113	103	94	105	113
Laperouse(ɒ)	100	101	102	103	108
La Trobe(ɒ)	109	99	103	100	110
Compass(ɒ)	120	100	92	102	117
Spartacus CL(ɒ)*	99	96	108	99	108
Sowing date	**7 Jun**	**7 May**	**13 May**	**12 May**	**31 May**
Rainfall J–M (mm)	**12**	**104**	**68**	**69**	**7**
Rainfall A–O (mm)	**370**	**203**	**434**	**314**	**221**

Special thanks to 2023 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 3: Yuna main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		3.85	5.10	5.39	
Combat(ɒ)	No trial		112	109	Trial failed
Beast(ɒ)		108	108	107	
Cyclops(ɒ)		100	110	108	
Maximus(ɒ) CL*		103	112	101	
Rosalind(ɒ)		109	110	98	
Minotaur(ɒ)		102	108	103	
Fathom(ɒ)		107	102	105	
Leabrook(ɒ)		104	101	108	
Laperouse(ɒ)		99	106	106	
Compass(ɒ)		108	98	106	
Titan AX(ɒ)*				108	
Spartacus CL(ɒ)*		102	105	97	
Commodus(ɒ) CL*		104	98	102	
La Trobe(ɒ)		105	101	98	
Buff(ɒ)		105	99	97	
Sowing date		**25 May**	**11 May**	**5 May**	**1 Jun**
Rainfall J–M (mm)		**37**	**71**	**32**	**22**
Rainfall A–O (mm)		**174**	**340**	**270**	**95**

Special thanks to 2023 trial cooperator, Helenore Farms.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Barley variety quality – Geraldton

Grain quality for individual varieties varies from site to site and from year to year. However, long-term and across-site trends highlight varieties that can consistently achieve high protein percentage, high test weight or low grain screenings under a wider range of environments.

The following figures show the grain quality trends as histograms from 2022 and 2023 NVT averaged for trials in the Geraldton region. Only the varieties evaluated at every site are included. These are plotted in order of performance, up to a maximum of 20.

Protein and yield comparisons

Figure 1: Protein (%) and yield (t/ha) comparisons for main season barley varieties from three NVT sites in Geraldton in 2022.

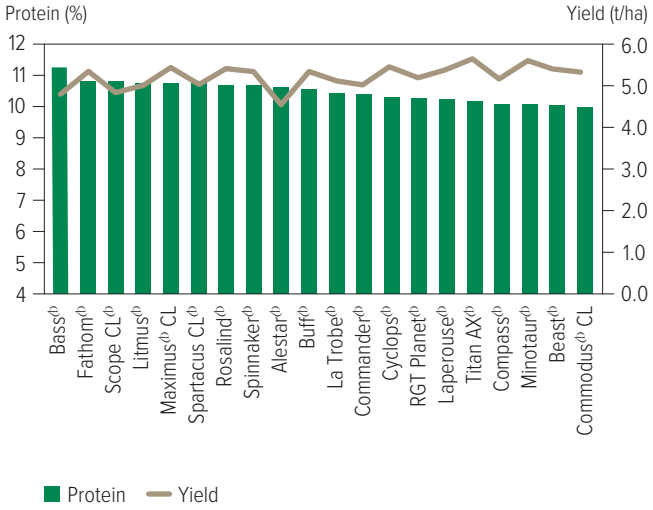
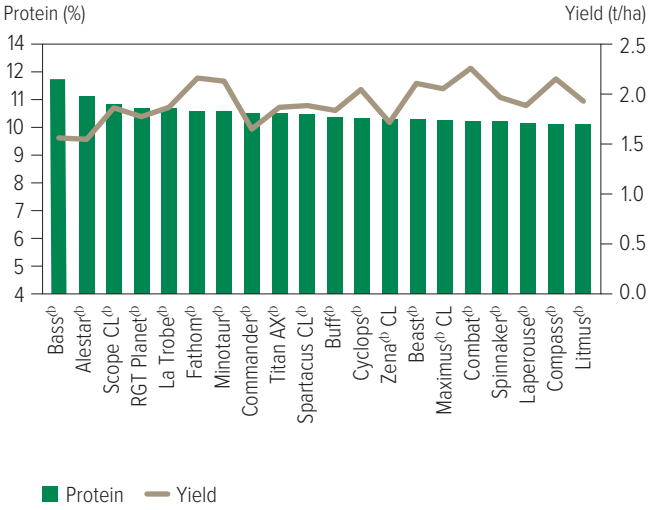


Figure 2: Protein (%) and yield (t/ha) comparisons for main season barley varieties from two NVT sites in Geraldton in 2023.



Test weight comparisons

Figure 3: Test weight (kg/hL) comparisons for main season barley varieties from three NVT sites in Geraldton in 2022.

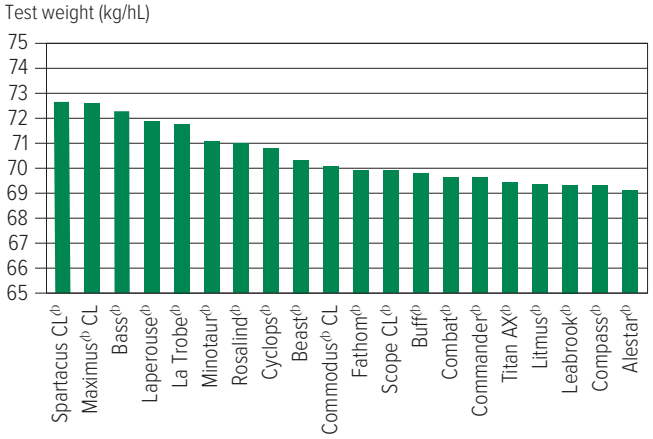
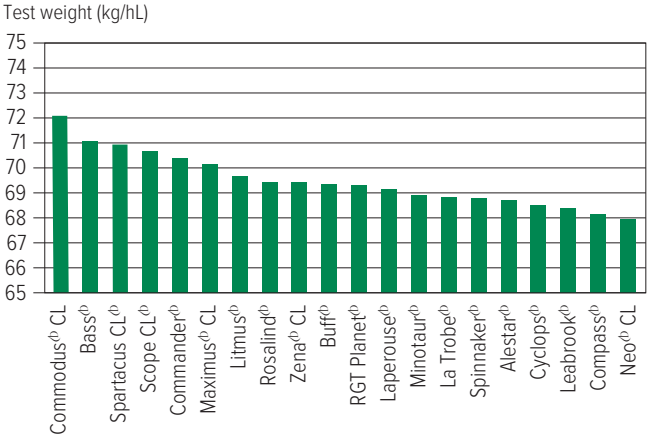


Figure 4: Test weight (kg/hL) comparisons for main season barley varieties from two NVT sites in Geraldton in 2023.



