Kwinana East

May 2025

GRDC NATIONAL VARIETY TRIALS™

CELEBRATING 20 YEARS

NVT
HARVEST REPORT

nvt.grdc.com.au

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COVER: Kalyx Australia harvesting at the GRDC National Variety Trials (NVT) site on John and Brendan Pattison's farm near Marrar, New South Wales.
PHOTO: Nicole Baxter

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LEGEND: MEAN VARIETY YIELD PERFORMANCE

HIGH **LOW**

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

LEGEND: DISEASE RATING COLOUR RANGE

R	RMR	MR	MRMS	MS	MSS	S	SVS	VS

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

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 – Kwinana East provides information to support growers and advisers with decisions on variety selection for **Kwinana East**. 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 2024 and long-term yield performance of varieties of crop species suitable for production in **Kwinana East** 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 – Kwinana East***, 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 **Kwinana East**.

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 20th anniversary

In 2025, the National Variety Trials (NVT) proudly celebrates 20 years of empowering Australian grain growers and their advisers with trusted, independent results to support varietal decision-making.

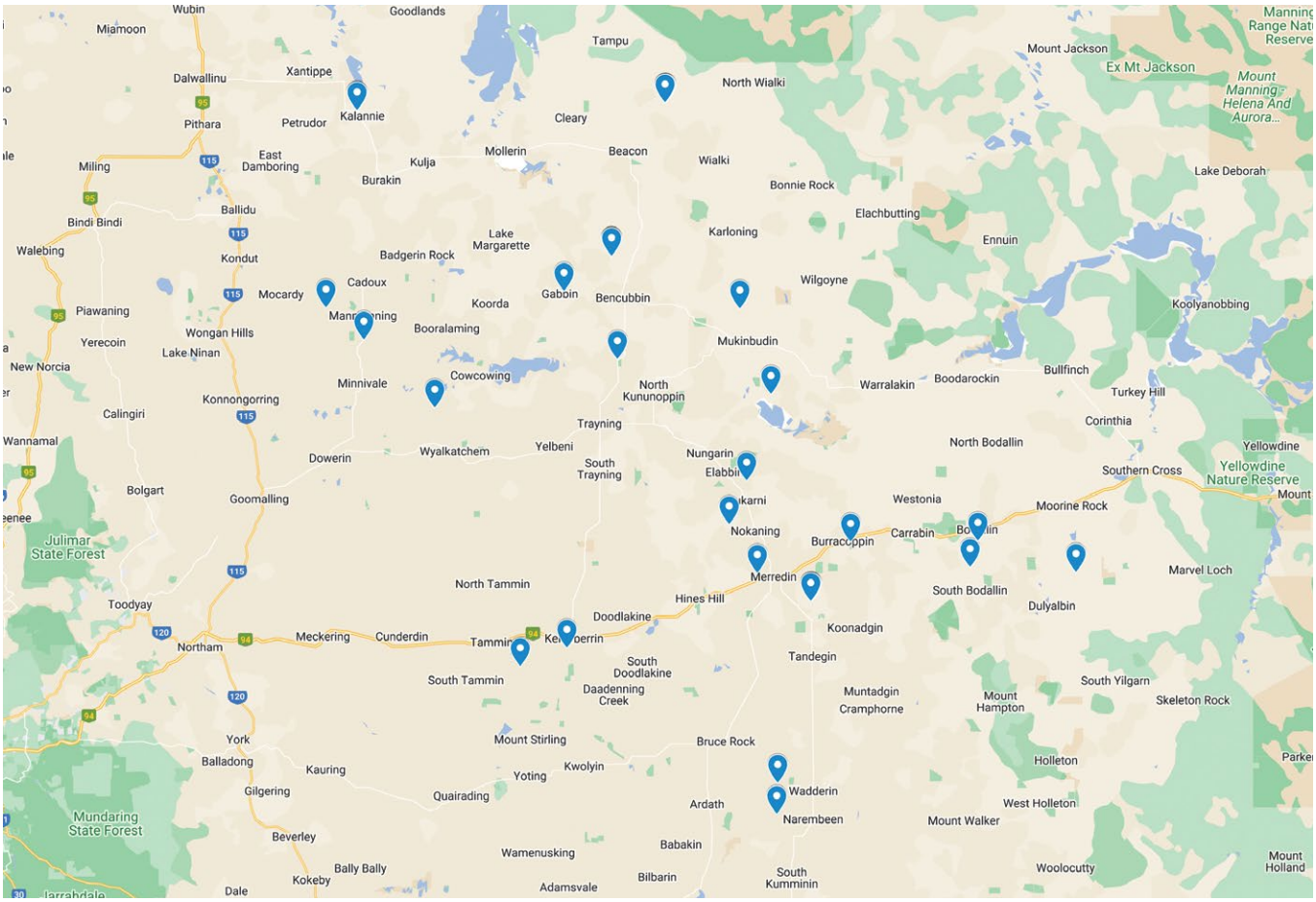
Established in 2005 by the Grains Research and Development Corporation (GRDC), the NVT program has evolved into the largest coordinated variety trial network in the world. Each year, more than 640 trials are conducted across over 300 locations nationwide, encompassing 10 different crop species. Over the past two decades, NVT has been a transformative force, providing growers with credible insights into newly released varieties that drives the rapid adoption of superior genetics.

The success of NVT is a testament to the collaborative efforts of many. GRDC extends heartfelt thanks to the growers, GRDC staff and panellists, service providers, trial hosts, breeding companies and members of the NVT Advisory Committee who have been instrumental in this journey. Your dedication has delivered exceptional outcomes, advancing the productivity and profitability of Australian grain growers and strengthening the grains industry as a whole.

As we mark this significant milestone, GRDC celebrates the achievements of NVT and looks forward to continuing to deliver game-changing innovations for Australia's grains sector in the years to come.

NVT SITE LOCATIONS – Kwinana East

Figure 1: Locality of NVT trial sites in Kwinana East from 2020 to 2024.



SOURCE: National Variety Trials

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 – western zone	End point royalty* ($)	Comments supplied by breeding company[1]
Brighton(Φ)	Australian Grain Technologies Pty Ltd	TBC	4.10	Brighton(Φ) is a dual-purpose winter wheat suitable for grazing and grain production. It is a higher-yielding alternative to Illabo(Φ) and slightly quicker than Illabo(Φ). It has improved test weight compared with Illabo(Φ). **Maturity description:** quick winter
Lancelin(Φ)	Australian Grain Technologies Pty Ltd	TBC	3.70	Lancelin(Φ) has Australian Soft (ASFT) quality classification. It has high and stable yields in WA, similar to Scepter(Φ). It is similar to Scepter(Φ) with an excellent physical grain quality package, high test weights and low screenings. **Maturity description:** mid spring
LRPB Vortex(Φ)	LongReach Plant Breeders Pty Ltd	APW	3.50	LRBP Vortex(Φ) is a high-yielding variety suitable for main season sowing across all Western Australian agzones. LRPB Vortex(Φ) has a solid grain receivals performance. APW classification in WA. Marketed by Pacific Seeds. **Maturity description:** mid spring
Mammoth(Φ)	InterGrain Pty Ltd	APW	3.50	Mammoth(Φ)'s unique phenology makes it an excellent option for an early break scenario, from late March to mid-April. Unlike winter wheats that have similar maturity, Mammoth(Φ) does not have the same vernalisation requirement, allowing it to continue to develop using day length rather than needing low temperature to trigger flowering like winter varieties typically need. This attribute is advantageous in both high and low-rainfall regions as it allows Mammoth(Φ) to respond to seasonal conditions and minimise frost risk. Mammoth(Φ) is well suited to WA and SA and some areas in Victoria. **Maturity description:** very slow spring
Rottnest(Φ)	Australian Grain Technologies Pty Ltd	ANW	3.90	Rottnest(Φ) is an udon noodle wheat in a plant type similar to Scepter(Φ). It offers a substantial yield improvement over currently grown udon noodle varieties. It is very broadly adapted with stable yield across a range of environments. **Maturity description:** mid spring
Shotgun(Φ)	Australian Grain Technologies Pty Ltd	AH	3.90	Shotgun(Φ) is a Scepter(Φ) replacement with a significant yield advantage. It is agronomically very similar to Scepter(Φ). **Maturity description:** mid spring
Splendid(Φ)	InterGrain Pty Ltd	TBC	4.00	Splendid(Φ) is a high-yielding noodle wheat set to replace Ninja(Φ) across WA. Splendid(Φ) provides a significant yield jump over Ninja(Φ) and similar physical grain characteristics to Ninja(Φ). **Maturity description:** quick-mid spring
Wallaroo(Φ)	Trigall Australia	TBC	4.00	Variety description not supplied.

*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. Consult the Grains Australia Wheat Variety Master List for final classification in your region.

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

Wheat variety yield performance – Kwinana East

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: Beacon main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class					1.92
LRPB Havoc(b)	AH (N)					111
LRPB Avenger(b)	APW (N)					110
LRPB Anvil(b) CL Plus	AH					109
Vixen(b)	AH (N)					109
Tomahawk CL Plus(b)	APW					108
LRPB Vortex(b)	APW					107
Scepter(b)	AH					106
Sting(b)	AH	No trial	No trial	No trial	No trial	106
Zen(b)	ANW					105
Chief CL Plus(b)	APW (N)					105
Lancelin(b)						104
Mace(b)	AH (N)					104
Devil(b)	AH (N)					103
Rottnest(b)						103
Calibre(b)	AH					103
Sowing date						**2 Jun**
Rainfall J–M (mm)						**67**
Rainfall A–O (mm)						**190**

Special thanks to 2024 trial cooperator, Stuart Faulkner, Faulkner Farms.
Learn more via the NVT Long Term Yield Reporter

Table 2: Bencubbin main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	2.24		4.32	0.61	
Thumper(b)	AH				105	
Shotgun(b)					110	
Calibre(b)	AH	109		110	116	
Tomahawk CL Plus(b)	APW			108	115	
LRPB Vortex(b)	APW			112	105	
Brumby(b)	APW (N)			112	105	
LRPB Matador(b)	FEED				107	
Devil(b)	AH (N)	107		110	106	No trial
Firefly(b)	ANW				99	
RockStar(b)	AH (N)	102		114	94	
Ballista(b)	FEED			110	111	
Scepter(b)	AH	108		105	108	
Ninja(b)	ANW	103		109	97	
Sting(b)	AH	110		101	119	
Kinsei(b)	ANW	96		112	90	
Sowing date		**14 May**	**14 May**	**6 May**	**31 May**	
Rainfall J–M (mm)		**96**	**146**	**97**	**45**	
Rainfall A–O (mm)		**149**	**225**	**268**	**113**	

Compromised trial

No 2024 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 3: Cadoux main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	4.19	3.01	3.97	1.88	3.74
LRPB Vortex(b)	APW			109	108	111
Tomahawk CL Plus(b)	APW			110	112	110
Rottnest(b)						110
Shotgun(b)					109	107
Brumby(b)	APW (N)		108	106	107	108
Vixen(b)	AH (N)	104	110	110	112	104
Devil(b)	AH (N)	107	107	106	107	107
Calibre(b)	AH	107	107	107	110	104
Scepter(b)	AH	105	107	107	107	107
Thumper(b)	AH				106	105
RockStar(b)	AH (N)	108	106	103	102	109
Sting(b)	AH	104	107	108	110	102
LRPB Matador(b)	FEED				106	104
Splendid(b)						107
LRPB Havoc(b)	AH (N)	100	106	107	106	106
Sowing date		**11 May**	**24 May**	**26 May**	**31 May**	**2 May**
Rainfall J–M (mm)		**130**	**109**	**50**	**41**	**82**
Rainfall A–O (mm)		**153**	**237**	**289**	**138**	**199**

Special thanks to 2024 trial cooperator, Stewart Avery.
Learn more via the NVT Long Term Yield Reporter

