NVT
HARVEST REPORT

GRDC NATIONAL VARIETY TRIALS™

REVISED MAY 2024

Esperance
Western Region

nvt.grdc.com.au

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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 - Esperance provides information to support growers and advisers with decisions on variety selection for **Esperance**. 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 **Esperance** 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 - Esperance***, 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 **Esperance**.

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.

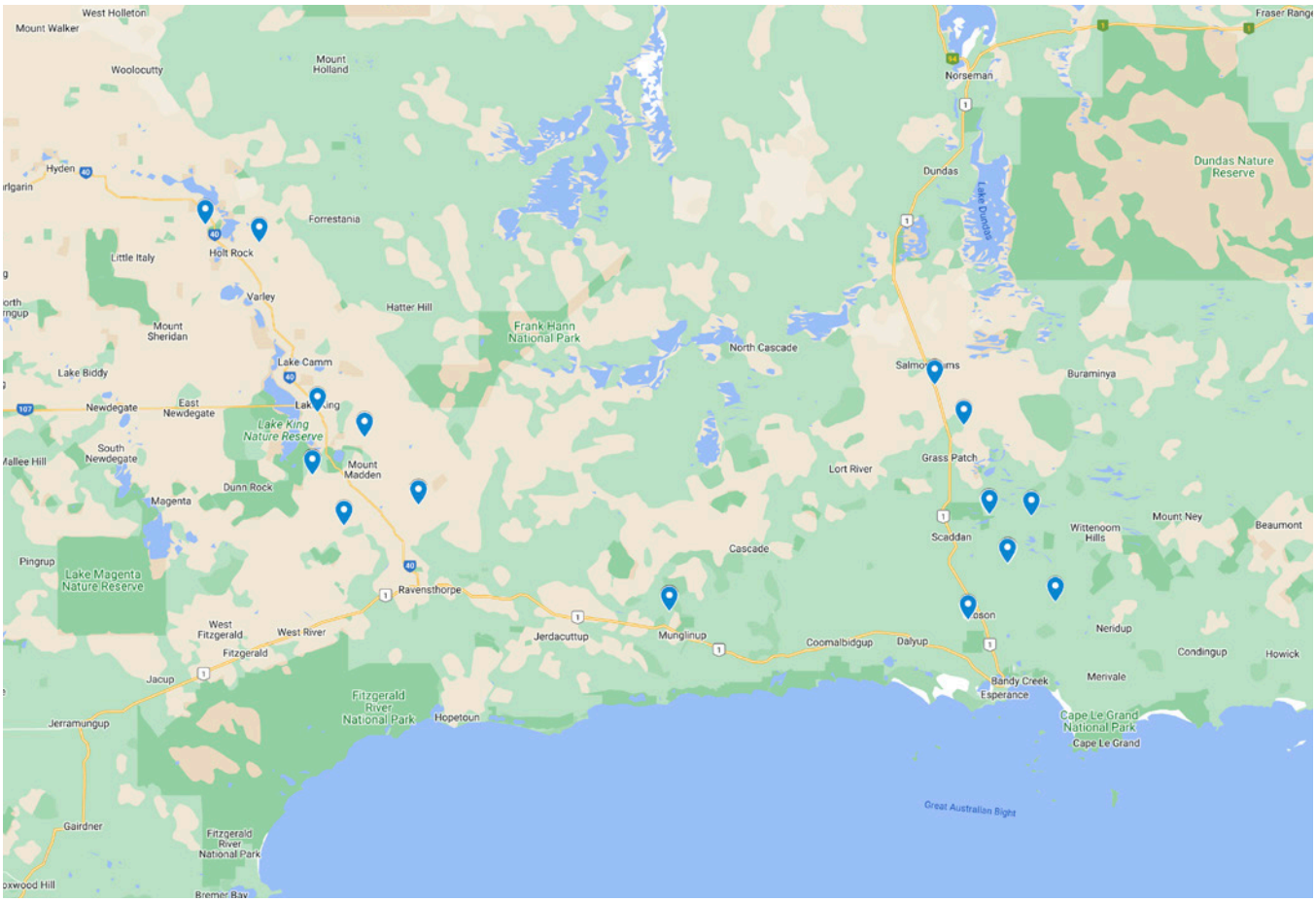
Trials listed as compromised are not suitable for making variety decisions. Results can be found in the Quarantined trial reports.

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

NVT SITE LOCATIONS – Esperance

Figure 1: Locality of NVT trial sites in Esperance 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(Þ) CL Plus	InterGrain	TBC	3.90	Dozer(Þ) CL Plus is a quick-mid maturing APW Clearfield® Plus wheat. Dozer(Þ) 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(Þ) CL Plus has strong lodging resistance, moderate early vigour, medium plant height and medium coleoptile length. Dozer(Þ) CL Plus offers good grain size and test weight. Proactive disease management of stripe rust and CCN in South Australia is recommended with Dozer(Þ) CL Plus to maximise yield and quality potential.
Firefly(Þ)	InterGrain	ANW	4.00	Firefly(Þ) is a high-yielding, mid-slow maturing ANW wheat, setting a new noodle yield benchmark for WA. Firefly(Þ) is suited to late April through to early May sowings, being similar in maturity to Zen(Þ) and Calingiri. Firefly(Þ) has an effective disease resistance profile, including good stripe rust and yellow spot resistance. Firefly(Þ) offers good physical grain characteristics, including good grain size.
Genie(Þ)	InterGrain	AH	3.50	Genie(Þ) is a mid-slow maturing wheat and is an excellent alternative to RockStar(Þ) 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(Þ). Genie(Þ), with its slightly later maturity than RockStar(Þ) and long coleoptile, enables earlier sowing opportunities to be maximised. Genie(Þ) 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(Þ) has good sprouting tolerance. Genie(Þ) 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(Þ)	LongReach Plant Breeders	FEED	3.50	Mid-maturity AH wheat that has consistently outperformed Scepter(Þ) with an improved shorter canopy and better lodging tolerance. Improved powdery mildew (MS) and stripe rust resistance (MS) over Scepter(Þ), adding some minor genes for both diseases. AH quality in SA and Victoria and commercialised by Pacific Seeds.
Thumper(Þ)	InterGrain	AH	3.50	Thumper(Þ) 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(Þ) has a robust disease resistance package with good yellow spot resistance, useful for wheat-on-wheat rotations, and an excellent stripe rust resistance. Thumper(Þ) offers good grain size, reducing screenings risk, and has adequate test weight. Thumper(Þ) is currently classified as APW in the western zone with an AH classification expected soon.
Tomahawk CL Plus(Þ)	Australian Grain Technologies	FEED	4.15	Scepter(Þ)-type Clearfield® variety with increased yield over Scepter(Þ). The highest-yielding Clearfield® wheat variety in Western Australia, South Australia and Victoria. Tolerant to Clearfield® Intervix® herbicide. Similar disease resistance profile to Scepter(Þ). Similar grain size and test weight as Scepter(Þ). Mid-season maturity, similar to Scepter(Þ). APW quality classification in SA, Victoria, southern NSW, classification for WA pending.

* EPR amount is ex-GST, (Þ) 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 – Esperance

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: Gibson main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	4.33	4.78	5.53	5.07	2.43
Tomahawk CL Plus(ↀ)*				108	116
Vixen(ↀ)	107	117	105	103	121
Thumper(ↀ)					105
Brumby(ↀ)			108	107	105
RockStar(ↀ)	113	106	111	108	98
Scepter(ↀ)	108	111	107	105	110
Devil(ↀ)	110	109	107	107	106
LRPB Matador(ↀ)				106	106
LRPB Havoc(ↀ)	103	115	106	99	121
Ninja(ↀ)	107	107	108	105	104
Sting(ↀ)	104	112	102	103	115
Calibre(ↀ)		107	102	106	106
Ballista(ↀ)	104		103	106	107
Zen(ↀ)	105	106	107	100	105
Kinsei(ↀ)	108	99	106	106	92
Sowing date	**8 May**	**12 May**	**14 May**	**16 May**	**21 May**
Rainfall J–M (mm)	**20**	**82**	**51**	**44**	**44**
Rainfall A–O (mm)	**352**	**346**	**510**	**521**	**451**

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

Table 2: Mt. Madden main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.18	2.59	3.27	2.46	
Tomahawk CL Plus(ↀ)*				118	Compromised trial
Vixen(ↀ)	136	115	114	114	
Calibre(ↀ)		110	113	114	
Sting(ↀ)	133	111	111	112	
LRPB Avenger(ↀ)	140	110		108	
Devil(ↀ)	115	110	111	112	
Brumby(ↀ)			111	112	
Scepter(ↀ)	114	111	110	111	
LRPB Anvil(ↀ) CL Plus*		108	107	105	
Ballista(ↀ)	117		108	109	
LRPB Havoc(ↀ)	112	111	105	106	
RockStar(ↀ)	92	109	108	110	
Razor CL Plus(ↀ)*	121	105	104	104	
Mace(ↀ)	118	103	103	102	
Catapult(ↀ)	104	101	105	104	
Sowing date	**28 May**	**13 May**	**20 May**	**22 May**	**3 Jun**
Rainfall J–M (mm)	**14**	**76**	**89**	**37**	**20**
Rainfall A–O (mm)	**142**	**196**	**338**	**354**	**181**