Screenings comparisons

Figure 5: Screenings (<2.5mm) comparisons for main season barley varieties from three NVT sites in Geraldton in 2022.

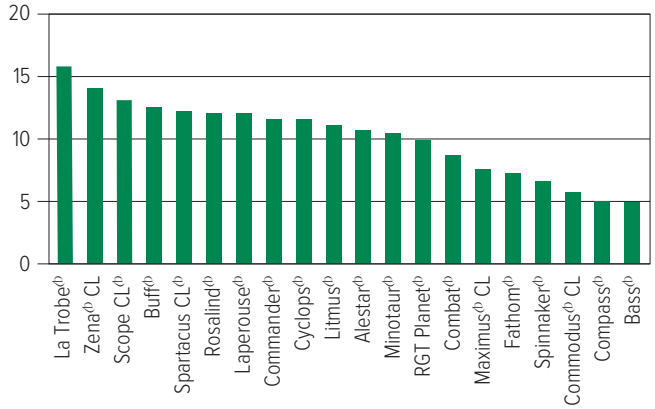
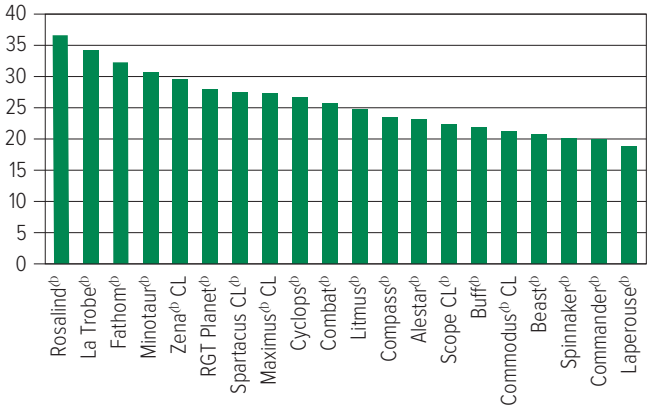


Figure 6: Screenings (<2.5mm) comparisons for main season barley varieties from two NVT sites in Geraldton in 2023.



Retention comparisons

Figure 7: Retention (>2.5mm) comparisons for main season barley varieties from three NVT sites in Geraldton in 2022.

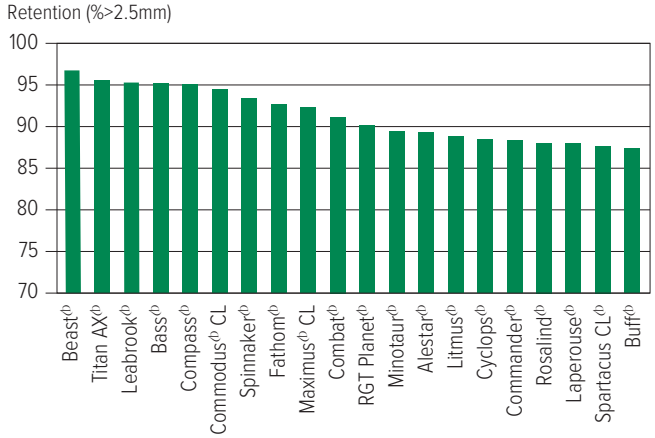
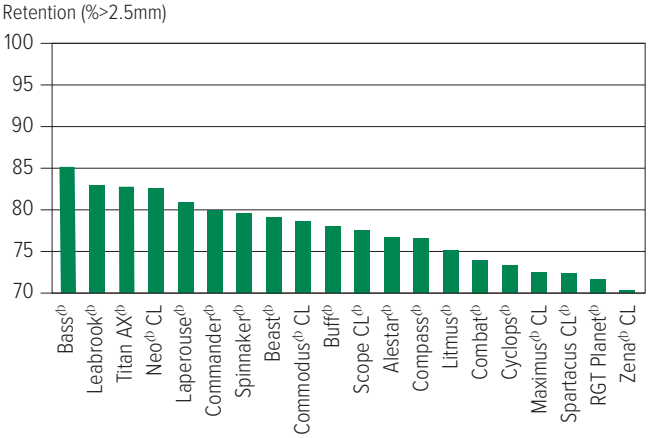


Figure 8: Retention (>2.5mm) comparisons for main season barley varieties from two NVT sites in Geraldton in 2023.



Barley variety disease ratings – Western Australia

The following tables contain varietal ratings for the predominant diseases of barley in Western Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and tolerance ratings.

Table 4: Barley disease guide for Western Australia.