Table 4: Kalannie main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	3.14	3.70	4.19	0.83	2.84
LRPB Vortex(b)	APW			110	106	111
Tomahawk CL Plus(b)	APW			106	113	115
Vixen(b)	AH (N)	107	111	104	113	116
Shotgun(b)					108	107
Calibre(b)	AH	105	111	106	109	108
Brumby(b)	APW (N)		111	107	106	107
Sting(b)	AH	105	109	103	110	112
Rottnest(b)						106
Devil(b)	AH (N)	104	110	106	106	107
Thumper(b)	AH				103	102
LRPB Avenger(b)	APW (N)	107		100	110	116
Scepter(b)	AH	104	109	104	108	110
RockStar(b)	AH (N)	102	109	107	101	102
LRPB Matador(b)	FEED				105	103
Lancelin(b)				102	107	108
Sowing date		**26 May**	**25 May**	**17 May**	**31 May**	**1 Jun**
Rainfall J–M (mm)		**108**	**131**	**51**	**37**	**73**
Rainfall A–O (mm)		**163**	**271**	**269**	**121**	**193**

Special thanks to 2024 trial cooperator, Rowan McCreery.
Learn more via the NVT Long Term Yield Reporter

Table 5: Kellerberrin main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	1.98	4.13	5.17	2.07	2.80
LRPB Vortex(b)	APW			111	110	110
Tomahawk CL Plus(b)	APW			106	115	110
Vixen(b)	AH (N)	117	112	99	117	107
Rottnest(b)						109
Shotgun(b)					112	108
Brumby(b)	APW (N)		105	108	109	108
Devil(b)	AH (N)	108	105	107	109	107
Scepter(b)	AH	111	107	104	109	107
Calibre(b)	AH	110	104	104	114	107
Sting(b)	AH	113	108	99	115	106
Thumper(b)	AH				108	107
LRPB Havoc(b)	AH (N)	114	113	97	107	105
RockStar(b)	AH (N)	102	103	111	102	106
LRPB Avenger(b)	APW (N)	115		94	113	103
Splendid(b)						106
Sowing date		**25 May**	**19 May**	**18 May**	**31 May**	**7 May**
Rainfall J–M (mm)		**64**	**76**	**41**	**40**	**56**
Rainfall A–O (mm)		**125**	**298**	**338**	**216**	**217**

Special thanks to 2024 trial cooperator, Kelvin Tiller.
Learn more via the NVT Long Term Yield Reporter

Table 6: Merredin main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	1.98		4.67	0.79	2.98
Vixen(b)	AH (N)	119	Compromised trial	103	131	115
Tomahawk CL Plus(b)	APW			105	128	113
Calibre(b)	AH	110		110	128	108
Shotgun(b)					123	108
Sting(b)	AH	115		104	128	111
LRPB Vortex(b)	APW			109	106	113
Thumper(b)	AH				112	104
Brumby(b)	APW (N)			108	113	107
Devil(b)	AH (N)	106		107	115	107
Rottnest(b)						106
LRPB Matador(b)	FEED				119	103
LRPB Avenger(b)	APW (N)	117		96	118	115
Scepter(b)	AH	110		103	116	109
Lancelin(b)				101	118	106
LRPB Anvil(b) CL Plus	AH	120		90	121	111
Sowing date		**13 May**	**12 May**	**12 May**	**31 May**	**29 May**
Rainfall J–M (mm)		**100**	**68**	**81**	**42**	**83**
Rainfall A–O (mm)		**170**	**188**	**319**	**141**	**200**

Special thanks to 2024 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 7: Moorine Rock main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	2.28		4.12		
LRPB Vortex(b)	APW		Compromised trial	109	Compromised trial	No trial
RockStar(b)	AH (N)	103		114		
Brumby(b)	APW (N)			111		
Tomahawk CL Plus(b)	APW			106		
Devil(b)	AH (N)	108		109		
Calibre(b)	AH	111		107		
Ninja(b)	ANW	101		110		
Ballista(b)	FEED			108		
Scepter(b)	AH	111		104		
Kinsei(b)	ANW	95		112		
Catapult(b)	AH	96		110		
Vixen(b)	AH (N)	119		96		
Denison(b)	APW	93		110		
Sting(b)	AH	114		98		
Lancelin(b)				101		
Sowing date		**25 May**	**13 May**	**6 May**	**31 May**	
Rainfall J–M (mm)		**79**	**63**	**63**	**63**	
Rainfall A–O (mm)		**161**	**253**	**296**	**124**	

No 2024 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 8: Mukinbudin main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	1.02		3.27	1.65	1.40
Vixen(b)	AH (N)	120	Compromised trial	113	117	123
Tomahawk CL Plus(b)	APW			111	119	122
Sting(b)	AH	118		110	116	119
Calibre(b)	AH	115		109	119	118
Shotgun(b)					118	116
LRPB Avenger(b)	APW (N)	116		112	105	115
LRPB Anvil(b) CL Plus	AH	118		107	106	115
Scepter(b)	AH	108		107	111	113
Devil(b)	AH (N)	106		107	112	112
Lancelin(b)				105	112	113
LRPB Matador(b)	FEED				116	112
Rottnest(b)						112
Brumby(b)	APW (N)			107	112	111
LRPB Vortex(b)	APW			112	105	109
Thumper(b)	AH				112	108
Sowing date		**25 May**	**14 May**	**26 May**	**31 May**	**2 Jun**
Rainfall J–M (mm)		**87**	**131**	**75**	**74**	**38**
Rainfall A–O (mm)		**118**	**227**	**242**	**125**	**145**

Special thanks to 2024 trial cooperator, Kilgobbin Farms.
Learn more via the NVT Long Term Yield Reporter

Table 9: Narembeen main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	1.71	3.13	3.51		3.24
LRPB Vortex(Ф)	APW			112	Compromised trial	108
Tomahawk CL Plus(Ф)	APW			108		111
Vixen(Ф)	AH (N)	118	109	108		109
Shotgun(Ф)						108
Sting(Ф)	AH	115	106	107		107
Calibre(Ф)	AH	112	106	108		107
LRPB Avenger(Ф)	APW (N)	116		106		105
Rottnest(Ф)						108
Brumby(Ф)	APW (N)		109	107		107
Devil(Ф)	AH (N)	108	108	107		107
Scepter(Ф)	AH	110	108	105		107
Thumper(Ф)	AH					105
LRPB Havoc(Ф)	AH (N)	111	109	101		107
Lancelin(Ф)				103		106
RockStar(Ф)	AH (N)	99	108	106		105
Sowing date		**25 May**	**13 May**	**27 May**	**31 May**	**7 May**
Rainfall J–M (mm)		**63**	**92**	**76**	**23**	**81**
Rainfall A–O (mm)		**172**	**293**	**296**	**162**	**173**

Special thanks to 2024 trial cooperator, Jake Cole.
Learn more via the NVT Long Term Yield Reporter

Table 10: Southern Cross main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class					2.06
Tomahawk CL Plus(Ф)	APW	Trial failed	Trial failed	Trial failed	Trial failed	124
Vixen(Ф)	AH (N)					123
Sting(Ф)	AH					119
Calibre(Ф)	AH					118
Shotgun(Ф)						117
LRPB Havoc(Ф)	AH (N)					115
Scepter(Ф)	AH					115
LRPB Anvil(Ф) CL Plus	AH					115
Rottnest(Ф)						114
Lancelin(Ф)						114
LRPB Avenger(Ф)	APW (N)					114
Devil(Ф)	AH (N)					113
Brumby(Ф)	APW (N)					113
LRPB Matador(Ф)	FEED					112
Mace(Ф)	AH (N)					111
Sowing date						**2 Jun**
Rainfall J–M (mm)						**58**
Rainfall A–O (mm)						**205**

Special thanks to 2024 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 11: Trayning main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	2.36		5.09	1.00	1.46
Tomahawk CL Plus(Ф)	APW		Compromised trial	109	124	114
Vixen(Ф)	AH (N)	119		106	131	107
Shotgun(Ф)					116	113
LRPB Vortex(Ф)	APW			110	108	109
Calibre(Ф)	AH	111		108	123	110
Sting(Ф)	AH	114		105	127	106
Rottnest(Ф)						114
Brumby(Ф)	APW (N)			108	110	111
Devil(Ф)	AH (N)	108		107	111	110
Thumper(Ф)	AH				107	109
Scepter(Ф)	AH	110		105	114	109
LRPB Avenger(Ф)	APW (N)	118		101	126	97
LRPB Matador(Ф)	FEED				111	111
Lancelin(Ф)				103	115	107
RockStar(Ф)	AH (N)	103		107	95	109
Sowing date		**25 May**	**15 May**	**7 May**	**31 May**	**2 Jun**
Rainfall J–M (mm)		**64**	**103**	**71**	**62**	**53**
Rainfall A–O (mm)		**157**	**229**	**273**	**127**	**165**

Special thanks to 2024 trial cooperator, Luke Yates.
Learn more via the NVT Long Term Yield Reporter

Table 12: Wyalkatchem main season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	1.67	3.27	3.88	0.69	1.57
Tomahawk CL Plus(Ф)	APW			109	124	118
Vixen(Ф)	AH (N)	112	111	106	138	113
Sting(Ф)	AH	111	109	105	132	110
Shotgun(Ф)					114	111
Calibre(Ф)	AH	113	108	106	124	110
LRPB Vortex(Ф)	APW			110	106	108
Rottnest(Ф)						114
Scepter(Ф)	AH	108	107	106	114	112
Brumby(Ф)	APW (N)		107	108	106	110
Devil(Ф)	AH (N)	108	107	107	109	110
Lancelin(Ф)				104	116	111
LRPB Avenger(Ф)	APW (N)	106		102	137	105
LRPB Havoc(Ф)	AH (N)	103	106	103	120	114
LRPB Matador(Ф)	FEED				108	109
Thumper(Ф)	AH				103	105
Sowing date		**25 May**	**25 May**	**20 May**	**31 May**	**2 Jun**
Rainfall J–M (mm)		**98**	**87**	**39**	**84**	**56**
Rainfall A–O (mm)		**137**	**246**	**277**	**140**	**196**

Special thanks to 2024 trial cooperator, Marcus Reilly.
Learn more via the NVT Long Term Yield Reporter

Table 13: Beacon early season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class					2.57
RockStar(Ф)	AH (N)					129
Brumby(Ф)	APW (N)					126
Kinsei(Ф)	ANW					122
Catapult(Ф)	AH					122
Firefly(Ф)	ANW					121
Denison(Ф)	APW					116
Valiant(Ф) CL Plus	AH					109
Magenta(Ф)	APW	No trial	No trial	No trial	No trial	104
Yitpi	AH					103
Cutlass(Ф)	APW (N)					103
Willaura(Ф)	FEED					102
Mammoth(Ф)	APW					96
Wallaroo(Ф)						93
Mowhawk(Ф)	AH					85
Stockade(Ф)	APW					84
Sowing date						**19 Apr**
Rainfall J–M (mm)						**67**
Rainfall A–O (mm)						**190**
Irrigation A–O (mm)						**20**

Special thanks to 2024 trial cooperator, Stuart Faulkner, Faulkner Farms.
Learn more via the NVT Long Term Yield Reporter

Table 14: Bencubbin early season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	2.25		3.47	0.91	
Mammoth(Ф)	APW				134	
Wallaroo(Ф)					110	
Stockade(Ф)	APW			129	102	
Valiant(Ф) CL Plus	AH			107	138	
Cutlass(Ф)	APW (N)	104		111	127	
Denison(Ф)	APW	113		101	130	
Willaura(Ф)	FEED				123	
Brighton(Ф)					47	No trial
Longsword(Ф)	AWW	95	Compromised trial	117	54	
Kinsei(Ф)	ANW	111		82	127	
Catapult(Ф)	AH	109		81	130	
Yitpi	AH	97		92	109	
RockStar(Ф)	AH (N)	113		74	137	
Brumby(Ф)	APW (N)				132	
Illabo(Ф)	AH	90		108	46	
Sowing date		**21 Apr**	**22 Apr**	**20 Apr**	**23 Apr**	
Rainfall J–M (mm)		**96**	**146**	**97**	**45**	
Rainfall A–O (mm)		**149**	**225**	**268**	**113**	
Irrigation A–O (mm)					**10**	

No 2024 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 15: Kalannie early season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class	2.82	4.21	3.94	1.50	2.20
Mammoth(Ф)	APW				116	99
Firefly(Ф)	ANW					116
Wallaroo(Ф)					111	100
Stockade(Ф)	APW			126	100	85
Denison(Ф)	APW	106	107	95	122	122
Valiant(Ф) CL Plus	AH		106	97	120	107
Mowhawk(Ф)	AH			119		108
Kinsei(Ф)	ANW	102	100	92	117	126
RockStar(Ф)	AH (N)	101	99	88	121	132
Cutlass(Ф)	APW (N)	105	106	96	115	101
Brighton(Ф)					81	92
Catapult(Ф)	AH	98	99	83	117	122
Brumby(Ф)	APW (N)				117	127
Willaura(Ф)	FEED				108	95
Longsword(Ф)	AWW	93	105	102	84	91
Sowing date		**21 Apr**	**22 Apr**	**14 Apr**	**22 Apr**	**26 Apr**
Rainfall J–M (mm)		**108**	**131**	**51**	**37**	**73**
Rainfall A–O (mm)		**163**	**271**	**269**	**121**	**193**
Irrigation A–O (mm)					**10**	**10**

Special thanks to 2024 trial cooperator, Rowan McCreery.
Learn more via the NVT Long Term Yield Reporter

Table 16: Southern Cross early season wheat.