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

Table 3: Munglinup main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		2.69	3.05	3.42	2.30
Tomahawk CL Plus(ↀ)*	Compromised trial			113	110
RockStar(ↀ)		117	112	115	102
Denison(ↀ)		118	104	119	97
Brumby(ↀ)			112	111	105
Devil(ↀ)		110	111	109	106
LRPB Matador(ↀ)				109	105
Thumper(ↀ)					104
Calibre(ↀ)		106	110	107	109
Scepter(ↀ)		107	110	107	106
Kinsei(ↀ)		114	105	110	98
Catapult(ↀ)		111	103	111	101
Valiant(ↀ) CL Plus*		115	99	115	94
Ninja(ↀ)		109	107	106	101
Vixen(ↀ)		99	111	103	111
Sting(ↀ)		99	109	101	109
Sowing date	**9 May**	**7 May**	**19 May**	**17 May**	**24 May**
Rainfall J–M (mm)	**21**	**83**	**68**	**50**	**31**
Rainfall A–O (mm)	**292**	**314**	**431**	**584**	**357**

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

Table 4: Salmon Gums main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		0.94		2.76	1.37
Vixen(ↀ)	Compromised trial	156	Compromised trial	111	121
Tomahawk CL Plus(ↀ)*				113	121
LRPB Avenger(ↀ)		155		108	120
LRPB Anvil(ↀ) CL Plus*		158		107	118
Sting(ↀ)		143		109	118
Calibre(ↀ)		129		109	119
LRPB Havoc(ↀ)		141		106	108
Scepter(ↀ)		123		108	112
Razor CL Plus(ↀ)*		135		104	109
Devil(ↀ)		116		108	113
Brumby(ↀ)				108	112
LRPB Matador(ↀ)					111
Mace(ↀ)		125		103	108
Ballista(ↀ)				105	110
Thumper(ↀ)					109
Sowing date	**30 May**	**20 May**	**25 May**	**20 May**	**5 Jun**
Rainfall J–M (mm)	**28**	**92**	**99**	**38**	**40**
Rainfall A–O (mm)	**159**	**158**	**269**	**299**	**168**

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

Table 5: Scaddan main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		**2.02**	**3.89**	**4.50**	**3.35**
Tomahawk CL Plus(ф)*	Trial failed			112	115
Calibre(ф)		119	110	107	113
Vixen(ф)		124	108	104	113
Brumby(ф)			111	110	109
Devil(ф)		112	110	109	110
RockStar(ф)		103	111	113	106
Thumper(ф)					107
LRPB Matador(ф)					108
Scepter(ф)		113	108	107	109
Sting(ф)		120	107	103	111
Firefly(ф)			108		105
LRPB Avenger(ф)		122		99	112
Ballista(ф)			107	104	106
Catapult(ф)		102	105	107	105
Ninja(ф)		101	106	107	102
Sowing date	**10 May**	**3 Jun**	**18 May**	**4 May**	**22 May**
Rainfall J–M (mm)	**16**	**48**	**51**	**44**	**36**
Rainfall A–O (mm)	**278**	**249**	**510**	**521**	**225**

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

Table 6: Gibson early season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	**3.31**	**4.28**		**2.81**	
Denison(ф)		118	Trial failed	113	No trial
Valiant(ф) CL Plus*				111	
RockStar(ф)	113	113		114	
Catapult(ф)	122	108		110	
Kinsei(ф)	117	111		110	
Mowhawk(ф)				108	
Coota(ф)		104		105	
Cutlass(ф)	107	107		106	
Severn(ф)				103	
Stockade(ф)				107	
Longsword(ф)	103	105		96	
EG Titanium	98	96		97	
LRPB Trojan(ф)	107	87		98	
Magenta(ф)	98	91		98	
Yitpi	99	92		95	
Sowing date	**17 Apr**	**23 Apr**	**22 Apr**	**29 Apr**	
Rainfall J–M (mm)	**20**	**82**	**51**	**44**	
Rainfall A–O (mm)	**352**	**346**	**510**	**521**	

No 2023 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Wheat variety quality – Esperance

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 Esperance 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 five NVT sites in Esperance in 2022.

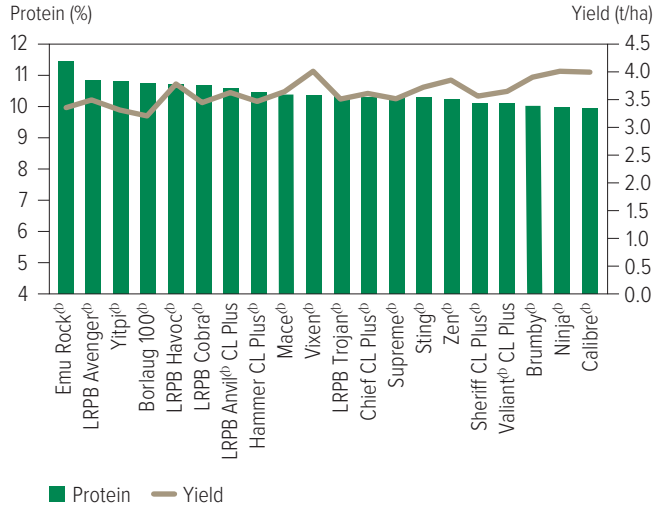


Figure 2: Protein (%) and yield (t/ha) comparisons for main season wheat varieties from four NVT sites in Esperance in 2023.

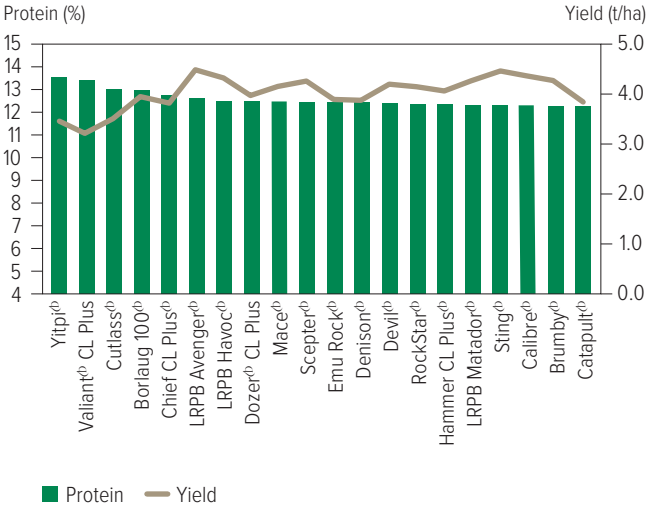


Figure 3: Protein (%) and yield (t/ha) comparisons for early season wheat varieties from one NVT site in Esperance in 2022.

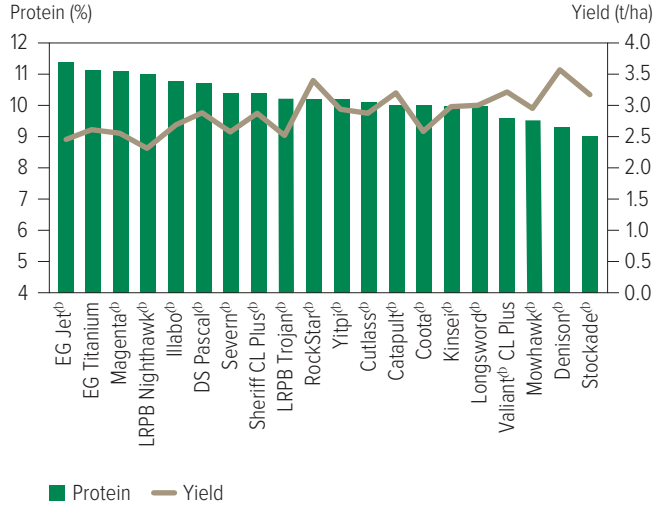
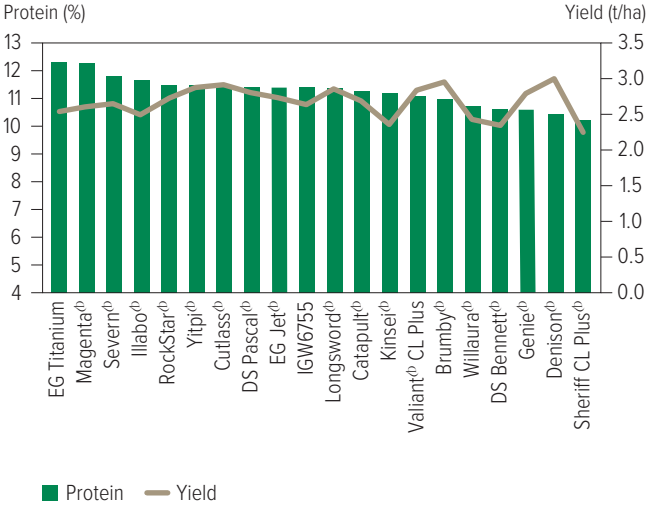


Figure 4: Protein (%) and yield (t/ha) comparisons for early season wheat varieties from one NVT site in Esperance in 2023.