Variety	Scald	Net form net blotch	Spot form net blotch	Powdery mildew	Leaf rust	Crown rot resistance	Barley yellow dwarf virus	RLN resistance (*Pratylenchus neglectus*)	RLN resistance (*Pratylenchus quasitereoides*)	CCN	Ramularia
Alestar(ф)	S	MRMS-S	S	RMR	MS	S	MRMS	MR		R^ (P)	SVS
Banks(ф)	SVS	MRMS-MS	MSS	MR-MS	S	MSS	MRMS	MS	MSS	S	VS
Bass(ф)	MRMS-MS	MRMS-S	MSS	MSS	SVS	MSS	MRMS	MS	MSS	S	VS
Beast(ф)	S	MRMS-S	MSS	RMR	S	S	MSS	MRMS	MSS	MR	SVS
Bottler(ф)	S	MRMS-MSS	MSS	RMR	MS	SVS	MS	MS			SVS
Buff(ф)	MS	MRMS-MSS	S	MSS	S	S	MRMS	MRMS	S		SVS
Combat(ф)	S	MRMS-S	MRMS	R	MRMS	S	MRMS-MS	MRMS	S (P)	MR	SVS
Commander(ф)	MS	MRMS-S	MSS	RMR	MSS	S	MRMS-MS	MRMS		R	SVS
Commodus(ф) CL	MSS	MRMS-S	MSS	RMR	S	S	MRMS-MS	MRMS	MS	R	SVS
Compass(ф)	MS	MRMS-S	MSS	R	S	MSS	MSS	MRMS	S	R	SVS
Cyclops(ф)	MRMS	MR-MS	MSS	R	S	MSS	S	MRMS	MSS (P)	S	SVS
Fairview(ф)	S	MRMS-SVS	MSS	R	S	MSS	MRMS	MR			SVS
Fandaga(ф)	SVS	R-MRMS	MSS	RMR	MS	MSS	MS	MR	MS (P)	R	VS
Fathom(ф)	MR	MS-S	MR	MR	MS	SVS	MS	MRMS	MSS	R	SVS
Flinders(ф)	MSS	MR-S	S	RMR	MS	MSS	MRMS-MS	MRMS	MSS (P)	S	SVS
Keel	MS	MRMS-S	MR	R-MRMS	SVS	S	MRMS-MS	MS		R	SVS
Kiwi	S	MRMS-MS	S	RMR	MS	MSS	MRMS-MS	MRMS		S	VS
La Trobe(ф)	MR	MRMS-S	MSS	MS	MSS	S	S	MRMS	S	R	SVS
Laperouse(ф)	S	MRMS-S	MS	RMR	MSS	S	MRMS	MRMS	MS	S	VS
Leabrook(ф)	MSS	MRMS-S	MSS	RMR	S	S	MSS	MRMS	MS	RMR	VS
Litmus(ф)	S	MRMS-S	S	R	S	S	S	MS	MSS (P)	MS	VS
Maximus(ф) CL	MR	MRMS-S	MSS	RMR/S	MSS	S	MRMS	MRMS	S	R	VS
Minotaur(ф)	VS	MRMS	S	S	S	MSS	S	MRMS	MS (P)	R	SVS
Neo(ф) CL	MR (P)	MRMS-S (P)	MRMS (P)	R (P)	MSS (P)		MRMS (P)	RMR (P)	S (P)	R	SVS (P)
RGT Planet(ф)	MR	MRMS-SVS	S	R	MRMS	MSS	MRMS	MRMS	MS	R (P)	SVS
Rosalind(ф)	MSS	MR-S	S	MSS	MR	S	MRMS-MS	MRMS	MSS	R	VS
SakuraStar	MS	MRMS-S	MS	RMR	S	S	MRMS	MR	-	R	SVS
Scope CL(ф)	MS	MRMS-S	MSS	RMR	MSS	S	MRMS	MRMS	MRMS	S	SVS
Spartacus CL(ф)	RMR	MRMS-S	S	MS	MSS	S	S	MRMS	MSS	R	VS
Spinnaker(ф)	MR	MRMS-SVS	S	R	MS	S	MRMS	MR	MS (P)	S	VS
Titan AX(ф)	S	MRMS-S	MSS	RMR	S	S	MS	MR	S (P)	MR (P)	VS
Topstart	MSS	MRMS-S	MSS	R	MS	MSS	MRMS	RMR		S	SVS
Urambie	RMR	MRMS	MSS	MRMS-MSS	MSS	MSS	MRMS	MRMS			VS
Westminster(ф)	MR	MRMS-MSS	MSS	RMR	MRMS	MSS	MRMS-MS	MRMS			SVS
Yeti(ф)	SVS	MR-S	MS	MR	S	S	MS	MR		RMR	VS
Zena(ф) CL	MR	MRMS-SVS	S	R	MS	S	MRMS-MS	MRMS	MS (P)	R	VS

Learn more via the NVT Disease Ratings.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, T = tolerant, MT = moderately tolerant, MI = moderately intolerant, I = intolerant, VI = very intolerant, (P) = provisional rating, - hyphen indicates a range, / indicates pathotype differences, ^ line contains a few susceptible off types.

CANOLA

New canola varieties

The following information is for canola varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	End point royalty* ($)	Comments supplied by breeding company[1]
DG Avon TT[Φ]	Nutrien Ag Solutions Ltd	5.50	Early, determinant, short TT open-pollinated variety suited to low-medium rainfall zones.
Hyola® Continuum CL	Advanta Seeds	N/A	An early-mid maturity Clearfield® hybrid, Continuum CL provides wide environmental adaptability with excellent grain oil potential. It exhibits strong yields in target environments and demonstrates excellent adaptability to growing regions with a range of 1.5 to 5.5t/ha. Continuum CL showcases an exceptionally high level of early plant vigour, high lodging resistance, and an outstanding blackleg rating of 'R' due to its distinctive tri-group resistance, ADF.
Hyola® Defender CT	Advanta Seeds	N/A	A mid-season maturity CT hybrid, Defender CT delivers remarkable grain yield, robust plant vigour and a very high grain oil content. Defender CT performance is closely aligned with the renowned Hyola® Blazer TT variety. Defender CT offers uniform flowering, manageable height for direct harvesting and an exceptional blackleg rating of 'R-MR' due to its distinctive tri-group resistance, ADF.
PY421C	Pioneer Hi-Bred Aust	N/A	Pioneer® PY421C is an early to mid-maturing hybrid with exceptional yield for maturity and widely adapted. Blackleg rating of 'R-MR', resistance group A. Marketed by Pioneer Seeds.

* EPR amount is ex-GST, [Φ] denotes Plant Breeder's Rights apply. [1] All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

Refer to the latest *Crop Sowing Guide* for further information at nvt.grdc.com.au/resources/crop-sowing-guides

Canola variety yield performance – Geraldton

Yield results are presented from the top-performing varieties within each NVT location in the region for the past five seasons. Results are presented (as a percentage) for each variety relative to the mean trial yield for the location within each year. Varieties are listed in descending order of average yield over the period.

The Long Term Yield Reporter provides additional information on varieties not listed and can be viewed as a table or chart with error bars. Rainfall is provided for January to March (J–M) and April to October (A–O) and, where relevant, irrigation from April to October.

Table 1: Coorow low-med rainfall GLY.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)			3.45	3.06	
Nuseed® Hunter TF	No trial	Trial failed	110	107	Compromised trial
InVigor® LR 4540P				104	
InVigor® R 4520P			107	102	
Pioneer® 44Y27 (RR)			106	103	
Nuseed® Raptor TF			104	103	
Pioneer® 44Y30 RR			104	102	
InVigor® R 4022P			102	99	
Nuseed® Emu TF			98	101	
Hyola® Garrison XC				99	
Hyola® Battalion XC			95	97	
Sowing date		**25 May**	**8 May**	**26 Apr**	**6 May**
Rainfall J–M (mm)		**119**	**83**	**62**	**23**
Rainfall A–O (mm)		**159**	**323**	**244**	**138**

Special thanks to 2023 trial cooperator, Catalina Farms.
Learn more via the NVT Long Term Yield Reporter

Table 2: Greenough low-med rainfall GLY.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.78		2.53	2.34	
InVigor® LR 4540P		Compromised trial		112	Compromised trial
Nuseed® Hunter TF			107	109	
InVigor® R 4520P	99		109	112	
Pioneer® 44Y27 (RR)	101		104	102	
Pioneer® 44Y30 RR			104	105	
InVigor® R 4022P	99		103	103	
Nuseed® Emu TF				93	
Nuseed® Raptor TF	94		103	102	
Hyola® Garrison XC	105			99	
Hyola® 410XX	108		87	91	
Sowing date	**7 Jun**	**12 Jun**	**21 Apr**	**12 May**	**6 May**
Rainfall J–M (mm)	**11**	**32**	**53**	**32**	**7**
Rainfall A–O (mm)	**379**	**233**	**416**	**480**	**227**