Year		2020	2021	2022	2023	2024
Mean yield (t/ha)	Class					2.48
Firefly(Ф)	ANW					121
RockStar(Ф)	AH (N)					121
Brumby(Ф)	APW (N)					120
Catapult(Ф)	AH					119
Denison(Ф)	APW					118
Kinsei(Ф)	ANW					116
Valiant(Ф) CL Plus	AH					114
Cutlass(Ф)	APW (N)	No trial	No trial	No trial	No trial	110
Willaura(Ф)	FEED					107
Yitpi	AH					104
Wallaroo(Ф)						100
Magenta(Ф)	APW					100
Mammoth(Ф)	APW					99
Stockade(Ф)	APW					90
Longsword(Ф)	AWW					88
Sowing date						**18 Apr**
Rainfall J–M (mm)						**58**
Rainfall A–O (mm)						**205**
Irrigation A–O (mm)						**20**

Special thanks to 2024 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Wheat variety quality – Kwinana East

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 2023 and 2024 NVT averaged for trials in the Kwinana East 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 Kwinana East in 2023.

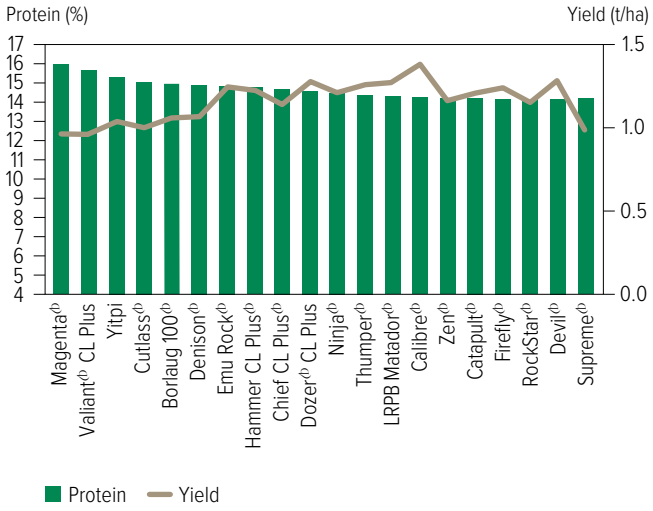


Figure 2: Protein (%) and yield (t/ha) comparisons for main season wheat varieties from 10 NVT sites in Kwinana East in 2024.

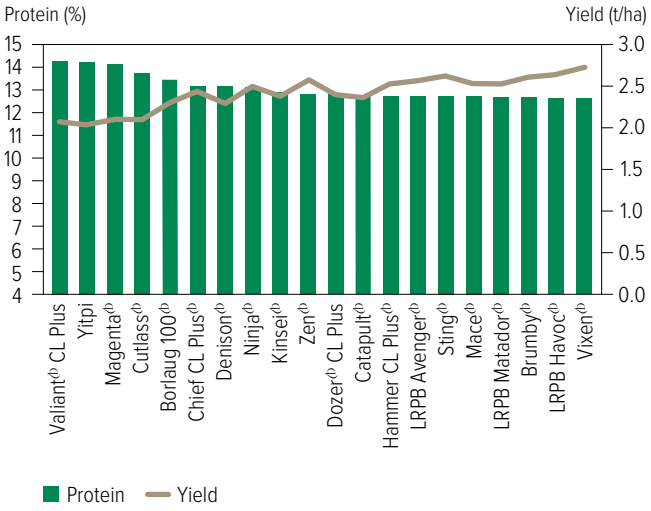


Figure 3: Protein (%) and yield (t/ha) comparisons for early season wheat varieties from two NVT sites in Kwinana East in 2023.

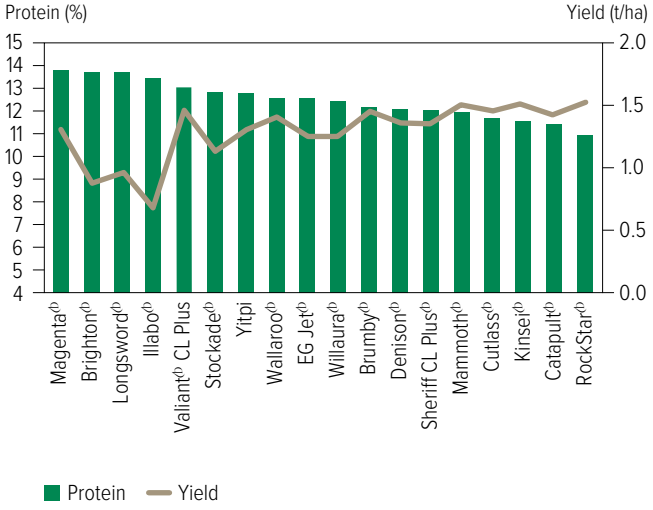
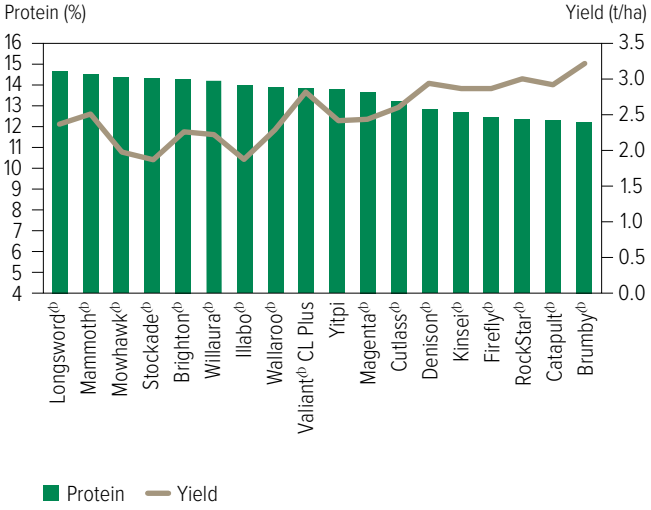


Figure 4: Protein (%) and yield (t/ha) comparisons for early season wheat varieties from three NVT sites in Kwinana East in 2024.



Test weight comparisons

Figure 5: Test weight (kg/hL) comparisons for main season wheat varieties from eight NVT sites in Kwinana East in 2023.

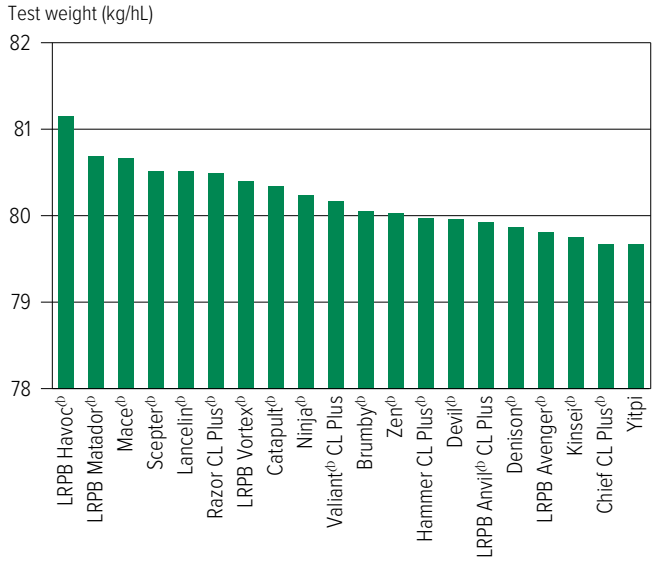


Figure 6: Test weight (kg/hL) comparisons for main season wheat varieties from 10 NVT sites in Kwinana East in 2024.

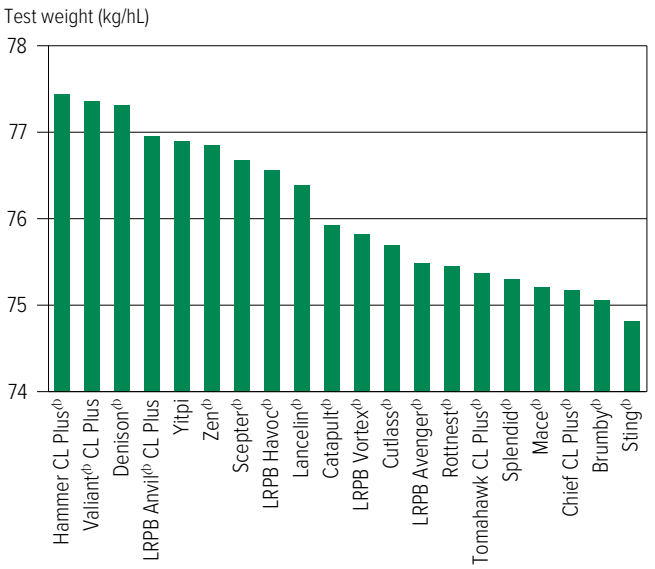


Figure 7: Test weight (kg/hL) comparisons for early season wheat varieties from two NVT sites in Kwinana East in 2023.

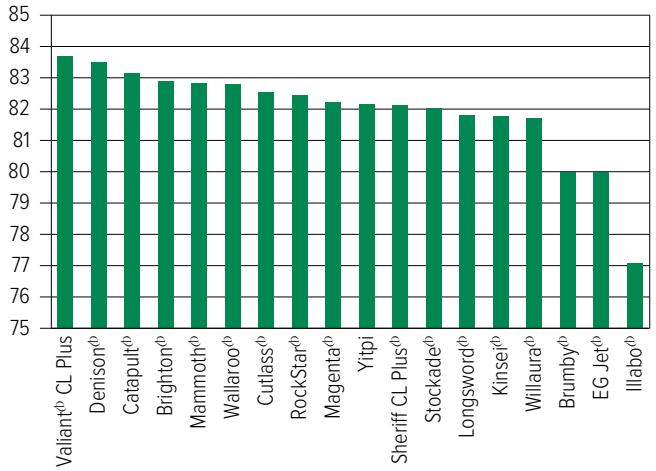
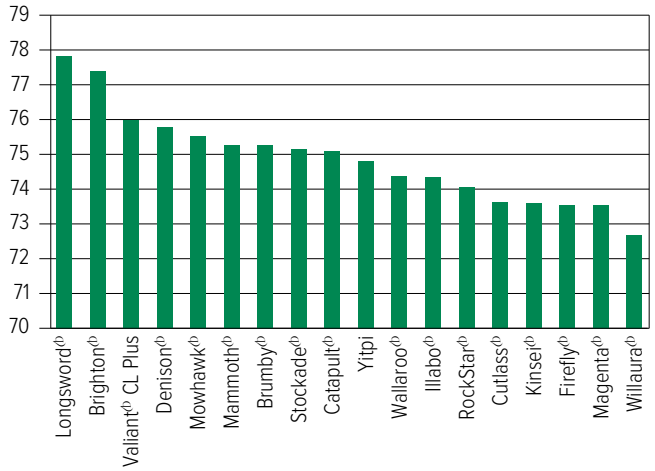


Figure 8: Test weight (kg/hL) comparisons for early season wheat varieties from three NVT sites in Kwinana East in 2024.