Test weight comparisons

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

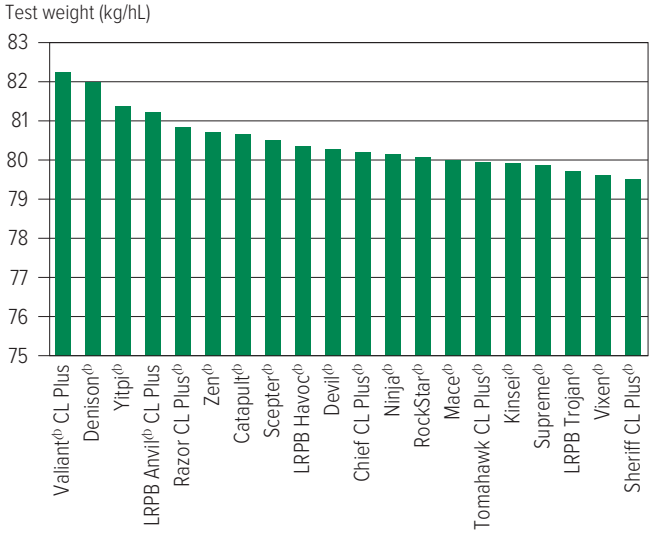


Figure 6: Test weight (kg/hL) comparisons for main season wheat varieties from four NVT sites in Esperance in 2023.

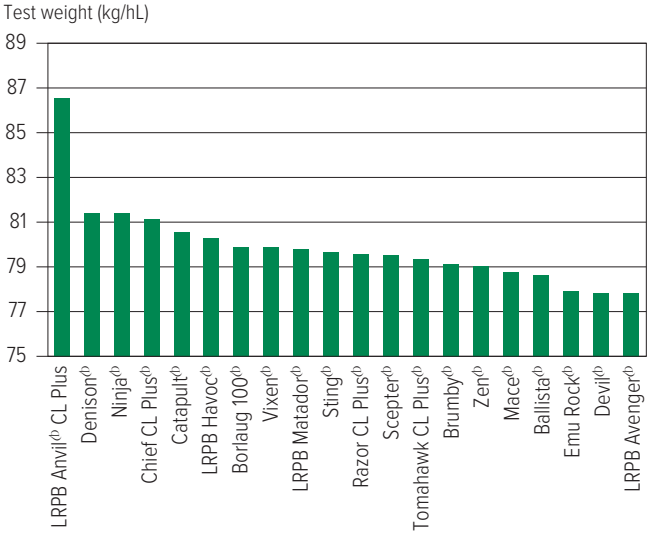


Figure 7: Test weight (kg/hL) comparisons for early season wheat varieties from one NVT site in Esperance in 2022.

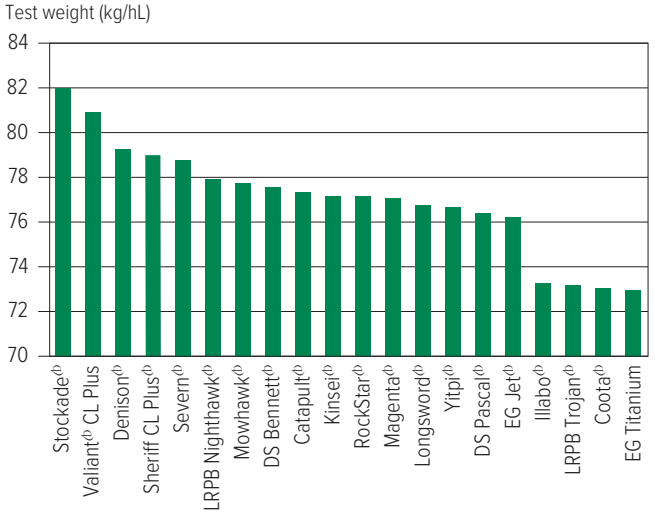
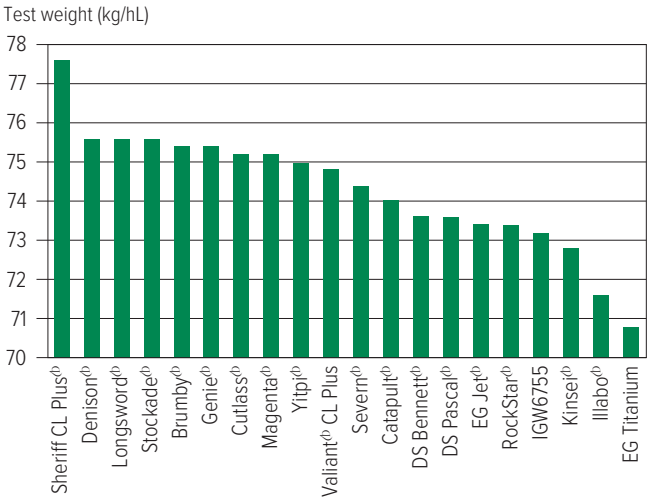


Figure 8: Test weight (kg/hL) comparisons for early season wheat varieties from one NVT site in Esperance in 2023.



Screenings comparisons

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

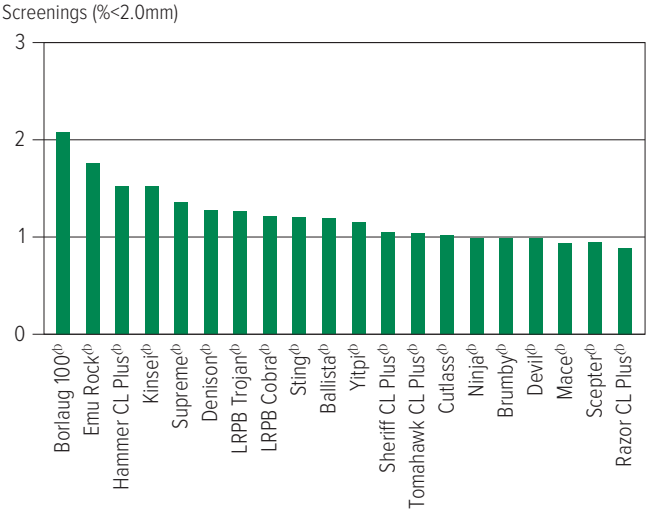


Figure 10: Screenings (<2.0mm) comparisons for main season wheat varieties from four NVT sites in Esperance in 2023.

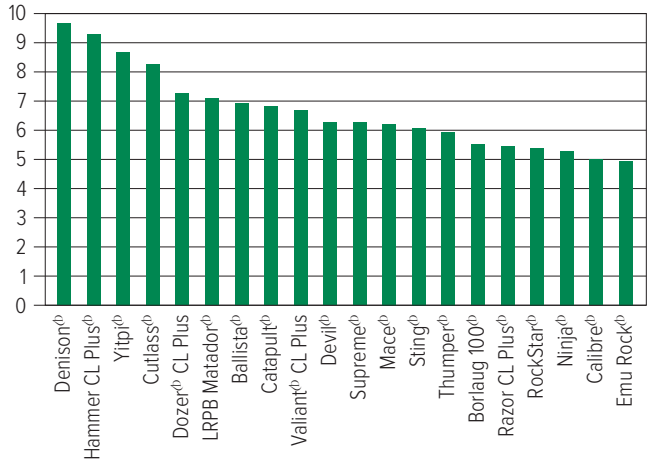


Figure 11: Screenings (<2.0mm) comparisons for early season wheat varieties from one NVT site in Esperance in 2022.

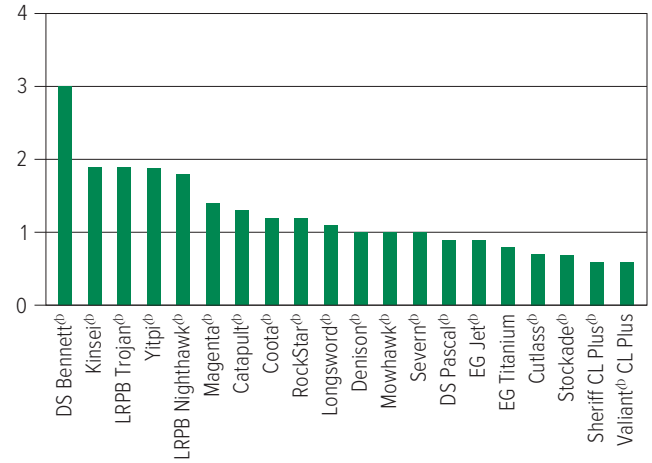
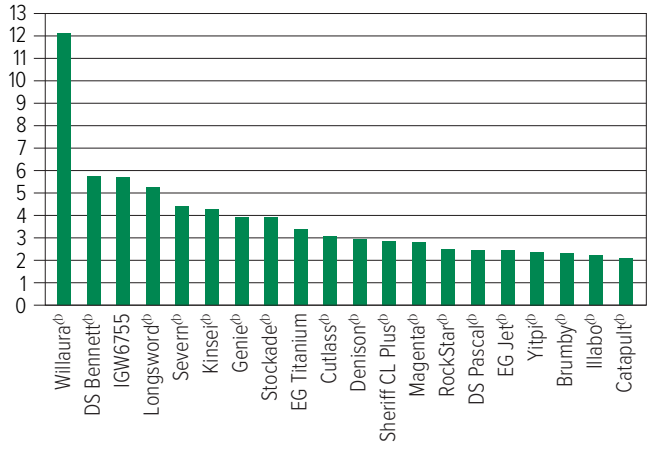


Figure 12: Screenings (<2.0mm) comparisons for early season wheat varieties from one NVT site in Esperance in 2023.