Special thanks to 2023 trial cooperator, Living Farm Pty Ltd.
Learn more via the NVT Long Term Yield Reporter

Table 3: Mingenew low-med rainfall GLY.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.01	2.58	2.46	2.24	
Nuseed® Emu TF	112	113		107	Compromised trial
Nuseed® Hunter TF			108	109	
Pioneer® 44Y27 (RR)	103	106	107	107	
InVigor® LR 4540P				107	
Nuseed® Raptor TF	103	102	104	101	
Hyola® Battalion XC		102	101	98	
Pioneer® 44Y30 RR			101	101	
InVigor® R 4022P	94	98	101	102	
DG Lofty TF			100	95	
InVigor® R 4520P	90	94	100	103	
Sowing date	**7 Jun**	**5 May**	**5 May**	**12 May**	**6 May**
Rainfall J–M (mm)	**12**	**104**	**58**	**69**	**6**
Rainfall A–O (mm)	**370**	**203**	**333**	**314**	**219**

Special thanks to 2023 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 4: Yuna low-med rainfall GLY.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.17		3.70	2.77	
Nuseed® Hunter TF		Trial failed		108	Trial failed
InVigor® LR 4540P				104	
Pioneer® 44Y27 (RR)	100		109	105	
Nuseed® Emu TF			112	96	
Pioneer® 44Y30 RR			101	104	
InVigor® R 4520P	104		102	99	
InVigor® R 4022P	96		102	98	
Hyola® Battalion XC			100	98	
DG Lofty TF			97	100	
Hyola® Garrison XC	111			98	
Sowing date	**7 Jun**	**6 May**	**5 May**	**28 Apr**	**6 May**
Rainfall J–M (mm)	**7**	**37**	**71**	**32**	**22**
Rainfall A–O (mm)	**195**	**174**	**340**	**270**	**95**

Special thanks to 2023 trial cooperator, Helenore Farms.
Learn more via the NVT Long Term Yield Reporter

Table 5: Mingenew low-med rainfall IMI.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.68	2.60	2.28	2.12	
Saintly CL	111				Trial results below standard
Hyola® Equinox CL				98	
Pioneer® 44Y94 CL			103	105	
Hyola® Solstice CL			95		
VICTORY® V7002CL	96	101			
Pioneer® 44Y90 (CL)	94	98			
Pioneer® 43Y92 (CL)	103	99	98	98	
Hyola® Continuum CL				96	
Hyola® 575CL	99				
Sowing date	**7 Jun**	**5 May**	**5 May**	**12 May**	**6 May**
Rainfall J–M (mm)	**12**	**104**	**58**	**69**	**6**
Rainfall A–O (mm)	**370**	**203**	**333**	**314**	**219**

Special thanks to 2023 trial cooperator.
Yield performance of 'stacked' varieties with tolerances to multiple herbicide systems should not be compared to varieties in trials where the variety has not specifically been tested, even for the same location. The following varieties have not been included in this trial, but have been tested in other herbicide trials at this location: Hyola® Battalion XC, Hyola® Defender CT, Hyola® Garrison XC and Hyola® Regiment XC.
Learn more via the NVT Long Term Yield Reporter

Table 6: Coorow low-med rainfall TT.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)			2.89	2.81	
HyTTec® Trident	No trial	Trial failed	117	113	Compromised trial
SF Dynatron TT			114	109	
HyTTec® Velocity			112	109	
HyTTec® Trophy				109	
Hyola® Blazer TT				107	
InVigor® T 4510			111	107	
InVigor® LT 4530P			110	104	
InVigor® T 4511			106	105	
Hyola® Defender CT				102	
RGT Baseline® TT				103	
Sowing date		**25 May**	**8 May**	**26 Apr**	**6 May**
Rainfall J–M (mm)		**119**	**83**	**62**	**23**
Rainfall A–O (mm)		**159**	**323**	**244**	**138**

Special thanks to 2023 trial cooperator, Catalina Farms.
Learn more via the NVT Long Term Yield Reporter

Table 7: Greenough low-med rainfall TT.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.69		1.89	2.08	
Hyola® Blazer TT		Compromised trial	113	117	Compromised trial
InVigor® T 4510	108		109	108	
InVigor® LT 4530P			113	110	
Hyola® Defender CT				113	
InVigor® T 4511			104	104	
Hyola® Enforcer CT			102	106	
RGT Capacity TT			100	103	
Renegade TT[d]			105	106	
SF Spark TT	104		99	98	
Bandit TT[d]			98	95	
Sowing date	**7 Jun**	**12 Jun**	**21 Apr**	**12 May**	**6 May**
Rainfall J–M (mm)	**11**	**32**	**53**	**32**	**7**
Rainfall A–O (mm)	**379**	**233**	**416**	**480**	**227**

Special thanks to 2023 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 8: Mingenew low-med rainfall TT.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.53	2.40	2.01	1.95	
InVigor® T 4510	111	108	111	111	Trial results below standard
InVigor® T 4511			106	105	
SF Spark TT	109	105	103	103	
RGT Capacity TT		105	101	103	
InVigor® LT 4530P		100	107	107	
DG Avon TT				100	
Hyola® Blazer TT	102	99	102	106	
Bandit TT[d]			102	101	
Hyola® Enforcer CT	113	101	99	99	
Hyola® Defender CT				100	
Sowing date	**7 Jun**	**5 May**	**5 May**	**12 May**	**6 May**
Rainfall J–M (mm)	**12**	**104**	**58**	**69**	**6**
Rainfall A–O (mm)	**370**	**203**	**333**	**314**	**219**

Special thanks to 2023 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 9: Yuna low-med rainfall TT.					
Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.95		3.05	2.37	
HyTTec® Trident	125	Trial failed	121	117	Trial failed
HyTTec® Velocity				107	
HyTTec® Trophy	122			112	
InVigor® T 4510	110		115	110	
InVigor® T 4511			107	108	
Hyola® Blazer TT				107	
InVigor® LT 4530P			108	107	
Hyola® Enforcer CT				107	
SF Spark TT	101		105	102	
Hyola® Defender CT				102	
Sowing date	**7 Jun**	**6 May**	**5 May**	**28 Apr**	**6 May**
Rainfall J–M (mm)	**7**	**37**	**71**	**32**	**22**
Rainfall A–O (mm)	**195**	**174**	**340**	**270**	**95**

Special thanks to 2023 trial cooperator, Helenore Farms.
Learn more via the NVT Long Term Yield Reporter

Australian canola variety disease ratings

The following table contains varietal ratings for blackleg disease of canola.

These ratings are updated twice a year by crop pathologists and were released in autumn 2024.

Varieties are listed in alphabetical order and disease ratings are colour-coded to match resistance and susceptibility ratings.