Screenings comparisons

Figure 9: Screenings (<2.0mm) comparisons for main season wheat varieties from eight NVT sites in Kwinana East in 2023.

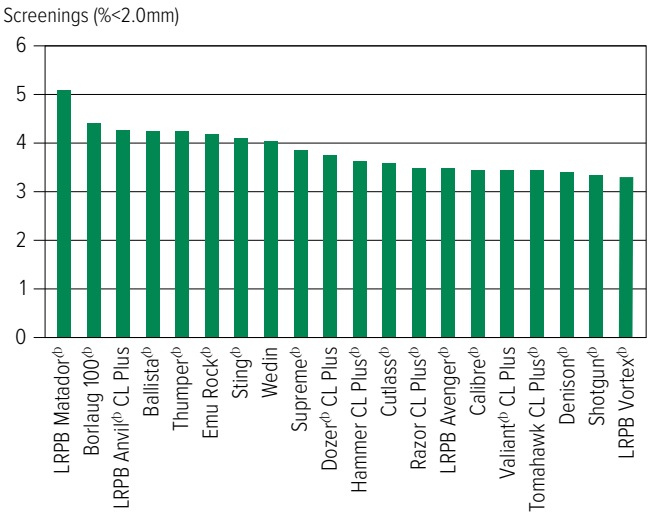


Figure 10: Screenings (<2.0mm) comparisons for main season wheat varieties from 10 NVT sites in Kwinana East in 2024.

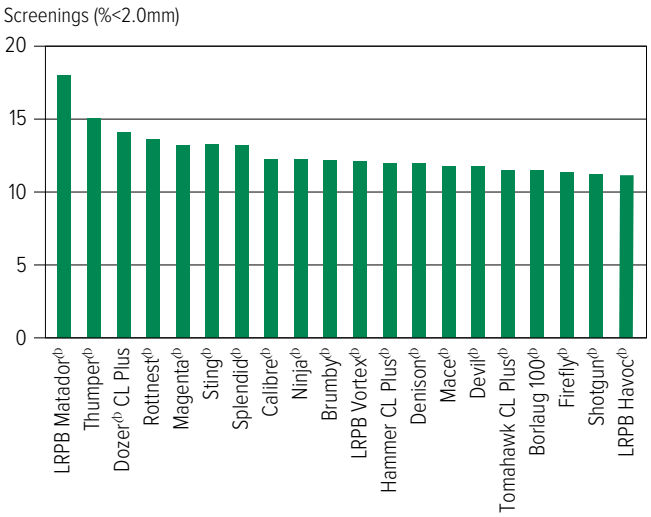


Figure 11: Screenings (<2.0mm) comparisons for early season wheat varieties from two NVT sites in Kwinana East in 2023.

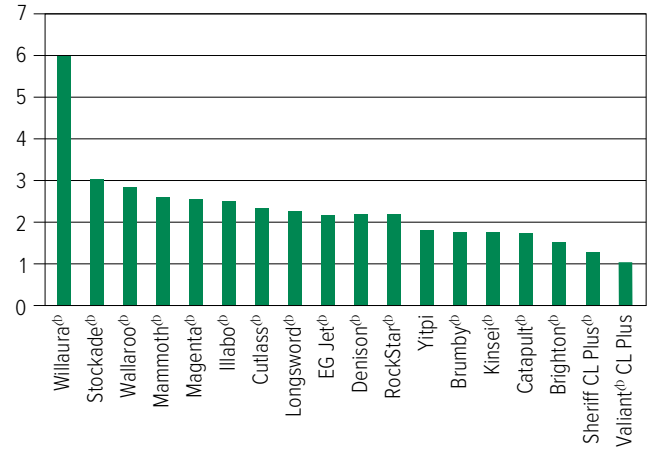
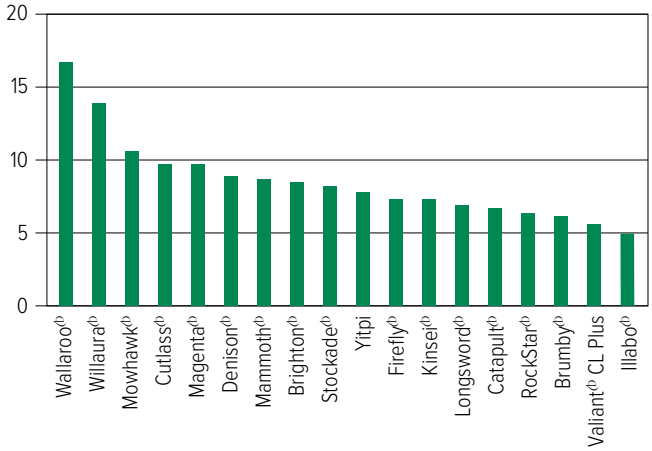


Figure 12: Screenings (<2.0mm) comparisons for early season wheat varieties from three NVT sites in Kwinana East in 2024.



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 2025.

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

Continued on next page

Table 17: 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
LRPB Vortex[Ф]	MRMS	MRMS	MS	MRMS	RMR	SVS	MS	MSS (P)	S		MSS	MSS
Mace[Ф]	MRMS	MS	MS	MRMS	RMR	S	MSS	S	MS	MRMS	MRMS	S
Magenta[Ф]	MRMS	MRMS	MSS	MR	MSS	RMR	MRMS	MS	MSS	MSS	S	MSS
Mammoth[Ф]	MRMS	MRMS	MR	MR	MRMS	MRMS	S	MRMS	MSS		MSS	S
Mowhawk[Ф]	MRMS (P)			RMR (P)		MR (P)						
Ninja[Ф]	MRMS	MRMS	MS	S	MS	S	S	MSS	S	S	MS	S
Razor CL Plus[Ф]	MSS	MS	MS	MRMS		S	MSS	SVS	S		MR	S
RGT Accroc[Ф]	MRMS			MRMS	RMR	S	RMR (P)	MRMS	MS		S	SVS
RGT Zanzibar	MS	MR		VS	RMR	SVS	R	MR	S		MSS	S
RockStar[Ф]	MRMS	MRMS	MRMS	MRMS	RMR	S	MSS	S	MRMS	MS	MSS	S
Rottnest[Ф]	MRMS (P)			S (P)	MRMS	VS (P)	SVS (P)					
Scepter[Ф]	MRMS	MRMS	MSS	MRMS	RMR	MSS	S	S	S	MS	MRMS	MSS
Severn[Ф]	MRMS	MR	MR	MRMS	RMR	MR	R	MS (P)	S		MSS (P)	S
Sheriff CL Plus[Ф]	MRMS	MRMS	MRMS	MS		SVS	SVS	S	MRMS	MRMS	MS	S
Shotgun[Ф]	MRMS	MRMS (P)	MSS (P)	MRMS	RMR	MSS	MSS (P)		MS (P)		R (P)	MS (P)
Splendid[Ф]	MRMS (P)			MR (P)	RMR (P)	MSS (P)	SVS (P)					
Sting[Ф]	MRMS	MS	MS	MRMS	MR	SVS	MSS	S	MS	MSS	MS	MSS
Stockade[Ф]	MRMS	MR	MR	MS	RMR	MR	S	MS	S		MRMS	S
Thumper[Ф]	MRMS	MRMS (P)	S (P)	MS	RMR	MSS	S (P)		S	MSS (P)	MS (P)	MS (P)
Tomahawk CL Plus[Ф]	MRMS	MRMS	S	MR	RMR	S	S	MSS (P)	S	MS (P)	MRMS	MSS
Triple 2[Ф]	MR (P)	RMR (P)	MR (P)	MR (P)	R (P)	MRMS	RMR (P)		R (P)		MS (P)	MRMS (P)
Valiant[Ф] CL Plus	MRMS	MR	MRMS	MRMS	RMR	S	SVS	MRMS	S	MSS	MSS (P)	MSS
Vixen[Ф]	MRMS	MS	MSS	MRMS	MR	SVS	SVS	MSS	MRMS	MSS	MSS	S
Wallaroo[Ф]	MRMS	MR	MR	RMR	RMR	RMR	MSS	MRMS (P)	MS		R	MSS
Willaura[Ф]	MS	MRMS	MRMS	MR	R	MRMS	SVS	MRMS	MSS		MS	S
Yitpi	SVS	MS	MRMS	S	MRMS	MSS	MS	MS	MSS	MS	MR	S
Zen[Ф]	MRMS	MS	MRMS	S (MRMS)	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,
T = tolerant, MT = moderately tolerant, MI = moderately intolerant, I = intolerant, VI = very intolerant,
(P) = provisional rating, - hyphen indicates a range, / indicates pathotype differences, # warning, may be more susceptible to alternate pathotypes,
^ line contains a few susceptible off types, ( ) show outlier.

Wheat variety maturity

The wheat-breeding members of Australian Crop Breeders have developed a consistent approach to the description of wheat variety maturity (relative heading date).

Table 18: An industry guide for wheat variety maturity description.

Maturity description	Abbreviation	Quick wheat boundary	Slow wheat boundary
SPRING WHEAT			
Very quick	VQ		Axe[Ф]
Very quick-quick	VQ-Q	> Axe[Ф]	Vixen[Ф]
Quick	Q	> Vixen[Ф]	Corack[Ф]/LRPB Mustang[Ф]
Quick-mid	Q-M	> Corack[Ф]/LRPB Mustang[Ф]	Mace[Ф]/Suntop[Ф]
Mid	M	> Mace[Ф]/Suntop[Ф]	LRPB Reliant[Ф]/Sheriff CL Plus[Ф]/LRPB Trojan[Ф]
Mid-slow	M-S	> LRPB Reliant[Ф]/Sheriff CL Plus[Ф]/LRPB Trojan[Ф]	Yitpi/EGA Gregory[Ф]
Slow	S	> Yitpi/EGA Gregory[Ф]	Sunzell
Slow-very slow	S-VS	> Sunzell	Sunmax[Ф]
Very slow	VS	> Sunmax[Ф]	
WINTER WHEAT			
Quick	Q		Illabo[Ф]
Mid	M	> Illabo[Ф]	RGT Accroc[Ф]
Slow	S	> RGT Accroc[Ф]	

Source: Australian Crop Breeders Ltd

Wheat optimum time of sowing – an example for Kwinana East

To achieve flowering in the ideal window and maximise yield, the optimum time of sowing is based on a combination of variety maturity and environment.