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 7: 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(ϕ)	MS	MS	MRMS	MR	RMR	S	S	SVS	S		MRMS	S
Boree(ϕ)	MRMS	MS	MRMS	MR	MR	S	S	S	S		MSS	S
Borlaug 100(ϕ)	MRMS	MRMS	MRMS	MR	RMR	MR	S	MS	S		MS	MSS
Brumby(ϕ)	MRMS	MRMS	MS	MR	RMR	SVS	R	MSS (P)	MRMS	MS (P)	MRMS	S
Calibre(ϕ)	MRMS	MSS	MSS	MR	RMR	S	MSS	S	S	MRMS (P)	MRMS	S
Catapult(ϕ)	MRMS	MRMS	MS	MR	RMR	S	S	MSS	S	MRMS	R	MSS
Chief CL Plus(ϕ)	MRMS	MS	MRMS	MR	S	MR	S	MSS	MRMS	MRMS	MS	MSS
Coota(ϕ)	MSS	MRMS	MS	RMR	RMR	MR	S	MSS	MR		MR	MSS
Cutlass(ϕ)	MSS	MRMS	MRMS	R	R	RMR	S	MSS	MSS	MS	MR	S
Denison(ϕ)	MRMS	MR	MRMS	MS	MRMS	S	S	MS	S	MRMS (P)	MS	MSS
Devil(ϕ)	MRMS	MRMS	MS	S	MR	SVS	SVS	SVS	MSS	MRMS	MSS	MSS
Dozer(ϕ) CL Plus	MS	MRMS (P)	MSS (P)	MS	MRMS	MSS	MSS (P)	MSS (P)	MRMS		MS (P)	S
DS Bennett(ϕ)	MRMS	MRMS	MR	MS	RMR	SVS	RMR	MR	S		S	VS
DS Pascal(ϕ)	MS	MRMS	MRMS	MSS	RMR	MRMS#	RMR	MS	S		S	S
EG Jet(ϕ)	MRMS	MSS		S	RMR	S	MS	MSS	S		MRMS	S
EG Titanium	MSS	MRMS		MS	RMR	MS	MSS	MSS	MSS		R	MSS
EGA Wedgetail(ϕ)	MSS	MRMS	MRMS	MRMS	MRMS	MSS	MRMS	MRMS	S		S	S
Emu Rock(ϕ)	MS	S	MS	MS	MRMS	SVS	MSS	S	MSS	MS (P)	S	MSS
Firefly(ϕ)	MRMS	MRMS (P)	MSS (P)	S	MS	MSS	MSS (P)	MSS (P)	MS		S (P)	S
Genie(ϕ)	MRMS (P)			MS (P)	MR (P)	S (P)						
Hammer CL Plus(ϕ)	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(ϕ)	MS	MR	MR	MRMS	RMR	S	R	MR	MSS	RMR	MRMS	S
Jillaroo(ϕ)	MS	MS	MS	MS	MR	S	S	MRMS (P)	S		MS	S
Kinsei(ϕ)	MS	MRMS	MRMS	MSS	MRMS	MSS	S	MS	S	S	MSS	MSS
Longsword(ϕ)	MRMS	MRMS	MRMS	MR	RMR	MS	MS	MRMS	MRMS		MRMS	MSS
LRPB Anvil(ϕ) CL Plus	MSS	MSS	MSS	MR	RMR	SVS	MSS	SVS	MSS	S (P)	MS	MSS
LRPB Avenger(ϕ)	MS	MSS	MS	MS	MRMS	S	S	S	MSS	MS (P)	MRMS	S
LRPB Havoc(ϕ)	MRMS	MS	MS	S	MR	S	MS	MRMS	S	MRMS	S	MSS
LRPB Kittyhawk(ϕ)	MRMS	MR (P)		MRMS (S)	RMR	MR	MRMS	MR	S		S	SVS
LRPB Matador(ϕ)	MRMS	MRMS (P)	MSS (P)	MS	RMR	MSS	MS (P)	MSS (P)	S		MS (P)	S
LRPB Nighthawk(ϕ)	MS	MRMS	MRMS	RMR	RMR	MSS	MSS	MR	MSS	MRMS (P)	MS	MSS
LRPB Nyala(ϕ)	MS	MSS	MR	SVS	RMR	S	R	SVS	S		MSS	MSS
LRPB Oryx(ϕ)	MSS	S	MSS	MR	RMR	RMR#	RMR	SVS	MSS	MSS (P)	S	MSS
LRPB Trojan(ϕ)	MSS	MS	MS	MRMS	MR	MR#	S	S	MSS	MS (P)	MS	MS
Mace(ϕ)	MRMS	MS	MS	MRMS	RMR	S	MSS	S	MS	MRMS	MRMS	S
Magenta(ϕ)	MRMS	MRMS	MS	MR	MS	RMR	MRMS	MS	MSS	MSS	S	MSS
Ninja(ϕ)	MRMS	MRMS	MS	S	MS	S	S	MSS	S	S	MS	S
Razor CL Plus(ϕ)	MSS	MS	MS	MRMS	RMR	S	MSS	SVS	S		MR	S

Continued on next page

Table 7: 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 – Esperance

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: Gibson main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	5.30	5.50	6.11	5.71	2.69
Neo(Ф) CL*					101
Combat(Ф)			108	112	98
Cyclops(Ф)		107	107	106	113
Spinnaker(Ф)			105	110	93
RGT Planet(Ф)	110	110	106	108	89
Minotaur(Ф)		109	104	108	102
Zena(Ф) CL*			106	108	87
Rosalind(Ф)	105	104	102	107	104
Fandaga(Ф)				105	92
Laperouse(Ф)	102	102	103	101	110
Titan AX(Ф)*				98	101
Leabrook(Ф)	102	99	104	97	107
Maximus(Ф) CL*	99	99	98	102	115
Buff(Ф)	102	102	101	102	93
Bottler(Ф)	101	104	99	104	88
Sowing date	8 May	12 May	14 May	17 May	21 May
Rainfall J–M (mm)	20	82	51	44	44
Rainfall A–O (mm)	352	346	510	521	451

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

Table 2: Mt. Madden main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.19	3.11	4.23	3.90	
Rosalind(Ф)	143	108	104	108	Compromised trial
Beast(Ф)	116	120	106	103	
Maximus(Ф) CL*	137	121	99	96	
Compass(Ф)	106	112	106	104	
Combat(Ф)			105	112	
Cyclops(Ф)		118	107	100	
La Trobe(Ф)	129	108	101	101	
Leabrook(Ф)	83	111	108	104	
Spartacus CL(Ф)*	135	114	97	94	
Minotaur(Ф)		105	102	103	
Commodus(Ф) CL*		107	101	100	
Laperouse(Ф)	89	114	103	97	
Buff(Ф)	114	91	102	108	
Spinnaker(Ф)				107	
Fathom(Ф)	117	101	96	103	
Sowing date	28 May	13 May	20 May	22 May	3 Jun
Rainfall J–M (mm)	14	76	89	37	20
Rainfall A–O (mm)	160	196	338	354	181

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

Table 3: Munglinup main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.96	2.62		4.38	3.27
Neo(Ф) CL*			Trial failed		107
Combat(Ф)				119	103
Cyclops(Ф)		119		105	113
Minotaur(Ф)		109		109	104
Laperouse(Ф)	107	115		99	109
Maximus(Ф) CL*	106	115		94	113
Beast(Ф)	107	112		95	112
Rosalind(Ф)	104	102		105	107
Leabrook(Ф)	104	107		100	106
Titan AX(Ф)*				104	101
Spinnaker(Ф)				113	98
RGT Planet(Ф)	98	93		113	94
Fandaga(Ф)				109	95
Zena(Ф) CL*				114	92
Spartacus CL(Ф)*	101	106		89	108
Sowing date	9 May	7 May	17 May	17 May	24 May
Rainfall J–M (mm)	21	83	68	50	31
Rainfall A–O (mm)	292	314	431	584	357

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

Table 4: Salmon Gums main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		1.13		3.58	2.03
Beast(Ф)	No trial	152	Compromised trial	112	124
Compass(Ф)		146		105	125
Maximus(Ф) CL*		145		111	105
Leabrook(Ф)		118		106	122
Rosalind(Ф)		135		112	100
Cyclops(Ф)		111		111	115
Combat(Ф)				110	115
Commodus(Ф) CL*		134		102	114
La Trobe(Ф)		135		105	104
Fathom(Ф)		132		100	113
Spartacus CL(Ф)*		138		105	99
Laperouse(Ф)		110		106	112
Titan AX(Ф)*				101	119
Minotaur(Ф)		100		106	102
Buff(Ф)		101		101	96
Sowing date		20 May	25 May	20 May	5 Jun
Rainfall J–M (mm)		92	99	38	40
Rainfall A–O (mm)		158	269	299	168