Table 10: Canola disease guide – 2024 autumn blackleg ratings and resistance groups.

Variety	2024 Blackleg rating Bare	2024 Blackleg rating ILeVo®	2024 Blackleg rating Saltro®	Type	*Section A* – resistance group of cultivar	*Section B* – resistance group of previous year's cultivar (stubble)																			
						A	B	C	AB	AC	AD	ABC	ABD	ABF	ABS	ABDF	ABDS	ADF	BF	BC	H	AH	ACH	ABH	ADFH
CONVENTIONAL VARIETIES																									
Outlaw(Φ)	RMR			Open pollinated	A																				
Nuseed® Quartz	RMR			Hybrid	ABD																				
Nuseed® Diamond	RMR	R	R	Hybrid	ABF																				
TRIAZINE-TOLERANT VARIETIES																									
HyTTec® Trifecta	R			Hybrid	ABD																				
HyTTec® Trident	R			Hybrid	AD																				
Monola® H524TT	R			High stability oil, hybrid	AD																				
DG Bidgee TT(Φ)	R	R	R	Open pollinated	H																				
HyTTec® Trophy	R	R	R	Hybrid	AD																				
DG Torrens TT(Φ)	RMR			Open pollinated	H																				
Hyola® Blazer TT	RMR		R	Hybrid	ADF																				
InVigor® T 4511	RMR	R		Hybrid	Different blackleg resistance pattern, further testing required. Effective rotation with existing groups currently unknown																				
Monola® H421TT	RMR			High stability oil, hybrid	BC																				
ATR-Bluefin(Φ)	RMR			Open pollinated	AB																				
DG Avon TT(Φ)	MR	R	R	Open pollinated	AC																				
SF Spark™ TT	MR	R	R	Hybrid	ABDS																				
InVigor® T 4510	MR	R	R	Hybrid	BF																				
Renegade TT(Φ)	MR			Open pollinated	A																				
HyTTec® Velocity	MR			Hybrid	AB																				
Monola® 422TT	MRMS			Open pollinated	BC																				
ATR-Swordfish(Φ)	MRMS			Open pollinated	AB																				
SF Dynatron™ TT	MRMS	R	R	Hybrid	BC																				
RGT Baseline™ TT	MRMS	R	R	Hybrid	B																				
Bandit TT(Φ)	MRMS	R	R	Open pollinated	A																				
RGT Capacity™ TT	MRMS	RMR	R	Hybrid	B																				
AFP Cutubury(Φ)	MS	MR	RMR	Open pollinated	AB																				
ATR-Bonito(Φ)	MS	RMR	R	Open pollinated	A																				

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Table 10: Canola disease guide – 2024 autumn blackleg ratings and resistance groups (continued).

Variety	2024 Blackleg rating Bare	2024 Blackleg rating InVigor®	2024 Blackleg rating Saltro®	Type	*Section A* – resistance group of cultivar	*Section B* – resistance group of previous year's cultivar (stubble)																		
						A	B	C	AB	AC	AD	ABC	ABD	ABF	ABS	ABDF	ABDS	ADF	BF	BC	H	AH	ACH	ABH	ADFH
IMIDAZOLINONE-TOLERANT VARIETIES																								
Hyola® Continuum CL	R		R	Hybrid, Clearfield®	ADF																			
Hyola® Solstice CL	R		R	Hybrid, Clearfield®	ADFH																			
Captain CL	R			Winter, hybrid, Clearfield®	AH																			
Hyola® Feast CL	R		R	Winter, hybrid, Clearfield®	H																			
RGT Nizza™ CL	R			Winter, hybrid, Clearfield®	B																			
Hyola® 970CL	R		R	Winter, hybrid, Clearfield®	H																			
Phoenix CL	R			Winter, hybrid, Clearfield®	B																			
Pioneer® 45Y93 CL	R		R	Hybrid, Clearfield®	BC																			
RGT Clavier™ CL	R			Winter, hybrid, Clearfield®	ACH																			
Pioneer® PN526C	RMR			High stability oil, Hybrid, Clearfield®	ABD																			
Pioneer® 45Y95 CL	RMR		R	Hybrid, Clearfield®	C																			
Nuseed® Ceres IMI	RMR			Hybrid	AD																			
Pioneer® 43Y92 CL	RMR		R	Hybrid, Clearfield®	B																			
Pioneer® 44Y94 CL	RMR		R	Hybrid, Clearfield®	BC																			
Pioneer® PY421C	RMR		R	Hybrid, Clearfield®	A																			
VICTORY® V75-03CL	RMR			High stability oil, hybrid, Clearfield®	AB																			
IMIDAZOLINONE AND TRIAZINE-TOLERANT VARIETIES																								
Hyola® Defender CT	R		R	Hybrid, Clearfield®, Triazine	ADF																			
Hyola® Enforcer CT	R			Hybrid, Clearfield®, Triazine	ADF																			
Pioneer® PY520 TC	MR		R	Hybrid, Clearfield®, Triazine	BC																			
GLYPHOSATE-TOLERANT VARIETIES																								
DG Hotham TF	R			Hybrid, TruFlex®	ABH																			
Nuseed® Raptor TF	R			Hybrid, TruFlex®	AD																			
Nuseed® Eagle TF	R			Hybrid, TruFlex®	ABD																			
VICTORY® V55-04TF	R		R	High stability oil, hybrid, TruFlex®	AB																			
DG Lofty TF	R			Hybrid, TruFlex®	ABH																			
Nuseed® Hunter TF	RMR			Hybrid, TruFlex®	AB																			
Pioneer® 45Y28 RR	RMR		R	Hybrid, Roundup Ready®	BC																			
Pioneer® 44Y27 RR	RMR		R	Hybrid, Roundup Ready®	B																			
Pioneer® 44Y30 RR	RMR		R	Hybrid, Roundup Ready®	AB																			
Pioneer® PY422G	MR		R	Hybrid, Optimum GLY®	AB																			
Nuseed® Emu TF	MR			Hybrid, TruFlex®	AB																			
Pioneer® PY525G	MR		R	Hybrid, Optimum GLY®	AB																			

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Table 10: Canola disease guide – 2024 autumn blackleg ratings and resistance groups (continued).