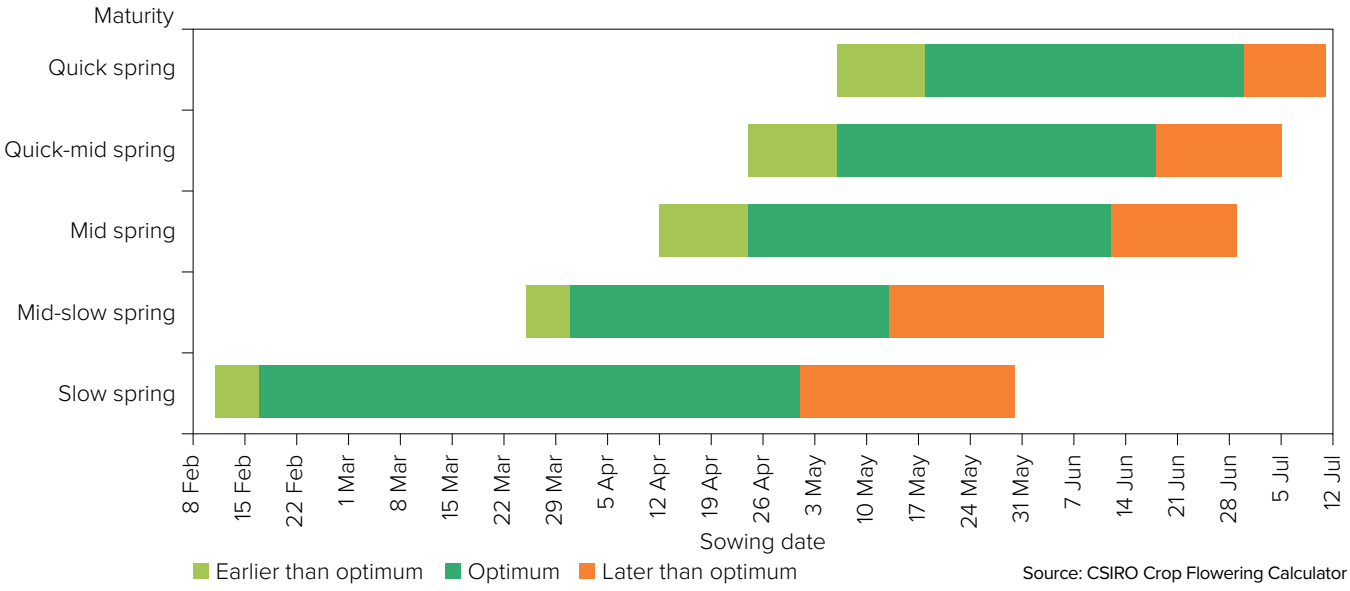
Growers and advisers are encouraged to use the Crop Flowering Calculator to compare the impact of specific variety selection and sowing date for the ideal flowering window at their own location. The Crop Flowering Calculator is a simple phenology (maturity) model that uses 60 years of local weather data to calculate a range of possible flowering dates for a specific environment for wheat, barley and canola.

The Crop Flowering Calculator helps optimise sowing programs by finding the variety or sowing time that best matches the optimal flowering window for a specific location. Select a location and crop type and then either 'Find a Variety' (to match a fixed sowing date), or find 'When to Sow' (to match a fixed variety).

This time of sowing guide (Figure 13) is automatically generated from the database that underpins the Crop Flowering Calculator. The guide presents the optimal sowing windows for generic varieties for a single location.

The Crop Flowering Calculator integrates the scientific outputs from several GRDC projects and Initiatives (CSP00187, CSP1901-002RTX, UOM1806-001RTX and CSP2206-012RTX) and brings together the diverse aspects of crop phenology (genetics, physiology and agronomy). This tool has been supported by CSIRO in partnership with GRDC through CSP2206-012RTX.

Figure 13: Optimum time of sowing by variety maturity for Merredin as an example for Kwinana East.



Source: CSIRO Crop Flowering Calculator

Disclaimer: This Crop Flowering Calculator is a work in progress and is still undergoing development. The results provided have not yet been fully validated and should be interpreted with caution and used at your own discretion.

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]
Bigfoot CL(Φ)	Australian Grain Technologies Pty Ltd	FEED	4.35	Bigfoot CL(Φ) is very similar to popular northern variety Yeti(Φ) but tolerant to Clearfield® Intervix® herbicide. It has good grain size and test weight, having a short stature and lower risk of lodging. It is feed quality only. Bigfoot CL(Φ) has a quick-mid spring maturity.
PegasusAX(Φ)	Australian Grain Technologies Pty Ltd	FEED	4.15	PegasusAX(Φ) carries CoAXium herbicide tolerance (Aggressor® AX herbicide) and is a derivative of Rosalind(Φ), with a similar plant type. It has similar grain size as some other high-yielding feed varieties and is feed quality only. PegasusAX(Φ) has a quick-mid spring maturity.
Spinnaker(Φ)	Secobra Recherches	Under malt evaluation	4.00	Spinnaker(Φ) has (Fathom(Φ) x RGT Planet(Φ)) x European malt breeding line heritage. It is two to three days earlier maturing than RGT Planet(Φ) with a May planting and has slightly shorter plant height than RGT Planet(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. Grain classification downloaded from Grains Australia on 14/3/2025.

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

Barley variety yield performance – Kwinana East

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: Bencubbin main season barley.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	2.37		5.33		1.74
Cyclops(Ⓓ)	104	Compromised trial	107	Compromised trial	115
Beast(Ⓓ)	110		99		122
Neo(Ⓓ) CL*					96
Maximus(Ⓓ) CL*	111		100		115
Combat(Ⓓ)			104		112
Bigfoot CL(Ⓓ)*					115
Laperouse(Ⓓ)	103		104		111
Leabrook(Ⓓ)	103		102		113
Minotaur(Ⓓ)	103		103		105
PegasusAX(Ⓓ)*					106
Titan AX(Ⓓ)*			104		108
Compass(Ⓓ)	104		98		114
Rosalind(Ⓓ)	112		97		106
Spartacus CL(Ⓓ)*	109		97		109
Commodus(Ⓓ) CL*	103		97		110
Sowing date	**14 May**	**14 May**	**6 May**	**31 May**	**2 Jun**
Rainfall J–M (mm)	**96**	**146**	**97**	**45**	**47**
Rainfall A–O (mm)	**149**	**225**	**268**	**113**	**155**

Special thanks to 2024 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 2: Cadoux main season barley.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)					3.55
Beast(Ⓓ)	No trial	No trial	No trial	No trial	118
Combat(Ⓓ)					113
Fathom(Ⓓ)					112
Bigfoot CL(Ⓓ)*					111
Compass(Ⓓ)					111
Cyclops(Ⓓ)					110
Leabrook(Ⓓ)					110
Maximus(Ⓓ) CL*					109
Commodus(Ⓓ) CL*					108
Laperouse(Ⓓ)					107
La Trobe(Ⓓ)					106
Titan AX(Ⓓ)*					106
Rosalind(Ⓓ)					106
Spartacus CL(Ⓓ)*					105
PegasusAX(Ⓓ)*					105
Sowing date					**2 May**
Rainfall J–M (mm)					**82**
Rainfall A–O (mm)					**199**

Special thanks to 2024 trial cooperator, Stewart Avery.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 3: Kalannie main season barley.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	2.75	3.10	5.78		
Combat(Ⓓ)		111	107	Compromised trial	No trial
Litmus(Ⓓ)	115	104	105		
Compass(Ⓓ)	100	115	101		
Beast(Ⓓ)	100	113	102		
Leabrook(Ⓓ)	99	113	102		
Rosalind(Ⓓ)	107	101	104		
Titan AX(Ⓓ)*			101		
Spinnaker(Ⓓ)			104		
Fathom(Ⓓ)	99	106	101		
Buff(Ⓓ)	102	101	102		
Zena(Ⓓ) CL*		95	103		
Minotaur(Ⓓ)	101	99	102		
Commodus(Ⓓ) CL*	98	106	99		
Cyclops(Ⓓ)	96	105	100		
RGT Planet(Ⓓ)	104	94	102		
Sowing date	**26 May**	**25 May**	**17 May**	**31 May**	
Rainfall J–M (mm)	**108**	**131**	**51**	**37**	
Rainfall A–O (mm)	**163**	**271**	**269**	**121**	

No 2024 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 4: Kellerberrin main season barley.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.89	4.60	5.13	2.53	2.58
Beast(Ⓓ)	123	110	103	122	113
Cyclops(Ⓓ)	107	117	107	110	106
Bigfoot CL(Ⓓ)*					109
Maximus(Ⓓ) CL*	115	118	95	107	115
Combat(Ⓓ)		109	112	108	99
Leabrook(Ⓓ)	111	105	107	117	105
PegasusAX(Ⓓ)*					111
Neo(Ⓓ) CL*				94	100
Rosalind(Ⓓ)	118	105	100	108	112
Laperouse(Ⓓ)	104	113	101	106	106
Compass(Ⓓ)	115	98	102	120	107
Minotaur(Ⓓ)	104	109	104	100	102
Titan AX(Ⓓ)*			109	111	97
Spartacus CL(Ⓓ)*	110	110	91	102	112
Commodus(Ⓓ) CL*	110	100	98	111	105
Sowing date	**25 May**	**19 May**	**18 May**	**31 May**	**7 May**
Rainfall J–M (mm)	**64**	**76**	**41**	**40**	**56**
Rainfall A–O (mm)	**125**	**298**	**338**	**216**	**217**

Special thanks to 2024 trial cooperator, Kelvin Tiller.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 5: Merredin main season barley.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	**2.27**		**6.04**	**1.18**	**3.16**
Rosalind(ɗ)	118	Compromised trial	104	127	113
Combat(ɗ)			117	108	105
PegasusAX(ɗ)*					112
Beast(ɗ)	116		101	133	112
Maximus(ɗ) CL*	121		98	129	111
Neo(ɗ) CL*				93	104
Minotaur(ɗ)	106		107	105	104
Cyclops(ɗ)	106		103	112	106
La Trobe(ɗ)	113		98	120	107
Fathom(ɗ)	105		106	109	101
Bigfoot CL(ɗ)*					108
Spartacus CL(ɗ)*	117		95	122	107
Leabrook(ɗ)	103		101	114	106
Laperouse(ɗ)	106		100	109	103
Compass(ɗ)	105		96	120	106
Sowing date	**13 May**	**12 May**	**12 May**	**31 May**	**29 May**
Rainfall J–M (mm)	**100**	**68**	**81**	**42**	**83**
Rainfall A–O (mm)	**170**	**188**	**319**	**141**	**200**

Special thanks to 2024 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 6: Southern Cross main season barley.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)					**2.34**
Beast(ɗ)	No trial	No trial	No trial	No trial	122
Bigfoot CL(ɗ)*					116
Compass(ɗ)					116
Maximus(ɗ) CL*					114
Leabrook(ɗ)					114
Cyclops(ɗ)					113
Combat(ɗ)					111
Commodus(ɗ) CL*					111
Fathom(ɗ)					110
PegasusAX(ɗ)*					109
Laperouse(ɗ)					109
Spartacus CL(ɗ)*					108
Rosalind(ɗ)					108
La Trobe(ɗ)					108
Titan AX(ɗ)*					107
Sowing date					**2 Jun**
Rainfall J–M (mm)					**58**
Rainfall A–O (mm)					**205**

Special thanks to 2024 trial cooperator.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Barley variety quality – Kwinana East

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 2023 and 2024 NVT averaged for trials in the Kwinana East 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 two NVT sites in Kwinana East in 2023.

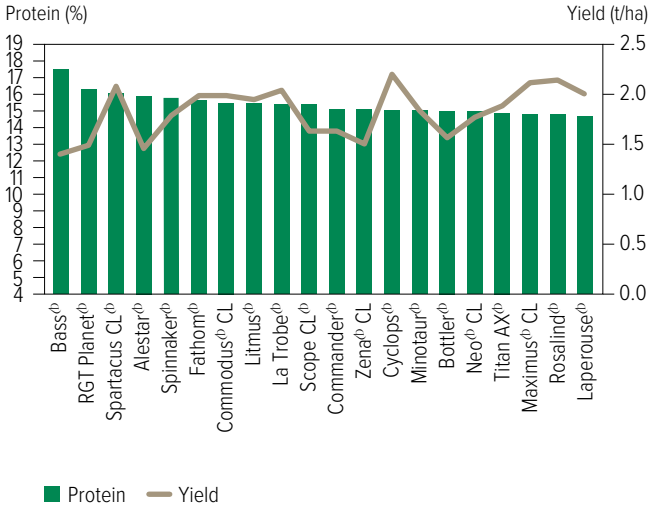
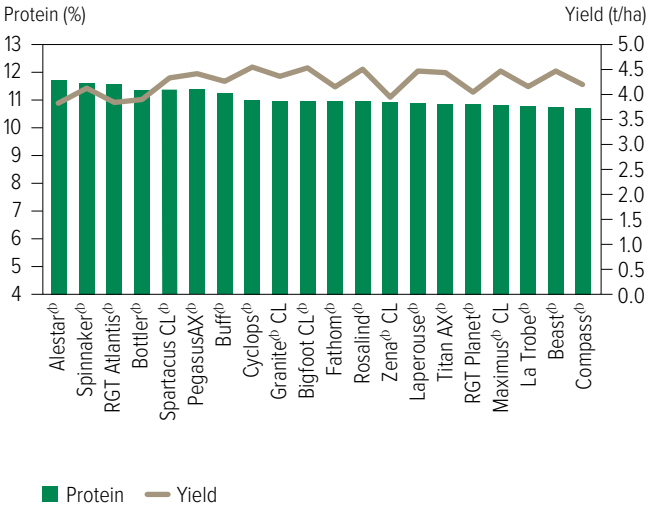


Figure 2: Protein (%) and yield (t/ha) comparisons for main season barley varieties from five NVT sites in Kwinana East in 2024.