Special thanks to 2023 trial cooperator, Graham Family – Salmon Gums.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 5: Scaddan main season barley.					
Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		2.09	4.58	4.45	3.33
Beast(ɒ)	Compromised trial	129	112	106	113
Cyclops(ɒ)		120	108	113	112
Combat(ɒ)			110	116	100
Leabrook(ɒ)		115	110	106	111
Laperouse(ɒ)		114	105	109	109
Maximus(ɒ) CL*		125	104	104	109
Compass(ɒ)		119	111	98	111
Titan AX(ɒ)*			108	107	106
Neo(ɒ) CL*					103
Minotaur(ɒ)		109	103	109	101
Rosalind(ɒ)		117	106	100	103
Commodus(ɒ) CL*		111	105	97	106
Fathom(ɒ)		110	104	103	98
Spartacus CL(ɒ)*		114	100	97	105
La Trobe(ɒ)		111	103	95	105
Sowing date	**10 May**	**3 Jun**	**18 May**	**4 May**	**22 May**
Rainfall J–M (mm)	**16**	**48**	**51**	**44**	**36**
Rainfall A–O (mm)	**278**	**250**	**510**	**521**	**225**

Special thanks to 2023 trial cooperator, Taliska Farms.

* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Barley variety quality – Esperance

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 Esperance 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 five NVT sites in Esperance in 2022.

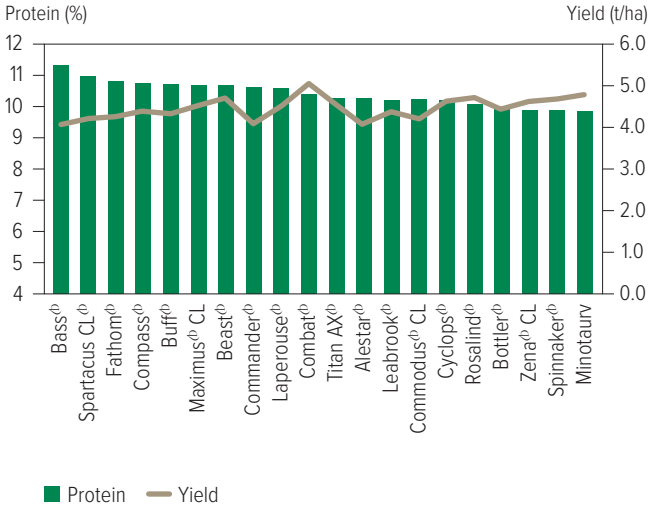
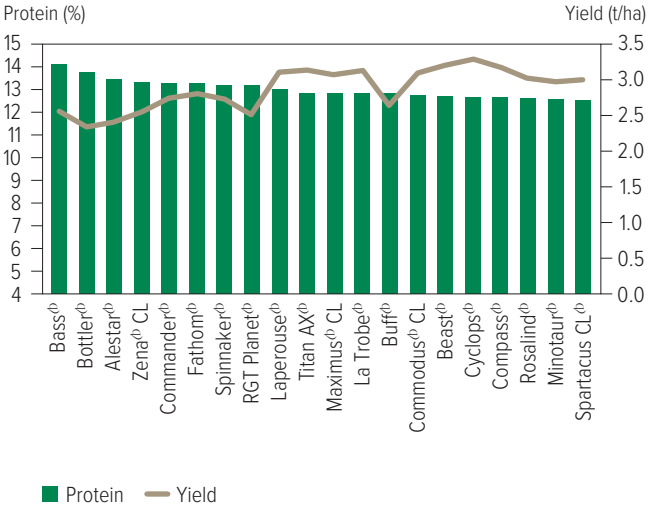


Figure 2: Protein (%) and yield (t/ha) comparisons for main season barley varieties from four NVT sites in Esperance in 2023.



Test weight comparisons

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

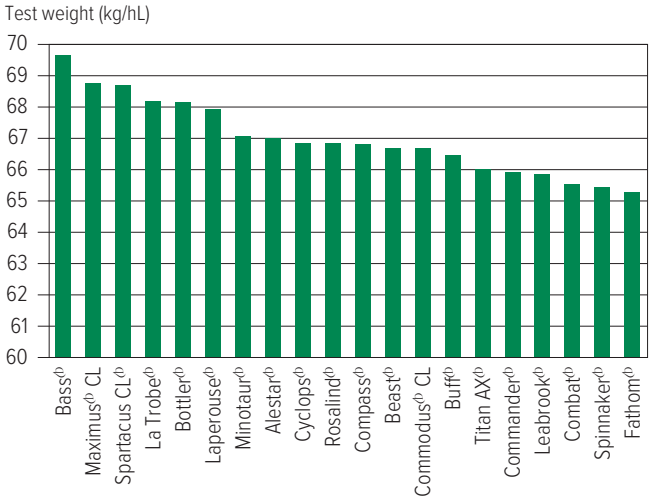
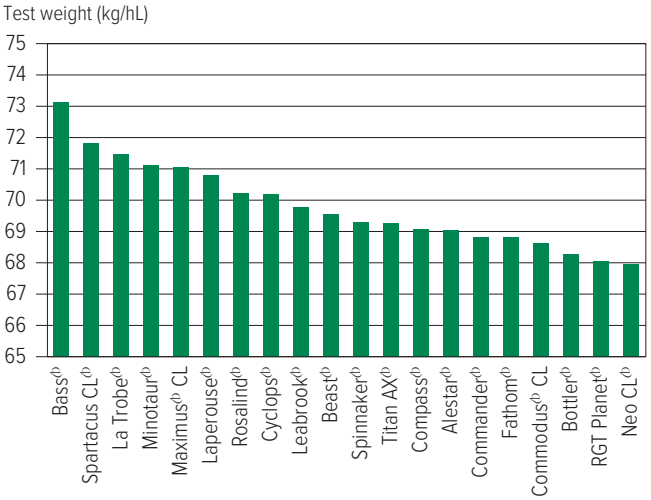


Figure 4: Test weight (kg/hL) comparisons for main season barley varieties from four NVT sites in Esperance in 2023.



Screenings comparisons

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

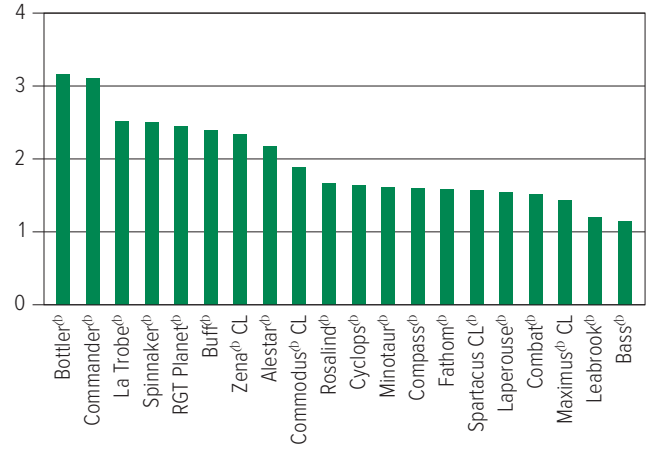
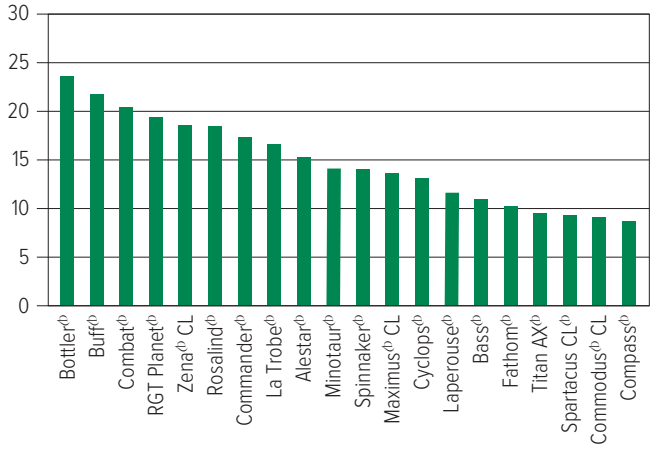


Figure 6: Screenings (<2.5mm) comparisons for main season barley varieties from four NVT sites in Esperance in 2023.