Variety	2024 Blackleg rating Bare	2024 Blackleg rating ILeVo®	2024 Blackleg rating Saltro®	Type	*Section A* – resistance group of cultivar	*Section B* – resistance group of previous year's cultivar (stubble)																			
						A	B	C	AB	AC	AD	ABC	ABD	ABF	ABS	ABDF	ABDS	ADF	BF	BC	H	AH	ACH	ABH	ADFH
GLYPHOSATE-TOLERANT VARIETIES																									
InVigor® R 4022P	MRMS	R		Hybrid, TruFlex®	ABC																				
InVigor® R 4520P	MRMS	R		Hybrid, Truflex®	B																				
Pioneer® PY323G	MRMS		R	Hybrid, Optimum GLY®	BC																				
GLYPHOSATE AND IMIDAZOLINONE-TOLERANT VARIETIES																									
Hyola® Regiment XC	R		R	Hybrid, TruFlex®, Clearfield®	ADFH																				
Hyola® Battalion XC	RMR			Hybrid, TruFlex®, Clearfield®	ADF																				
Hyola® Garrison XC	RMR		R	Hybrid, TruFlex®, Clearfield®	ADF																				
GLUFOSINATE AND TRIAZINE-TOLERANT VARIETIES																									
InVigor® LT 4530P	RMR	R		Hybrid, LibertyLink®, Triazine	BF																				
GLUFOSINATE AND GLYPHOSATE-TOLERANT VARIETIES																									
InVigor® LR 4540P	RMR	R		Hybrid, LibertyLink®, TruFlex®	B																				

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible.

Section B: Green = best possible rotation (no resistance genes in common)
Yellow = okay rotation (at least one resistance gene not in common)
Red = not advised (all resistance genes in common)

Please check updated ratings using the Blackleg Management Guide or the NVT Disease Ratings.

CHICKPEA

Chickpea variety yield performance – Western Australia

Yield results are presented from the top-performing varieties within each NVT location in the region for the past five seasons. Results are presented (as a percentage) for each variety relative to the mean trial yield for the location within each year. Varieties are listed in descending order of average yield over the period.

The Long Term Yield Reporter provides additional information on varieties not listed and can be viewed as a table or chart with error bars. Rainfall is provided for January to March (J–M) and April to October (A–O) and, where relevant, irrigation from April to October.

Table 1: Mingenew desi chickpea.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.90	1.55	1.77	1.58	
CBA Captain[Φ]	111	115	107	108	Compromised trial
PBA Striker[Φ]	109	109	105	109	
PBA Slasher[Φ]	104	102	101	106	
PBA Maiden[Φ]	106	102	100	100	
Neelam[Φ]	100	101	101	99	
Genesis™ 836	93	92	96	92	
PBA Seamer[Φ]				84	
Genesis™ 090	73	79	92	73	
Sowing date	**7 Jun**	**15 May**	**27 May**	**13 Jun**	**31 May**
Rainfall J–M (mm)	**12**	**104**	**58**	**69**	**26**
Rainfall A–O (mm)	**370**	**203**	**333**	**314**	**125**

Special thanks to 2023 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 2: Mullewa desi chickpea.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.81	1.20	1.77		0.44
CBA Captain[Φ]	105	114	103	Trial results below standard	103
PBA Striker[Φ]	102	104	105		98
PBA Slasher[Φ]	103	100	103		92
Neelam[Φ]	98	99	101		102
PBA Maiden[Φ]	99	99	97		113
Genesis™ 836	96	94	97		104
Genesis™ 090	77	80	97		112
Sowing date	**7 Jun**	**15 May**	**26 May**	**18 May**	**31 May**
Rainfall J–M (mm)	**3**	**44**	**87**	**58**	**94**
Rainfall A–O (mm)	**152**	**220**	**270**	**264**	**107**

Special thanks to 2023 trial cooperator, Spring Park Farms.
Learn more via the NVT Long Term Yield Reporter

Refer to the latest *Crop Sowing Guide* for further information at nvt.grdc.com.au/resources/crop-sowing-guides

Chickpea variety disease ratings – Western Australia

The following table contains varietal ratings for the predominant diseases of chickpea in Western Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and tolerance ratings.

Table 3: Chickpea disease guide for Western Australia.

Variety	Ascochyta blight (pathogen group 2 – north)	2022-23 Phytophthora root rot	RLN resistance (*Pratylenchus neglectus*)	RLN tolerance (*Pratylenchus neglectus*)
DESI				
CBA Captain(ϕ)	MS	S	MR	MT
Genesis™ 836	S		MR	MII
Kyabra(ϕ)	VS	VS	MRMS	MT
Neelam(ϕ)	S		MRMS	MI
PBA Boundary(ϕ)	S	VS	RMR	MI
PBA Drummond(ϕ)	VS	VS	MR	TMT
PBA HatTrick(ϕ)	S	S	MRMS	MT
PBA Maiden(ϕ)	S		MRMS	MI
PBA Pistol(ϕ)	VS		RMR	T
PBA Seamer(ϕ)	MS	S	MRMS	MI
PBA Slasher(ϕ)	S		MRMS	MI
PBA Striker(ϕ)	S		MRMS	MI
KABULI				
Almaz(ϕ)	MS		MRMS	MII
Genesis™ 090	MS		MRMS	IVI
Genesis™ Kalkee	S		MRMS	VI
PBA Magnus(ϕ)	MS		MR	MII
PBA Monarch(ϕ)	MS		MRMS	I
PBA Royal(ϕ)	MS		MR	VI

Learn more via the NVT Disease Ratings.
R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible,
T = tolerant, MT = moderately tolerant, MI = moderately intolerant, I = intolerant, VI = very intolerant.

FIELD PEA

New field pea varieties

The following information is for field pea varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	End point royalty* ($)	Comments supplied by breeding company[1]
APB Bondi(Φ)	Agriculture Victoria	TBC	APB Bondi(Φ) (tested as OZP1903) is a Kaspa-type pea with mid-flowering and mid-maturity. APB Bondi(Φ) combines a number of traits in a semi-leafless and semi-dwarf background. It is rated resistant to moderately resistant to downy mildew; resistant to powdery mildew, pea seed-borne mosaic virus and bean leaf roll virus; tolerant to boron toxicity and moderately tolerant to salinity. It has a high yield potential and wide adaptation. Seed is marketable as Kaspa pea.

* EPR amount is ex-GST, (Φ) denotes Plant Breeder's Rights apply. [1] All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

Refer to the latest *Crop Sowing Guide* for further information at nvt.grdc.com.au/resources/crop-sowing-guides

Field pea variety yield performance – Geraldton

Yield results are presented from the top-performing varieties within each NVT location in the region for the past five seasons. Results are presented (as a percentage) for each variety relative to the mean trial yield for the location within each year. Varieties are listed in descending order of average yield over the period.

The Long Term Yield Reporter provides additional information on varieties not listed and can be viewed as a table or chart with error bars. Rainfall is provided for January to March (J–M) and April to October (A–O) and, where relevant, irrigation from April to October.