Test weight comparisons

Figure 3: Test weight (kg/hL) comparisons for main season barley varieties from two NVT sites in Kwinana East in 2023.

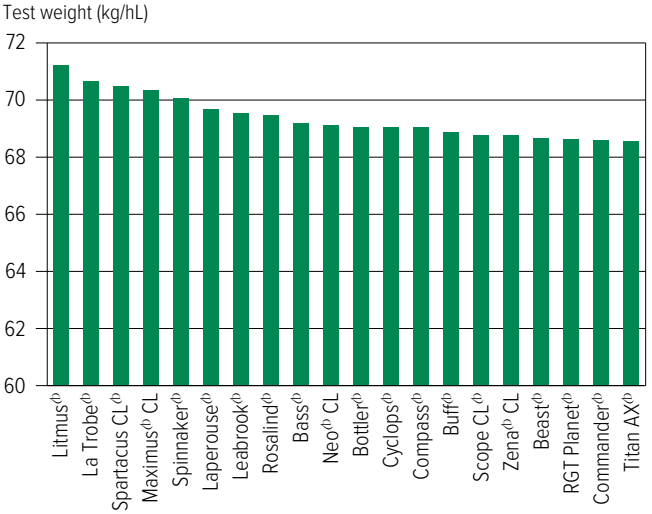
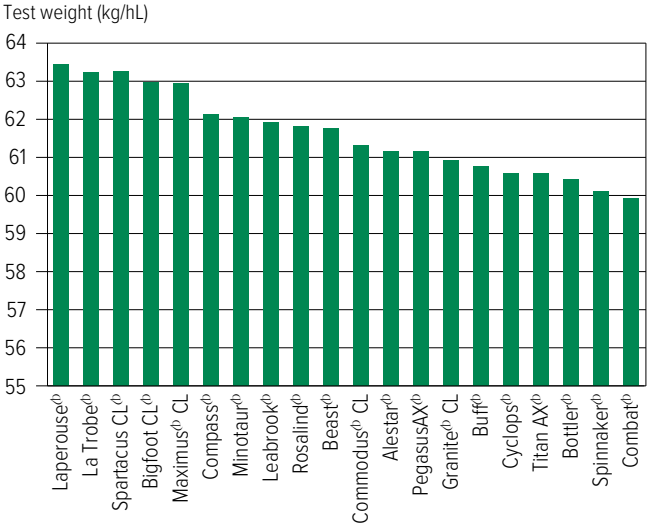


Figure 4: Test weight (kg/hL) comparisons for main season barley varieties from five NVT sites in Kwinana East in 2024.



Screenings comparisons

Figure 5: Screenings (<2.5mm) comparisons for main season barley varieties from two NVT sites in Kwinana East in 2023.

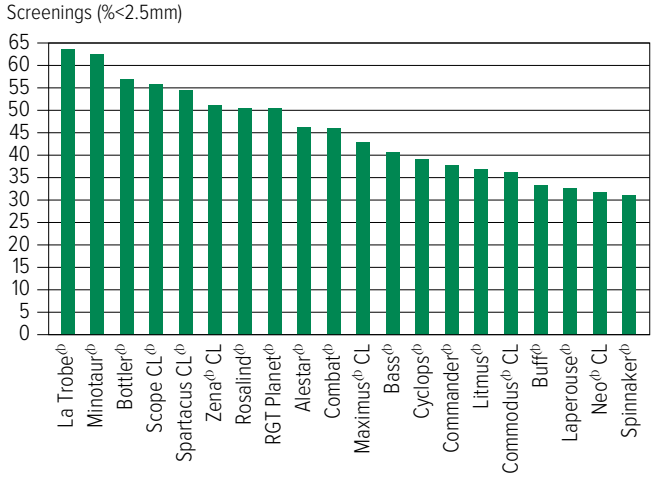
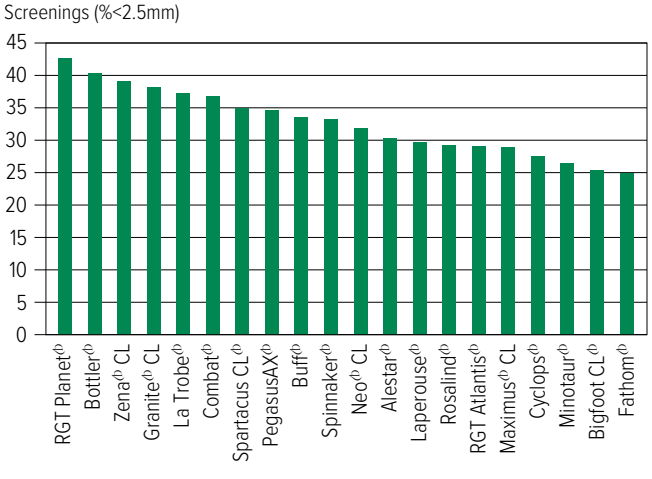


Figure 6: Screenings (<2.5mm) comparisons for main season barley varieties from five NVT sites in Kwinana East in 2024.



Retention comparisons

Figure 7: Retention (>2.5mm) comparisons for main season barley varieties from two NVT sites in Kwinana East in 2023.

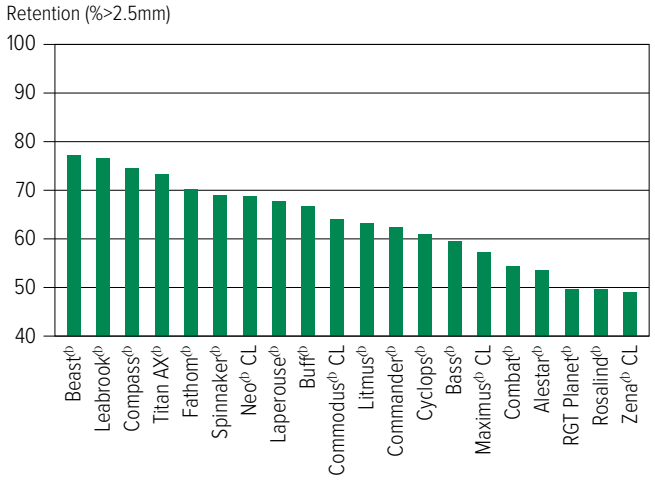
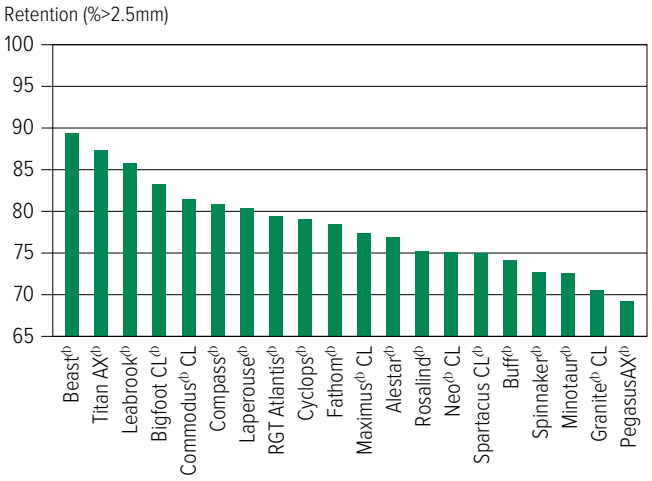


Figure 8: Retention (>2.5mm) comparisons for main season barley varieties from five NVT sites in Kwinana East in 2024.



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 2025.

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: Barley disease guide for Western Australia.

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

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, # warning, may be more susceptible to alternate pathotypes,
^ line contains a few susceptible off types, ( ) show outlier.

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]
Goldie[Φ]	InterGrain Pty Ltd	3.50	Goldie[Φ] is a new high-yielding milling oat and is suited to all oat growing regions of southern NSW, Victoria, SA and WA. Goldie[Φ] is a mid-spring maturing oat and is well suited for the second week of April to mid-May sowing window. Goldie[Φ] has a medium-tall plant height and has excellent panicle emergence. It has good test weight and low screenings. Along with excellent grain yield and quality attributes, early hay yield and quality data looks promising for export hay. Goldie[Φ] has a mid-spring maturity.
Minnie[Φ]	InterGrain Pty Ltd	3.50	Minnie[Φ] provides excellent yield potential for medium to high rainfall oat growing regions of southern NSW, Victoria, SA and WA. Its short-medium plant height allows improved lodging and harvestability in higher yielding situations. Minnie[Φ] has a mid-slow spring maturity.

*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

Oat variety yield performance – Kwinana East

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: Beacon oat.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)					
	No trial	No trial	No trial	No trial	Compromised trial
Sowing date					**2 Jun**
Rainfall J–M (mm)					**67**
Rainfall A–O (mm)					**190**

Special thanks to 2024 trial cooperator, Stuart Faulkner, Faulkner Farms.

Table 2: Cadoux oat.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)					2.58
Bilby[Ф]	No trial	No trial	No trial	No trial	115
Goldie[Ф]					114
Wandering					111
Minnie[Ф]					109
Archer[Ф]*					101
Bannister[Ф]					99
Williams[Ф]					98
Durack[Ф]					95
Koala[Ф]					88
Kultarr[Ф]					86
Sowing date					**2 May**
Rainfall J–M (mm)					**82**
Rainfall A–O (mm)					**199**

Special thanks to 2024 trial cooperator, Stewart Avery.
* herbicide-tolerant variety. Learn more via the NVT Long Term Yield Reporter

Table 3: Merredin oat.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.26	3.56	4.46	1.16	1.33
Minnie[Ф]			124	108	115
Goldie[Ф]		113	121	111	110
Wandering	112	109	113	109	108
Bilby[Ф]	131	97	107	110	137
Bannister[Ф]	79	111	113	95	79
Wallaby[Ф]				66	60
Koala[Ф]	48	112	113	82	53
Williams[Ф]	62	99	100	90	87
Kojonup[Ф]	61	95	104	76	77
Durack[Ф]	111	88	77	104	110
Sowing date	**13 May**	**12 May**	**12 May**	**31 May**	**29 May**
Rainfall J–M (mm)	**100**	**68**	**81**	**42**	**83**
Rainfall A–O (mm)	**170**	**188**	**319**	**141**	**200**

Special thanks to 2024 trial cooperator.
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 2025.

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: Oat disease guide for Western Australia.

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

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, # warning, may be more susceptible to alternate pathotypes, ^ line contains a few susceptible off types, ( ) show outlier.