Retention comparisons

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

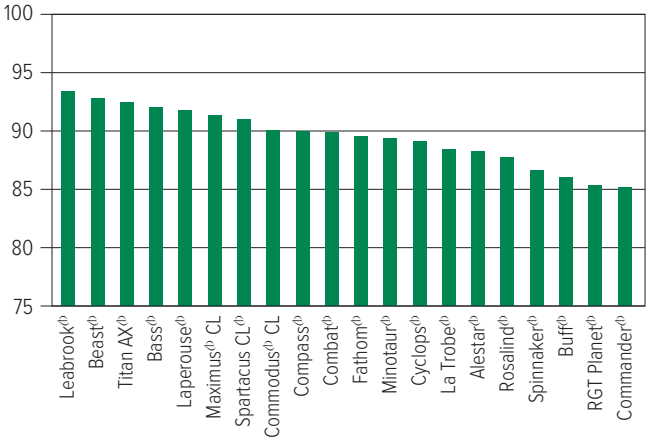
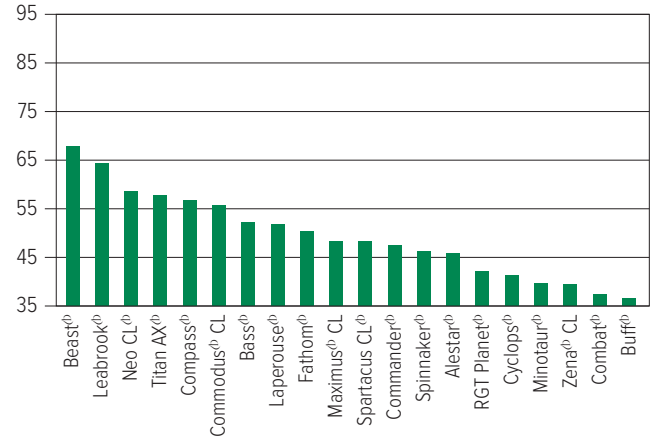


Figure 8: Retention (>2.5mm) comparisons for main season barley varieties from four NVT sites in Esperance in 2023.



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 6: 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.

OAT

New oat varieties

The following information is for oat 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]
Archer(Ф)	InterGrain	3.65	Archer(Ф) is a mid-maturing, single-gene imidazolinone-tolerant oaten hay variety. Sentry® is registered for pre-planting incorporation by seeding (IBS) for hay, forage, seed and grain (domestic feed market only) production for Archer(Ф). Excess grain, seed and screenings produced from single-gene imidazolinone oaten hay varieties Kingbale(Ф) and Archer(Ф) can be used for the domestic oaten grain feed markets and/or consumed on-farm. Grain of these varieties cannot be delivered into bulk handling systems.
Kingbale(Ф)	InterGrain	3.65	Kingbale(Ф) is a mid-slow maturing, single-gene imidazolinone-tolerant oaten hay variety. Sentry® is registered for pre-planting incorporation by seeding (IBS) for hay, forage, seed and grain (domestic feed market only) production for Kingbale(Ф). Excess grain, seed and screenings produced from Kingbale(Ф) and Archer(Ф) can be used for the domestic oaten grain feed markets and/or consumed on-farm. Grain of these varieties cannot be delivered into bulk handling systems.
Kultarr(Ф)	InterGrain	3.00	Kultarr(Ф) is a quick-mid maturing oaten hay suitable for low-medium production areas. Kultarr(Ф) has a tall plant height and a suitable hay quality profile for export hay.
Wallaby(Ф)	InterGrain	3.00	Wallaby(Ф) is a mid-maturing oaten hay well suited to medium and high production areas. Wallaby(Ф) has excellent hay yields.

* EPR amount is ex-GST, (Ф) 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

Oat variety yield performance – Esperance

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: Gibson oat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	**4.45**	**3.62**	**4.85**	**5.41**	**1.93**
Archer(Þ)*					107
Koala(Þ)	110	119	113	116	81
Wandering	112	117	106	107	112
13008-18			108	107	116
Bannister(Þ)	109	115	109	110	99
Kojonup(Þ)	107	122	110	108	86
Williams(Þ)	112	114	101	105	106
Wallaby(Þ)					77
Bilby(Þ)	103	106	103	101	113
Carrolup	94	86	86	88	95
Sowing date	**9 May**	**12 May**	**14 May**	**17 May**	**21 May**
Rainfall J–M (mm)	**20**	**82**	**51**	**44**	**44**
Rainfall A–O (mm)	**352**	**346**	**510**	**521**	**451**

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

Table 2: Holt Rock oat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	**0.79**	**2.91**	**2.02**	**5.48**	**2.49**
13008-18			113	105	115
Wandering	97	110	106	107	110
Bannister(Þ)	84	109	105	110	103
Koala(Þ)	50	107	101	117	94
Bilby(Þ)	122	107	105	98	108
Archer(Þ)*					102
Williams(Þ)	77	102	99	108	104
Kojonup(Þ)	54	96	88	107	85
Wallaby(Þ)					82
Durack(Þ)	133	86	96	84	99
Sowing date	**22 May**	**4 May**	**21 May**	**27 Apr**	**7 May**
Rainfall J–M (mm)	**13**	**75**	**98**	**100**	**13**
Rainfall A–O (mm)	**163**	**155**	**287**	**331**	**185**

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

Oat variety disease ratings – Western Australia

The following tables contain varietal ratings for the predominant diseases of oat 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: Oat disease guide for Western Australia.

Variety	Septoria blotch	Leaf rust (crown rust)	Stem rust	Barley yellow dwarf virus (BYDV)	RLN resistance (*Pratylenchus neglectus*)	CCN
Archer(Φ)	MRMS (P)	MR (P)	S (P)	MSS (P)	SVS	
Bannister(Φ)	MSS	MR	MSS	MS	MS	MR
Bilby(Φ)	S	MRMS	SVS	S	S	S
Brusher(Φ)	MSS	MR	S	S	MSS	MR
Carrolup	MSS	VS	S	SVS	MRMS	VS
Durack(Φ)	S	MRMS	S	S	MS	MRMS
Echidna	SVS	SVS	S	MSS	MSS	MS
Goldie(Φ)	MS	MR	S	MS	MSS	MR
Kingbale(Φ)	MSS	S	MSS	MS	MRMS	R
Koala(Φ)	MSS	MR	MRMS	MSS	MS	R
Kojonup(Φ)	MSS	SVS	MSS	MS	MSS	VS
Kowari(Φ)	S	MR/MRMS	S	S	S	S
Kultarr(Φ)	MS (P)	MR (P)	SVS (P)	MSS (P)	MSS	
Mitika(Φ)	SVS	MRMS	S	SVS	S	VS
Mulgara(Φ)	S/MS	MR	MR	MSS	MSS	R
Tungoo(Φ)	MRMS#	MR	MRMS	MSS	MSS	MR
Wallaby(Φ)	MS (P)	RMR (P)	MS (P)	MS (P)	MRMS	
Wandering	MSS	VS	SVS	MSS	S	VS
Williams(Φ)	MSS	MR	MSS	MSS	MRMS	S
Wintaroo	MS#	S	MR	MS	MSS	R
Yallara(Φ)	MSS	MR	S	S	MRMS	R

Learn more via the NVT Disease Ratings.
R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible,
(P) = provisional rating, - hyphen indicates a range, / indicates pathotype differences, # warning, may be more susceptible to alternate pathotypes.

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 Drummond TF	Nutrien Ag Solutions Ltd	N/A	DG Drummond TF is a tall, mid-late maturing, glyphosate-tolerant hybrid with group H blackleg resistance. DG Drummond TF is suited to medium to high-rainfall areas.
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.
InVigor® LR 4540P	BASF Australia Ltd	N/A	New LibertyLink® hybrid with tolerance to both Liberty® and TruFlex®. Combines two herbicide tolerances with the flexibility of PodGuard® for shatter tolerance. Early-mid maturing variety suited to low and medium-rainfall zones. Marketed by BASF.
Monola® H524TT	Nuseed	N/A	Monola® H524TT is an early-mid maturing TT hybrid with excellent early vigour. It is Nuseed's second Monola TT hybrid with improved yield and oil profile. It has demonstrated competitive yield and oil content to commercial canola TT hybrids during trials and exhibits strong early vigour and good early biomass. Suited to medium to slow canola growing regions, Monola® H524TT demonstrates strong blackleg resistance and good harvestability. Limited commercial release in 2024.
PY323G	Pioneer Hi-Bred Aust	N/A	Pioneer® PY323G is an early maturing Optimum GLY® hybrid variety. Suited to early-mid and mid-season growing regions. Mid-fast phenology. Medium height. Blackleg resistance rating NA, resistance group NA. Tested in NVT trials 2023. Marketed by Pioneer Seeds.
PY422G	Pioneer Hi-Bred Aust	N/A	Pioneer® PY422G is an early-mid maturing Optimum GLY® hybrid variety. Suited to early-mid and mid-season growing regions. Mid-fast phenology. Medium height. Blackleg resistance rating NA, resistance group NA. Tested in NVT trials 2023. Marketed by Pioneer Seeds.
PY424GC	Pioneer Hi-Bred Aust	N/A	Variety description not supplied.
PY525G	Pioneer Hi-Bred Aust	N/A	Pioneer® PY525G is a mid-maturing Optimum GLY® hybrid variety. Suited to mid-season growing regions. Mid-phenology. Medium-tall height. Blackleg resistance rating NA, resistance group NA. Tested in NVT trials 2023. Marketed by Pioneer Seeds.