Table 1: Mingenew field pea.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	**1.16**	**3.12**	**2.16**	**2.88**	**0.50**
PBA Butler[Ф]	104	103	106	107	107
APB Bondi[Ф]		108	105	104	106
PBA Taylor[Ф]	106	104	103	104	109
Kaspa	100	101	100	102	102
PBA Gunyah[Ф]	109	98	99	101	106
PBA Wharton[Ф]	107	101	98	97	106
PBA Oura[Ф]	111	94	100	100	103
PBA Twilight[Ф]	106	98	95	93	101
GIA Ourstar[Ф]*		91	88	88	87
GIA Kastar[Ф]*		102	82	80	80
Sowing date	**7 Jun**	**15 May**	**27 May**	**13 Jun**	**31 May**
Rainfall J–M (mm)	**12**	**104**	**58**	**69**	**26**
Rainfall A–O (mm)	**370**	**203**	**333**	**314**	**125**

Special thanks to 2023 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Field pea variety disease ratings – Western Australia

The following table contains varietal ratings for the predominant diseases of field pea in in Western Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and tolerance ratings.

Table 2: Field pea disease guide for Western Australia.

Variety	Bacterial blight	Downy mildew	Powdery mildew	RLN resistance (*Pratylenchus neglectus*)	RLN resistance (*Pratylenchus thornei*)
APB Bondi[Ф]	S	RMR (S)	RMR	RMR	MSS
GIA Kastar[Ф]	S	S	RMR	MR	MS
GIA Ourstar[Ф]	S (P)	S	S	MRMS	MS
Kaspa	S	S	S	RMR	MRMS
PBA Butler[Ф]	MS	S	S	RMR	MRMS
PBA Gunyah[Ф]	S	S	S	RMR	MRMS
PBA Noosa[Ф]	S	MS	S	RMR	MRMS
PBA Oura[Ф]	MS	S	S	MR	MRMS
PBA Pearl	MS	S	S	MR	MRMS
PBA Percy	MRMS	S	S	RMR	RMR
PBA Taylor[Ф]	S	S	S	RMR	MRMS
PBA Twilight[Ф]	S	S	S	MR	MRMS
PBA Wharton[Ф]	S	S	RMR	MR	MRMS
Sturt	MS	S	S	MR	MR

Learn more via the NVT Disease Ratings.
R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, (P) = provisional rating, ( ) show outlier.

LENTIL

New lentil varieties

The following information is for lentil varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	End point royalty* ($)	Comments supplied by breeding company[1]
ALB Terrier(Φ)	Agriculture Victoria	TBC	ALB Terrier(Φ) is an imidazolinone herbicide tolerant, small market class red lentil with mid-flowering and maturity characteristics. It is rated RMR to pathotype two of Asochyta, which is the best in its class. It is broadly adapted to various lentil growing regions of Australia.

* EPR amount is ex-GST, (Φ) denotes Plant Breeder's Rights apply. [1] All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

Refer to the latest *Crop Sowing Guide* for further information at nvt.grdc.com.au/resources/crop-sowing-guides

Lentil variety yield performance – Geraldton

Yield results are presented from the top-performing varieties within each NVT location in the region for the past five seasons. Results are presented (as a percentage) for each variety relative to the mean trial yield for the location within each year. Varieties are listed in descending order of average yield over the period.

The Long Term Yield Reporter provides additional information on varieties not listed and can be viewed as a table or chart with error bars. Rainfall is provided for January to March (J–M) and April to October (A–O) and, where relevant, irrigation from April to October.

Table 1: Mingenew lentil.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		**1.69**	**1.57**		
GIA Thunder(Ф)*	No trial	128	117	Compromised trial	Compromised trial
GIA Lightning(Ф)*		118	109		
PBA Jumbo2(Ф)		113	108		
ALB Terrier(Ф)			109		
PBA HighlandXT(Ф)*		109	101		
PBA Kelpie XT(Ф)*		104	102		
PBA Bolt(Ф)		101	96		
PBA Hurricane XT(Ф)*		92	99		
PBA Hallmark XT(Ф)*		91	93		
GIA Leader(Ф)*		86	98		
Sowing date		**7 Jun**	**27 May**	**13 Jun**	**31 May**
Rainfall J–M (mm)		**104**	**58**	**69**	**26**
Rainfall A–O (mm)		**203**	**333**	**314**	**125**

Special thanks to 2023 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Lentil variety disease ratings – Western Australia

The following table contains varietal ratings for the predominant diseases of lentil in Western Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and tolerance ratings.

Table 2: Lentil disease guide for Western Australia.

Variety	Ascochyta blight (Pathotype 2 PBA Hurricane XT(Ф) virulent)	Ascochyta blight (Pathotype 1 Nipper(Ф) virulent)	Botrytis grey mould	RLN resistance (*Pratylenchus neglectus*)	RLN resistance (*Pratylenchus thornei*)
ALB Terrier(Ф)	MR (P)	R	MRMS (P)	MR	MR
GIA Leader(Ф)	MR (P)	MR (P)	MRMS (P)	MRMS (P)	MR (P)
GIA Lightning(Ф)	MRMS (P)	R (P)	MS (P)	MRMS (P)	MR (P)
GIA Metro(Ф)	RMR (P)	MR (P)	MRMS (P)	MR (P)	MRMS (P)
GIA Sire(Ф)	MRMS (P)	R (P)	MS (P)	MRMS (P)	MRMS (P)
GIA Thunder(Ф)	MRMS (P)	R (P)	MRMS (P)	MR (P)	MR (P)
Nipper(Ф)	MR	MRMS	MRMS	RMR	MR
PBA Ace(Ф)	MR	R	MS	MR	MRMS
PBA Bolt(Ф)	MRMS	MR	S	MR	MR
PBA Hallmark XT(Ф)	MRMS	RMR	MRMS	MR	MRMS
PBA HighlandXT(Ф)	MR (P)	MR	MS	MR	MRMS
PBA Hurricane XT(Ф)	MRMS (P)	RMR	MS	MRMS	MRMS
PBA Jumbo2(Ф)	RMR	R	MR (P)	MR	MRMS
PBA KelpieXT(Ф)	MRMS	MRMS	MS	MRMS	MRMS

Learn more via the NVT Disease Ratings.
R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, (P) = provisional rating.

LUPIN

New lupin varieties

The following information is for lupin varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	End point royalty* ($)	Comments supplied by breeding company[1]
Gidgee(Φ)	Australian Grain Technologies	4.50	A very high and stable yielding alternative to PBA Jurien(Φ) and Mandelup(Φ). Widely adapted but particularly well adapted to the northern and central wheatbelt of WA. Metribuzin tolerant. Reduced risk of seed splitting compared with PBA Jurien(Φ). Moderately resistant to stem Phomopsis. Good CMV resistance. Slightly quicker maturity relative to PBA Jurien(Φ), slightly slower than Mandelup(Φ).
Rosemont(Φ)	Australian Grain Technologies	4.50	A very high yielding alternative to PBA Jurien(Φ), Coyote(Φ) and Mandelup(Φ). Best performance in softer-finishing situations and southern WA environments. Unique white flower and faintly speckled seed. Metribuzin tolerant. Excellent early vigour. Reduced risk of seed splitting compared with PBA Jurien(Φ). Taller plant height, may improve harvestability. Moderately resistant to stem Phomopsis. Good CMV resistance. Slightly slower maturity relative to PBA Jurien(Φ), slightly quicker than Coyote(Φ).