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 Buller G	Nutrien Ag Solutions Ltd	N/A	DG Buller G will be available to growers in 2025. It is a 5 series, Optimum GLY® hybrid. DG Buller G is medium height with good standability. It has good oil content.
InVigor® LR 3540P	BASF Australia Ltd	N/A	InVigor® LR 3540P is an early maturing hybrid with PodGuard®. InVigor® LR 3540P contains dual herbicide tolerance to Liberty® and Truflex®. InVigor® LR 3540P combines the flexibility of PodGuard® and dual herbicide tolerance with early maturity. InVigor® LR 3540P is suited to lower-rainfall and shorter-season areas.
InVigor® LR 5040P	BASF Australia Ltd	N/A	InVigor® LR5040P is a mid-season hybrid with PodGuard®. InVigor® LR5040P contains dual herbicide tolerance to Liberty® and Truflex®. InVigor® LR5040P combines the flexibility of PodGuard® and dual herbicide tolerance with high yield and oil results. InVigor® LR5040P is suited to mid-season growing regions.
Nuseed® Griffon TTI	Nuseed Pty Ltd	N/A	Nuseed® Griffon TTI is Nuseed's first dual-herbicide hybrid canola, with triazine and IMI tolerance for flexible, effective crop protection. It is an early-mid maturing variety ideal for target yield environments of 0.5 to 3t/ha, which ensures fast pod development to safeguard yield. Commercial release in 2025. Rapid pod development for higher yields and a shorter growing season.
Pioneer® PY323G	Pioneer	N/A	Pioneer® PY323G (coded AA1421G) is an early maturing Optimum GLY® hybrid variety. Suited to early and early-mid season growing regions, it is medium in height. First tested in NVT 2023. Marketed by Pioneer Seeds.
Pioneer® PY327C	Pioneer	N/A	Pioneer® PY327C (coded AA0424I) is an early maturing Clearfield® hybrid suited to medium to high rainfall zones. It has mid-fast phenology and a medium-tall plant height. First tested in NVT 2023. Marketed by Pioneer Seeds.
Pioneer® PY422G	Pioneer	N/A	Pioneer® PY422G (coded AA1418G) is an early-mid maturing Optimum GLY® hybrid suited to early-mid and mid-season growing regions with medium height. First tested in NVT 2023. Marketed by Pioneer Seeds.
Pioneer® PY424GC	Pioneer	N/A	Pioneer® PY424GC (coded WW1958W) is an early-mid maturing combination Optimum GLY® and Clearfield® hybrid suited to early and early-mid season growing regions. It has medium height. First tested in NVT 2023. Marketed by Pioneer Seeds.
Pioneer® PY429T	Pioneer	N/A	Pioneer® PY429T (coded AA902T) is a widely adapted early-mid maturing triazine-tolerant hybrid. Best suited to medium to medium-high rainfall zones. Medium plant height. First tested in NVT 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 – Kwinana East

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: Bencubbin low-med rainfall GLY.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.75	2.24	3.09		
Nuseed® Emu TF	120	115	106	Trial failed	Trial failed
Nuseed® Hunter TF		110	109		
Pioneer® 44Y27 RR	109	110	107		
InVigor® LR 4540P			109		
InVigor® LR 3540P			103		
InVigor® R 4022P	99	101	101		
Hyola® Battalion XC	98	104	99		
Pioneer® 44Y30 RR		100	101		
InVigor® R 4520P	97	97	102		
DG Lofty TF		99	97		
Sowing date	**8 May**	**4 May**	**20 Apr**	**31 May**	**2 Jun**
Rainfall J–M (mm)	**96**	**140**	**102**	**45**	**47**
Rainfall A–O (mm)	**149**	**230**	**284**	**113**	**155**

Special thanks to 2024 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 were included in this trial, but have not been tested in other herbicide trials at this location: Hyola® Regiment XC, Pioneer® PY424GC.
Learn more via the NVT Long Term Yield Reporter

Table 2: Kellerberrin low-med rainfall GLY.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.41	2.50	2.45	2.24	1.78
Nuseed® Emu TF	133	111	112	109	119
Nuseed® Hunter TF		110	113	106	109
Pioneer® 44Y27 RR	115	108	110	103	105
Pioneer® PY323G				107	110
Pioneer® PY424GC				102	103
InVigor® LR 4540P			111	102	103
InVigor® LR 3540P			104	97	97
Hyola® Regiment XC		100		105	104
DG Buller G					97
InVigor® R 4520P	96	100	100	98	89
Sowing date	**25 May**	**10 May**	**12 May**	**17 Apr**	**30 Apr**
Rainfall J–M (mm)	**64**	**79**	**41**	**40**	**56**
Rainfall A–O (mm)	**157**	**311**	**338**	**184**	**217**

Special thanks to 2024 trial cooperator, Kelvin Tiller.
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 were included in this trial, but have not been tested in other herbicide trials at this location: Hyola® Regiment XC, Pioneer® PY424GC.
Learn more via the NVT Long Term Yield Reporter

Table 3: Merredin low-med rainfall GLY.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.00	1.38	2.52	1.48	
Nuseed® Emu TF	138	107	114	108	Trial failed
Nuseed® Hunter TF			111	108	
Pioneer® 44Y27 RR	113	109	109	104	
Pioneer® PY424GC				103	
Pioneer® PY323G				106	
InVigor® LR 4540P			108	105	
InVigor® LR 3540P			104	97	
Hyola® Battalion XC	108	100	103	96	
InVigor® LR 5040P				98	
InVigor® R 4022P	100	104	101	98	
Sowing date	**6 May**	**8 May**	**4 May**	**31 May**	**2 Jun**
Rainfall J–M (mm)	**79**	**82**	**84**	**51**	**63**
Rainfall A–O (mm)	**153**	**245**	**320**	**141**	**166**

Special thanks to 2024 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 were included in this trial, but have not been tested in other herbicide trials at this location: Hyola® Regiment XC, Pioneer® PY424GC.
Learn more via the NVT Long Term Yield Reporter

Table 4: Merredin low-med rainfall IMI.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.07	1.29	2.72	1.44	
Nuseed® Ceres IMI				110	No trial
Hyola® Solstice CL		93		114	
Hyola® Equinox CL			103		
Pioneer® 44Y90 CL	101				
Pioneer® PY327C				103	
Pioneer® 44Y94 CL		106	103	104	
Pioneer® 43Y92 CL	98	100	101	101	
Pioneer® PY421C				106	
Hyola® Continuum CL			95	101	
Sowing date	**6 May**	**8 May**	**4 May**	**31 May**	
Rainfall J–M (mm)	**79**	**82**	**84**	**51**	
Rainfall A–O (mm)	**153**	**245**	**320**	**141**	

No 2024 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 5: Bencubbin low-med rainfall TT.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.68	1.98	2.71		0.53
HyTTec® Velocity			113	Trial failed	104
HyTTec® Trident	117	120	115		109
Nuseed® Griffon TTI					119
HyTTec® Trophy			109		111
InVigor® T 4511		108	106		115
SF Spark® TT	106	107	103		114
InVigor® LT 4530P	96	105	106		93
Hyola® Blazer TT	98		105		100
DG Avon TT$^{\Phi}$			98		94
Bandit TT$^{\Phi}$		102	99		91
Sowing date	**8 May**	**4 May**	**20 Apr**	**31 May**	**2 Jun**
Rainfall J–M (mm)	**96**	**140**	**102**	**45**	**47**
Rainfall A–O (mm)	**149**	**230**	**284**	**113**	**155**

Special thanks to 2024 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 were included in this trial, but have not been tested in other herbicide trials at this location: Hyola® Defender CT, Nuseed® Griffon TTI.
Learn more via the NVT Long Term Yield Reporter

Table 6: Kellerberrin low-med rainfall TT.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.05	2.03	2.02	1.49	1.74
HyTTec® Velocity			124	120	120
HyTTec® Trident	130	119	124	112	114
Nuseed® Griffon TTI				109	112
HyTTec® Trophy			113		106
InVigor® T 4511		107	110	106	108
SF Spark® TT	111	106	107	105	110
Hyola® Blazer TT	91		105	104	96
DG Avon TT$^{\Phi}$			98	95	102
Bandit TT$^{\Phi}$		99	99	96	99
InVigor® LT 4530P	95	103	107	92	93
Sowing date	**25 May**	**10 May**	**12 May**	**31 May**	**29 Apr**
Rainfall J–M (mm)	**64**	**79**	**41**	**40**	**56**
Rainfall A–O (mm)	**157**	**311**	**338**	**184**	**217**

Special thanks to 2024 trial cooperator, Kelvin Tiller.
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 were included in this trial, but have not been tested in other herbicide trials at this location: Hyola® Defender CT, Nuseed® Griffon TTI.
Learn more via the NVT Long Term Yield Reporter

Table 7: Merredin low-med rainfall TT.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.05	1.54	2.45	1.34	
HyTTec® Velocity	129		118	116	Trial failed
HyTTec® Trident	117	112	118	112	
InVigor® T 4510	110	108	111	105	
Pioneer® PY429T				107	
Nuseed® Griffon TTI				108	
SF Spark® TT	111	102	107	104	
InVigor® T 4511		103	107	106	
DG Avon TT$^{\Phi}$			102	94	
Bandit TT$^{\Phi}$		103	101	96	
InVigor® LT 4530P	93	108	104	97	
Sowing date	**6 May**	**8 May**	**4 May**	**31 May**	**2 Jun**
Rainfall J–M (mm)	**79**	**82**	**84**	**51**	**63**
Rainfall A–O (mm)	**153**	**245**	**320**	**141**	**166**

Special thanks to 2024 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 were included in this trial, but have not been tested in other herbicide trials at this location: Hyola® Defender CT, Nuseed® Griffon TTI.
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 2025.

Table 8: Canola disease guide – autumn 2025 ratings and resistance groups.

Variety	2025 autumn blackleg rating			2025 upper canopy infection blackleg rating	Type	Major gene resistance group of cultivar
	Bare	Fluopyram (e.g. ILeVo®)	Pydiflumetofen (e.g. Saltro®)			
CONVENTIONAL VARIETIES						
Outlaw(ф)	RMR	R	R	MR-UCI	Open pollinated	A
Nuseed® Diamond	RMR	R	R	MR-UCI	Hybrid	ABF
Nuseed® Quartz	MR			MR-UCI	Hybrid	ABD
TRIAZINE-TOLERANT VARIETIES						
Pioneer® PY429T	R		R	R-UCI	Hybrid, Triazine	ABH
HyTTec® Trifecta	R			MR-UCI	Hybrid, Triazine	ABD
DG Bidgee TT(ф)	R	R	R	R-UCI	Open pollinated, Triazine	H
HyTTec® Trident	R			MR-UCI	Hybrid, Triazine	AD
HyTTec® Trophy	R	R	R	MR-UCI	Hybrid, Triazine	AD
DG Torrens TT(ф)	RMR			R-UCI	Open pollinated, Triazine	H
Monola® H524TT	RMR			MR-UCI	High stability oil, hybrid, Triazine	AD
Hyola® Blazer TT	RMR		R	MR-UCI	Hybrid, Triazine	ADF
Monola® H421TT	RMR			MR-UCI	High stability oil, hybrid, Triazine	BC
InVigor® T 4511	RMR	R		MR-UCI	Hybrid, Triazine	Unknown
ATR-Bluefin(ф)	RMR			MR-UCI	Open pollinated, Triazine	AB
Renegade TT(ф)	MR	R	R	MR-UCI	Open pollinated, Triazine	A
SF Spark™ TT	MR	R	R	MR-UCI	Hybrid, Triazine	ABDS
HyTTec® Velocity	MR			MR-UCI	Hybrid, Triazine	AB
Monola® 422TT	MR			MR-UCI	High stability oil, open pollinated, Triazine	BC
DG Avon TT(ф)	MR		R	MR-UCI	Open pollinated, Triazine	AC
SF Dynatron™ TT	MRMS	R	R	MRMS-UCI	Hybrid, Triazine	BC
ATR-Swordfish(ф)	MRMS			MRMS-UCI	Open pollinated, Triazine	AB
RGT Baseline™ TT	MRMS	RMR	R	MRMS-UCI	Hybrid, Triazine	B
Bandit TT(ф)	MRMS	RMR	R	MRMS-UCI	Open pollinated, Triazine	A
RGT Capacity™ TT	MRMS	RMR	R	MRMS-UCI	Hybrid, Triazine	B
ATR-Bonito(ф)	MS	MR	RMR	MS-UCI	Open pollinated, Triazine	A
IMIDAZOLINONE-TOLERANT VARIETIES						
Captain CL	R			R-UCI	Winter, hybrid, Clearfield®	AH
Hyola® Solstice CL	R		R	R-UCI	Hybrid, Clearfield®	ADFH
Hyola® Feast CL	R		R	R-UCI	Winter, hybrid, Clearfield®	H
Phoenix CL	R			MR-UCI	Winter, hybrid, Clearfield®	B
Hyola® 970CL	R		R	R-UCI	Winter, hybrid, Clearfield®	H
RGT Nizza™ CL	R			MR-UCI	Winter, hybrid, Clearfield®	B
Pioneer® PN526C	R		R	MR-UCI	High stability oil, hybrid, Clearfield®	ABD
Pioneer® PY327C	R		R	MR-UCI	Hybrid, Clearfield®	AB
RGT Clavier™ CL	R			R-UCI	Winter, hybrid, Clearfield®	ACH
Pioneer® 45Y95 CL	RMR			MR-UCI	Hybrid, Clearfield®	C
Pioneer® PY421C	RMR		R	MR-UCI	Hybrid, Clearfield®	A
Nuseed® Ceres IMI	RMR			MR-UCI	Hybrid, Imidazolinone	AD
Pioneer® 43Y92 CL	RMR	R	R	MR-UCI	Hybrid, Clearfield®	B
VICTORY® V75-03CL	RMR	R		MR-UCI	High stability oil, hybrid, Clearfield®	AB
Pioneer® 44Y94 CL	RMR			MR-UCI	Hybrid, Clearfield®	BC

Continued on next page

Table 8: Canola disease guide – autumn 2025 ratings and resistance groups (continued).