* EPR amount is ex-GST, ⓟ 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 – Esperance

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: Gibson med-high rainfall GLY.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.21	2.94	3.30		
Pioneer® 45Y28 RR		107	114	Compromised trial	Trial failed
Nuseed® Condor TF	104	108	112		
Nuseed® Eagle TF			113		
Hyola® Regiment XC			110		
Nuseed® Raptor TF	102	105	109		
Pioneer® 44Y30 RR		106	101		
InVigor® R 4520P	107	107	98		
DG Drummond TF			107		
DG Hotham TF			105		
Hyola® Garrison XC	96	97	101		
Sowing date	3 May	22 Apr	3 May	30 Apr	28 Apr
Rainfall J–M (mm)	20	82	51	44	44
Rainfall A–O (mm)	352	346	510	521	451

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

Table 2: Munglinup med-high rainfall GLY.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.87	3.11	2.77		2.20
Nuseed® Hunter TF				Trial failed	107
InVigor® LR 4540P					108
InVigor® R 4520P	107	103	111		107
Pioneer® 44Y30 RR		102	111		106
Pioneer® 45Y28 RR		109	104		104
Nuseed® Eagle TF			103		104
Nuseed® Raptor TF	104	104	103		103
Hyola® Regiment XC			97		102
InVigor® R 4022P	103	95	105		101
PY525G					99
Sowing date	29 Apr	30 Apr	23 Apr	28 Apr	30 Apr
Rainfall J–M (mm)	21	83	68	50	31
Rainfall A–O (mm)	292	314	431	584	357

Special thanks to 2023 trial cooperator, Lawson Grains – Hakea.
Learn more via the NVT Long Term Yield Reporter

Table 3: Scaddan med-high rainfall GLY.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		2.60	2.85	2.77	1.64
InVigor® LR 4540P	No trial			106	113
Nuseed® Hunter TF				105	109
InVigor® R 4520P		107	104	106	108
Pioneer® 44Y30 RR			104	105	106
PY323G					106
Pioneer® 44Y27 (RR)		105	102	103	106
Pioneer® 45Y28 RR					99
Nuseed® Emu TF				97	113
Nuseed® Eagle TF				104	99
Nuseed® Raptor TF		105	101	102	102
Sowing date		23 Apr	26 Apr	14 Apr	25 Apr
Rainfall J–M (mm)		48	51	27	36
Rainfall A–O (mm)		250	510	322	225

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

Table 4: Gibson med-high rainfall IMI.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		3.08	3.30		
Pioneer® 45Y95 (CL)	No trial		119	Compromised trial	Trial failed
Pioneer® 44Y94 CL		113	113		
Pioneer® 45Y93 CL		108	115		
Hyola® Solstice CL			109		
Pioneer® 44Y90 (CL)		105			
Pioneer® 43Y92 (CL)		103			
Pioneer® 45Y91 (CL)		98			
Hyola® Equinox CL		103	98		
VICTORY® V75-03CL		92	95		
VICTORY® V7002CL		87			
Sowing date		22 Apr	3 May	30 Apr	28 Apr
Rainfall J–M (mm)		82	51	44	44
Rainfall A–O (mm)		346	510	521	451

Special thanks to 2023 trial cooperator, Ash Reichstein.
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® Defender CT and Hyola® Regiment XC.
Learn more via the NVT Long Term Yield Reporter

Table 5: Gibson med-high rainfall TT.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.07	2.87	3.20		
HyTTec® Trifecta	109	115	119	Compromised trial	Trial failed
Hyola® Blazer TT		115	118		
PY520TC			118		
HyTTec® Trophy	108	113	113		
SF Dynatron TT			109		
InVigor® T 4511			106		
InVigor® T 4510	106	108	102		
DG Bidgee TT(ϕ)			114		
InVigor® T 6010	103	104	108		
RGT Capacity TT			104		
Sowing date	**3 May**	**22 Apr**	**3 May**	**30 Apr**	**28 Apr**
Rainfall J–M (mm)	**20**	**82**	**51**	**44**	**44**
Rainfall A–O (mm)	**352**	**346**	**510**	**521**	**451**

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

Table 6: Munglinup med-high rainfall TT.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.94	2.78	2.37	2.62	1.93
HyTTec® Trifecta	109	116	114	111	112
Hyola® Blazer TT		115	117	107	112
HyTTec® Trophy	109	110	116	106	111
PY520TC			113	104	110
SF Dynatron TT			116	103	110
Hyola® Defender CT				101	110
InVigor® T 4510	107	103	113	104	108
InVigor® T 4511			110	105	107
RGT Baseline® TT			105	104	105
RGT Capacity TT	103		108	104	105
Sowing date	**29 Apr**	**30 Apr**	**23 Apr**	**28 Apr**	**30 Apr**
Rainfall J–M (mm)	**21**	**83**	**68**	**50**	**31**
Rainfall A–O (mm)	**292**	**314**	**431**	**584**	**357**

Special thanks to 2023 trial cooperator, Lawson Grains – Hakea.
Learn more via the NVT Long Term Yield Reporter

Table 7: Scaddan med-high rainfall TT.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.86	2.36	2.69	2.46	1.47
HyTTec® Trident	114	115	105	107	114
HyTTec® Trifecta				110	106
Hyola® Blazer TT	112	111	107	112	104
HyTTec® Trophy	112	112	105	109	108
HyTTec® Velocity				105	115
SF Dynatron TT	107	108	106	110	106
InVigor® T 4510	107	109	104	106	109
PY520TC					101
Hyola® Defender CT				111	100
InVigor® T 4511			103	105	106
Sowing date	**7 May**	**23 Apr**	**26 Apr**	**14 Apr**	**25 Apr**
Rainfall J–M (mm)	**16**	**48**	**51**	**27**	**36**
Rainfall A–O (mm)	**278**	**250**	**510**	**322**	**225**

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

Table 8: Mt. Madden low-med rainfall TT.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.28		1.94	3.16	
Hyola® Blazer TT		Trial failed		116	Trial failed
SF Dynatron TT	113			115	
HyTTec® Trident	101		120	110	
InVigor® LT 4530P				110	
Hyola® Defender CT				112	
HyTTec® Trophy	103			110	
InVigor® T 4510	105		112	107	
HyTTec® Velocity				103	
Renegade TT(ϕ)			98	104	
Hyola® Enforcer CT	100			107	
Sowing date	**30 Apr**	**1 May**	**23 Apr**	**19 Apr**	**6 May**
Rainfall J–M (mm)	**14**	**76**	**89**	**37**	**20**
Rainfall A–O (mm)	**160**	**196**	**338**	**354**	**181**

Special thanks to 2023 trial cooperator.
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 9: 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 9: 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 9: 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 – Esperance

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: Scaddan desi chickpea.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		**1.18**	**0.80**	**1.12**	**1.03**
PBA Slasher(Φ)	No trial	107	119	107	108
PBA Striker(Φ)		105	138	94	102
Neelam(Φ)		99	107	96	98
Genesis™ 836		95	87	102	99
CBA Captain(Φ)		101	102	85	92
PBA Maiden(Φ)		96	106	83	95
Genesis™ 090		80	89	99	
PBA Seamer(Φ)				89	
Sowing date		**3 Jun**	**13 May**	**18 May**	**29 May**
Rainfall J–M (mm)		**48**	**51**	**44**	**36**
Rainfall A–O (mm)		**250**	**510**	**521**	**225**

Special thanks to 2023 trial cooperator, Egan Farming.
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 2: 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.

FABA BEAN

Faba bean variety yield performance – Esperance

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: Scaddan faba bean.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		1.98	2.53	2.31	1.51
PBA Bendoc(Ф)*	No trial	99	101	96	105
PBA Marne(Ф)		107	99	101	85
Nura(Ф)		97	97	93	103
PBA Zahra(Ф)		93	100	93	98
PBA Samira(Ф)		93	97	93	97
Farah(Ф)		95	96	92	95
Fiesta VF		95	95	92	94
PBA Amberley(Ф)		90	96	91	98
PBA Rana(Ф)			86	85	102
Sowing date		**23 April**	**29 April**	**2 May**	**29 May**
Rainfall J–M (mm)		**48**	**51**	**44**	**36**
Rainfall A–O (mm)		**250**	**510**	**521**	**225**

Special thanks to 2023 trial cooperator, Egan Farming.

* herbicide-tolerant variety. 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

Faba bean variety disease ratings – Western Australia

The following table contains varietal ratings for the predominant diseases of faba bean 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: Faba bean disease guide for Western Australia.