* EPR amount is ex-GST, (Φ) denotes Plant Breeder's Rights apply. [1] All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

Refer to the latest *Crop Sowing Guide* for further information at nvt.grdc.com.au/resources/crop-sowing-guides

Lupin variety yield performance – Geraldton

Yield results are presented from the top-performing varieties within each NVT location in the region for the past five seasons. Results are presented (as a percentage) for each variety relative to the mean trial yield for the location within each year. Varieties are listed in descending order of average yield over the period.

The Long Term Yield Reporter provides additional information on varieties not listed and can be viewed as a table or chart with error bars. Rainfall is provided for January to March (J–M) and April to October (A–O) and, where relevant, irrigation from April to October.

Table 1: Eneabba narrow-leaf lupin.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.81	1.45	3.49	3.55	1.93
Rosemont(Φ)				113	106
Coyote(Φ)	131	143	105	105	108
Gidgee(Φ)			109	114	101
Lawler(Φ)		122	106	108	104
PBA Jurien(Φ)	111	118		106	104
PBA Bateman(Φ)	115	129	102	97	106
Mandelup(Φ)	103	104	103	103	101
PBA Gunyidi(Φ)	106	117	99	94	104
PBA Barlock(Φ)	97	103	103	96	102
Coromup(Φ)	104	98	88	98	98
Sowing date	**7 Jun**	**6 May**	**18 May**	**2 May**	**24 May**
Rainfall J–M (mm)	**12**	**114**	**79**	**70**	**18**
Rainfall A–O (mm)	**273**	**257**	**477**	**429**	**212**

Special thanks to 2023 trial cooperator, Jim Heal.
Learn more via the NVT Long Term Yield Reporter

Table 2: Mingenew narrow-leaf lupin.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.29	1.25	3.52	2.73	1.98
Coyote(Φ)	181	128	107	113	108
Rosemont(Φ)				118	107
PBA Bateman(Φ)	152	122	106	104	105
Lawler(Φ)		112	104	111	105
PBA Jurien(Φ)	99	110		110	104
Gidgee(Φ)			102	113	103
PBA Gunyidi(Φ)	136	115	104	99	102
Mandelup(Φ)	99	102	102	103	101
PBA Barlock(Φ)	90	104	104	99	101
Coromup(Φ)	142	100	93	96	98
Sowing date	**7 Jun**	**12 Jun**	**18 May**	**5 May**	**6 May**
Rainfall J–M (mm)	**12**	**87**	**67**	**50**	**6**
Rainfall A–O (mm)	**370**	**302**	**419**	**362**	**219**

Special thanks to 2023 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 3: Mullewa narrow-leaf lupin.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.72		2.83	2.93	
Rosemont(Φ)		Trial failed		111	Trial failed
Coyote(Φ)	108		109	109	
Lawler(Φ)			104	107	
Gidgee(Φ)			100	109	
PBA Jurien(Φ)	105			104	
PBA Bateman(Φ)	96		107	102	
Mandelup(Φ)	103		101	102	
Coromup(Φ)	103		100	101	
PBA Gunyidi(Φ)	92		105	98	
PBA Leeman(Φ)	107		97	102	
Sowing date	**7 Jun**	**5 May**	**14 May**	**10 May**	**11 May**
Rainfall J–M (mm)	**3**	**44**	**87**	**58**	**94**
Rainfall A–O (mm)	**152**	**220**	**270**	**264**	**107**

Special thanks to 2023 trial cooperator, Spring Park Farms.
Learn more via the NVT Long Term Yield Reporter

Table 4: Yuna narrow-leaf lupin.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.97		2.38	2.82	
Rosemont(Φ)		Trial failed		107	Trial failed
PBA Jurien(Φ)	114			106	
Gidgee(Φ)			111	104	
Lawler(Φ)			108	104	
Coyote(Φ)	110		106	104	
PBA Bateman(Φ)	105		103	103	
Mandelup(Φ)	104		104	102	
PBA Barlock(Φ)	103		103	102	
PBA Gunyidi(Φ)	99		98	101	
PBA Leeman(Φ)	89		89	94	
Sowing date	**7 Jun**	**6 May**	**14 May**	**28 Apr**	**11 May**
Rainfall J–M (mm)	**7**	**37**	**71**	**32**	**22**
Rainfall A–O (mm)	**195**	**174**	**340**	**270**	**95**

Special thanks to 2023 trial cooperator, Helenore Farms.
Learn more via the NVT Long Term Yield Reporter

Lupin variety disease ratings – Western Australia

The following table contains varietal ratings for the predominant diseases of lupin in Western Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and tolerance ratings.

Table 5: Lupin disease guide for Western Australia.

Variety	Anthracnose resistance	Cucumber mosaic virus (CMV)	Phomopsis pod infection	Phomopsis stem infection	Sclerotinia stem rot
Coromup[Φ]	MR	MR	MS	MR	S (P)
Coyote[Φ]	MRMS	MRMS	MRMS	S	S (P)
Gidgee[Φ]	RMR	MRMS	S (P)	MR	S (P)
Jenabillup[Φ]	MS	MRMS	MR	MS	S (P)
Lawler[Φ]	MR	MRMS	MS	MR	S (P)
Mandelup[Φ]	MRMS	MRMS	S	MR	S (P)
PBA Barlock[Φ]	RMR	MRMS	MR	MR	S (P)
PBA Bateman[Φ]	MRMS	MR	MS	RMR	S (P)
PBA Gunyidi[Φ]	MRMS	MRMS	MRMS	RMR	S (P)
PBA Jurien[Φ]	RMR	MS	MRMS	RMR	S (P)
PBA Leeman[Φ]	MRMS	MRMS	MRMS	MR	S (P)
Rosemont[Φ]	MRMS	MR	MRMS (P)	MR	S (P)
Wonga	MR	MR	MR	MR	S (P)

Learn more via the NVT Disease Ratings.
R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, (P) = provisional rating.

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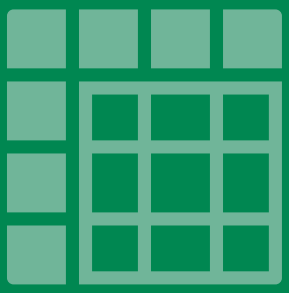

NVT Disease Ratings

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