Variety	Ascochyta blight	Cercospora leaf spot	Chocolate spot (Botrytis)	RLN resistance (*Pratylenchus thornei*)	Leaf rust
Cairo	VS	S	S	MSS	S
Doza	VS	S	S	MSS	MR
Farah[Φ]	MS	S	S	MS	VS
FBA Ayla[Φ]		S	S	MRMS	MR
Fiesta VF	S	S	S	MS	VS
Nura[Φ]	MR (P)	S	MS	MS	VS
PBA Amberley[Φ]	MR	S	MRMS	MRMS	VS
PBA Bendoc[Φ]	MR	S	S	MRMS	VS
PBA Marne[Φ]	MS	S	MS (P)	MS	MRMS
PBA Nanu[Φ]		S	S	MRMS	MR
PBA Nasma[Φ]	S	S	S	MSS	MRMS
PBA Rana[Φ]	MRMS (P)	S	MS	MS	VS
PBA Samira[Φ]	MR (P)	S	MS	MRMS	S
PBA Warda[Φ]	S	S	S	MRMS	MRMS
PBA Zahra[Φ]	MRMS	S	MS	MRMS	S

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

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(D)	Agriculture Victoria	TBC	APB Bondi(D) (tested as OZP1903) is a Kaspa-type pea with mid-flowering and mid-maturity. APB Bondi(D) 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, (D) 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 – Esperance

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: Grass Patch field pea.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.25	0.47	2.06	1.82	1.27
APB Bondi[Ф]		111	106	108	98
PBA Butler[Ф]	92	105	107	101	103
PBA Oura[Ф]	121	100	100	98	106
PBA Taylor[Ф]	102	104	98	93	98
PBA Twilight[Ф]	130	100	89	94	97
PBA Wharton[Ф]	122	102	90	91	95
Kaspa	80	95	96	89	97
PBA Gunyah[Ф]	103	97	93	86	99
GIA Ourstar[Ф]*		86	86	93	96
GIA Kastar[Ф]*		82	68	83	74
Sowing date	**14 June**	**27 May**	**25 May**	**20 May**	**4 June**
Rainfall J–M (mm)	**28**	**92**	**99**	**38**	**40**
Rainfall A–O (mm)	**159**	**158**	**269**	**299**	**168**

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

Table 2: Holt Rock field pea.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.76	1.23	0.93	1.35	
APB Bondi[Ф]		108	119	106	
PBA Butler[Ф]	107	103	113	107	
PBA Taylor[Ф]	111	104	102	99	
PBA Oura[Ф]	97	105	92	97	
PBA Wharton[Ф]	109	106	88	90	Trial failed
Kaspa	98	93	94	98	
PBA Gunyah[Ф]	100	99	86	94	
PBA Twilight[Ф]	103	105	83	88	
GIA Ourstar[Ф]*		90	71	87	
GIA Kastar[Ф]*		79	61	75	
Sowing date	**23 May**	**4 June**	**28 May**	**22 May**	**4 June**
Rainfall J–M (mm)	**13**	**75**	**98**	**100**	**13**
Rainfall A–O (mm)	**163**	**155**	**287**	**331**	**185**

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

Table 3: Scaddan field pea.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.96	1.64	1.89	1.38	1.70
APB Bondi[Ф]		112	114	118	98
PBA Butler[Ф]	102	107	111	115	105
PBA Taylor[Ф]	107	104	104	99	100
Kaspa	97	98	99	98	100
PBA Oura[Ф]	100	94	93	86	106
PBA Gunyah[Ф]	100	94	93	83	102
PBA Wharton[Ф]	109	97	93	79	95
PBA Twilight[Ф]	107	93	87	73	95
GIA Ourstar[Ф]*		83	77	69	93
GIA Kastar[Ф]*		86	76	66	71
Sowing date	**4 June**	**3 June**	**27 May**	**18 May**	**29 May**
Rainfall J–M (mm)	**16**	**48**	**51**	**44**	**36**
Rainfall A–O (mm)	**278**	**250**	**510**	**521**	**225**

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 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: Field pea disease guide for Western Australia.

Variety	Bacterial blight	Downy mildew	Powdery mildew	RLN resistance (*Pratylenchus neglectus*)	RLN resistance (*Pratylenchus thornei*)
APB Bondi[Φ]	S	RMR (S)	RMR	RMR	MSS
GIA Kastar[Φ]	S	S	RMR	MR	MS
GIA Ourstar[Φ]	S (P)	S	S	MRMS	MS
Kaspa	S	S	S	RMR	MRMS
PBA Butler[Φ]	MS	S	S	RMR	MRMS
PBA Gunyah[Φ]	S	S	S	RMR	MRMS
PBA Noosa[Φ]	S	MS	S	RMR	MRMS
PBA Oura[Φ]	MS	S	S	MR	MRMS
PBA Pearl	MS	S	S	MR	MRMS
PBA Percy	MRMS	S	S	RMR	RMR
PBA Taylor[Φ]	S	S	S	RMR	MRMS
PBA Twilight[Φ]	S	S	S	MR	MRMS
PBA Wharton[Φ]	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(ф)	Agriculture Victoria	TBC	ALB Terrier(ф) 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, (ф) 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 – Esperance

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: Scaddan lentil.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		**0.53**	**1.80**	**1.13**	**0.79**
GIA Lightning$^{\Phi}$*	No trial	112	107	110	111
PBA Bolt$^{\Phi}$		111	98	118	102
PBA HighlandXT$^{\Phi}$*		105	99	109	107
GIA Thunder$^{\Phi}$*		98	108	91	116
PBA Hallmark XT$^{\Phi}$*		104	101	101	97
ALB Terrier$^{\Phi}$			107	87	105
GIA Sire$^{\Phi}$*			90	114	80
PBA Jumbo2$^{\Phi}$		86	96	91	106
PBA Hurricane XT$^{\Phi}$*		91	97	93	93
GIA Leader$^{\Phi}$*		88	98	85	89
Sowing date		**11 May**	**13 May**	**18 May**	**29 May**
Rainfall J–M (mm)		**48**	**51**	**44**	**36**
Rainfall A–O (mm)		**250**	**510**	**521**	**225**

Special thanks to 2023 trial cooperator, Egan Farming.
* 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$^{\Phi}$ virulent)	Ascochyta blight (Pathotype 1 Nipper$^{\Phi}$ virulent)	Botrytis grey mould	RLN resistance (*Pratylenchus neglectus*)	RLN resistance (*Pratylenchus thornei*)
ALB Terrier$^{\Phi}$	MR (P)	R	MRMS (P)	MR	MR
GIA Leader$^{\Phi}$	MR (P)	MR (P)	MRMS (P)	MRMS (P)	MR (P)
GIA Lightning$^{\Phi}$	MRMS (P)	R (P)	MS (P)	MRMS (P)	MR (P)
GIA Metro$^{\Phi}$	RMR (P)	MR (P)	MRMS (P)	MR (P)	MRMS (P)
GIA Sire$^{\Phi}$	MRMS (P)	R (P)	MS (P)	MRMS (P)	MRMS (P)
GIA Thunder$^{\Phi}$	MRMS (P)	R (P)	MRMS (P)	MR (P)	MR (P)
Nipper$^{\Phi}$	MR	MRMS	MRMS	RMR	MR
PBA Ace$^{\Phi}$	MR	R	MS	MR	MRMS
PBA Bolt$^{\Phi}$	MRMS	MR	S	MR	MR
PBA Hallmark XT$^{\Phi}$	MRMS	RMR	MRMS	MR	MRMS
PBA HighlandXT$^{\Phi}$	MR (P)	MR	MS	MR	MRMS
PBA Hurricane XT$^{\Phi}$	MRMS (P)	RMR	MS	MRMS	MRMS
PBA Jumbo2$^{\Phi}$	RMR	R	MR (P)	MR	MRMS
PBA KelpieXT$^{\Phi}$	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 – Esperance

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: Gibson narrow-leaf lupin.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		2.11	1.73		
Gidgee(Φ)	No trial		113	Trial failed	Compromised trial
PBA Jurien(Φ)		112			
Lawler(Φ)		113	107		
Coyote(Φ)		110	103		
Mandelup(Φ)		105	104		
PBA Bateman(Φ)		99	99		
PBA Barlock(Φ)		97	101		
PBA Leeman(Φ)		97	93		
PBA Gunyidi(Φ)		93	95		
Coromup(Φ)		92	89		
Sowing date		23 Apr	3 May	29 Apr	20 May
Rainfall J–M (mm)		82	51	44	44
Rainfall A–O (mm)		346	510	521	451

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

Table 2: Holt Rock narrow-leaf lupin.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.22	1.22	1.86	2.70	0.93
PBA Jurien(Φ)	106	106		116	100
Rosemont(Φ)				112	97
Gidgee(Φ)			113	113	95
Lawler(Φ)		105	107	106	98
PBA Barlock(Φ)	103	102	100	106	103
Mandelup(Φ)	102	101	104	105	99
Coyote(Φ)	101	109	103	98	100
PBA Bateman(Φ)	102	106	98	98	103
PBA Gunyidi(Φ)	100	103	95	95	104
PBA Leeman(Φ)	92	95	94	83	97
Sowing date	1 May	1 May	24 Apr	6 May	8 May
Rainfall J–M (mm)	13	75	98	100	13
Rainfall A–O (mm)	163	155	287	331	185

Special thanks to 2023 trial cooperator.
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 3: 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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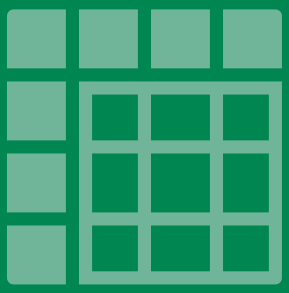

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