Variety	2025 autumn blackleg rating			2025 upper canopy infection blackleg rating	Type	Major gene resistance group of cultivar
	Bare	Fluopyram (e.g. ILeVo®)	Pydiflumetofen (e.g. Saltro®)			
IMIDAZOLINONE AND TRIAZINE-TOLERANT VARIETIES						
Hyola® Defender CT	R		R	MR-UCI	Hybrid, Clearfield®, Triazine	ADF
Pioneer® PY520 TC	RMR		R	MR-UCI	Hybrid, Clearfield®, Triazine	BC
Nuseed® Griffon TTI	RMR			MR-UCI	Hybrid, Imidazolinone, Triazine	AC
GLYPHOSATE-TOLERANT VARIETIES						
DG Hotham TF	R			R-UCI	Hybrid, TruFlex®	ABH
Nuseed® Raptor TF	R			MR-UCI	Hybrid, TruFlex®	AD
Nuseed® Eagle TF	R			MR-UCI	Hybrid, TruFlex®	ABD
VICTORY® V55-04TF	R	R		MR-UCI	High stability oil, hybrid, TruFlex®	AB
DG Lofty TF	R			R-UCI	Hybrid, TruFlex®	ABH
Nuseed® Hunter TF	RMR			MR-UCI	Hybrid, TruFlex®	AB
Pioneer® PY422G	RMR		R	MR-UCI	Hybrid, Optimum GLY®	AB
Pioneer® 44Y27 RR	RMR	R	R	MR-UCI	Hybrid, Roundup Ready®	B
DG Buller G	RMR			R-UCI	Hybrid, Optimum GLY®	H
Nuseed® Emu TF	MR			MR-UCI	Hybrid, TruFlex®	AB
Pioneer® PY525G	MR		R	MR-UCI	Hybrid, Optimum GLY®	AB
Pioneer® PY323G	MR		R	MR-UCI	Hybrid, Optimum GLY®	BC
Pioneer® PY428R	MR		R	MR-UCI	Hybrid, Roundup Ready®	B
InVigor® R 4520P	MRMS	R		MRMS-UCI	Hybrid, Truflex®	B
GLYPHOSATE AND IMIDAZOLINONE-TOLERANT VARIETIES						
Hyola® Regiment XC	R	R	R	R-UCI	Hybrid, TruFlex®, Clearfield®	ADFH
Pioneer® PY424GC	MR		R	MR-UCI	Hybrid, TruFlex®, Clearfield®	BC
GLUFOSINATE AND TRIAZINE-TOLERANT VARIETIES						
InVigor® LT 4530P	RMR	R		MR-UCI	Hybrid, LibertyLink®, Triazine	BF
GLUFOSINATE AND GLYPHOSATE-TOLERANT VARIETIES						
InVigor® LR 4540P	RMR	R		MR-UCI	Hybrid, LibertyLink®, TruFlex®	B
InVigor® LR 5040P	RMR	R		MR-UCI	Hybrid, LibertyLink®, TruFlex®	AB
InVigor® LR 3540P	MR	R		MR-UCI	Hybrid, LibertyLink®, TruFlex®	AB

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, UCI = upper canopy infection.
Please check updated ratings using the Blackleg Management Guide or the NVT Disease Ratings.

CHICKPEA

Chickpea variety yield performance – Kwinana East

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: Merredin desi chickpea.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.34	0.72	0.69	0.60	0.56
CBA Captain(ф)	115	99	106	111	103
PBA Striker(ф)	104	88	94	112	96
PBA Slasher(ф)	98	93	95	108	97
Neelam(ф)	98	91	93	98	94
Genesis® 836	92	96	98	91	98
PBA Maiden	87	85	89	103	93
PBA Seamer(ф)			94		
Genesis® 090	70	89	88		92
Sowing date	**18 May**	**31 May**	**25 May**	**31 May**	**2 Jun**
Rainfall J–M (mm)	**90**	**65**	**65**	**62**	**63**
Rainfall A–O (mm)	**193**	**251**	**304**	**134**	**166**

Special thanks to 2024 trial cooperator.
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 2025.

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(Ф)	MS (P)	S	MR	MT
Genesis® 836	S		MR	MII
Kyabra(Ф)	VS	VS	MRMS	MT
Neelam(Ф)	S		MRMS	MI
PBA Boundary(Ф)	S	VS	RMR	MTMI
PBA Drummond(Ф)	VS	VS	MR	TMT
PBA HatTrick(Ф)	S	S	MRMS	MT
PBA Maiden	S		MRMS	MI
PBA Pistol(Ф)	VS		RMR	T
PBA Seamer(Ф)	MS	S	MRMS	MTMI
PBA Slasher(Ф)	S		MRMS	MI
PBA Striker(Ф)	S		MRMS	MI
KABULI				
Almaz(Ф)	MS		MRMS	MI
Genesis® 090	MS		MRMS	IVI
Genesis® Kalkee	S		MRMS	VI
PBA Magnus(Ф)	MS		MRMS	MI
PBA Monarch(Ф)	MS (P)		MRMS	IVI
PBA Royal(Ф)	MS		MR (P)	MII

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, # warning, may be more susceptible to alternate pathotypes, ^ line contains a few susceptible off types, ( ) show outlier.

FIELD PEA

Field pea variety yield performance – Kwinana East

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: Merredin field pea.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.53	1.00	2.38	1.06	0.89
APB Bondi[Φ]	124	110	98	103	109
PBA Taylor[Φ]	109	99	100	101	102
PBA Butler[Φ]	111	104	102	98	90
PBA Oura[Φ]	92	106	103	106	106
PBA Wharton[Φ]	104	96	96	99	106
PBA Gunyah[Φ]	93	99	102	101	97
PBA Twilight[Φ]	96	96	97	98	103
Kaspa	100	89	99	94	89
GIA Ourstar[Φ]*	84	95	96	97	102
GIA Kastar[Φ]*	103	66	80	76	90
Sowing date	**18 May**	**31 May**	**25 May**	**31 May**	**2 Jun**
Rainfall J–M (mm)	**90**	**65**	**65**	**62**	**63**
Rainfall A–O (mm)	**193**	**251**	**304**	**134**	**166**

Special thanks to 2024 trial cooperator.

* 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

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 2025.

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(Þ)	S	RMR (S)	RMR	RMR	MSS
GIA Kastar(Þ)	S	S	RMR	MR	MS
GIA Ourstar(Þ)	S (P)	S	S	MRMS	MS
Kaspa	S	S	S	RMR	MRMS
PBA Butler(Þ)	MS	S	S	RMR	MRMS
PBA Gunyah(Þ)	S	S	S	RMR	MRMS
PBA Noosa(Þ)	S	MS	S	RMR	MRMS
PBA Oura(Þ)	MS	S	S	MR	MRMS (P)
PBA Pearl	MS	S	S	MR	MRMS
PBA Percy	MRMS	S	S	RMR	RMR
PBA Taylor(Þ)	S	S	S	RMR	MRMS
PBA Twilight(Þ)	S	S	S	MR	MRMS
PBA Wharton(Þ)	S	S	R (S)	MR	MRMS

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, # warning, may be more susceptible to alternate pathotypes,
^ line contains a few susceptible off types, ( ) show outlier.

LUPIN

Lupin variety yield performance – Kwinana East

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: Bencubbin narrow-leaf lupin.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.35	1.87	2.42		0.71
Coyote[Φ]	116	116	110	Compromised trial	115
Rosemont[Φ]			110		114
Gidgee[Φ]		107	107		109
PBA Bateman[Φ]	109	107	103		107
PBA Jurien[Φ]	107		104		109
Lawler[Φ]	104	105	105		106
PBA Gunyidi[Φ]	105	103	101		104
PBA Barlock[Φ]	103	100	101		104
Mandelup[Φ]	101	100	101		102
Coromup[Φ]	99	101	97		93
Sowing date	**8 May**	**4 May**	**7 May**	**31 May**	**2 Jun**
Rainfall J–M (mm)	**96**	**140**	**102**	**45**	**47**
Rainfall A–O (mm)	**149**	**230**	**284**	**113**	**155**

Special thanks to 2024 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 2: Kalannie narrow-leaf lupin.

Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	1.86	2.09	3.01		1.95
Coyote[Φ]	136	109	115	Compromised trial	124
Rosemont[Φ]			108		111
PBA Bateman[Φ]	122	104	106		119
PBA Jurien[Φ]	116		102		113
PBA Gunyidi[Φ]	112	103	103		112
Gidgee[Φ]		105	106		103
Lawler[Φ]	109	103	104		103
PBA Barlock[Φ]	109	103	99		110
Mandelup[Φ]	101	101	100		101
Coromup[Φ]	98	95	104		99
Sowing date	**8 May**	**4 May**	**1 May**	**31 May**	**1 Jun**
Rainfall J–M (mm)	**108**	**131**	**51**	**37**	**73**
Rainfall A–O (mm)	**163**	**271**	**269**	**121**	**193**

Special thanks to 2024 trial cooperator, Rowan McCreery.
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

Table 3: Merredin narrow-leaf lupin.					
Year	2020	2021	2022	2023	2024
Mean yield (t/ha)	0.84	0.98	2.45	1.16	0.45
Rosemont(Φ)			123	103	109
Gidgee(Φ)		113	119	101	109
Coyote(Φ)	109	103	120	107	106
Lawler(Φ)	107	107	113	101	106
PBA Jurien(Φ)	113		104	102	97
Mandelup(Φ)	103	104	102	100	100
PBA Bateman(Φ)	102	97	100	105	96
PBA Gunyidi(Φ)	102	99	98	103	96
PBA Barlock(Φ)	106	104	94	101	93
PBA Leeman(Φ)	84	84	98	100	103
Sowing date	**8 May**	**8 May**	**4 May**	**31 May**	**2 Jun**
Rainfall J–M (mm)	**79**	**82**	**84**	**51**	**63**
Rainfall A–O (mm)	**153**	**245**	**320**	**141**	**166**

Special thanks to 2024 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 2025.

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: Lupin disease guide for Western Australia.						
Variety	Anthracnose	Bean yellow mosaic virus (BYMV)	Cucumber mosaic virus (CMV)	Phomopsis pod infection	Phomopsis stem infection	Sclerotinia stem rot
Coromup(Φ)	MRMS	S (P)	MR	S	MR	S (P)
Coyote(Φ)	MS	MR (P)	MRMS	MRMS	S	S (P)
Gidgee(Φ)	MRMS	S (P)	MRMS	S	MR	S (P)
Jenabillup(Φ)	MRMS		MRMS	MR	MS	S (P)
Lawler(Φ)	MS	MS (P)	MRMS	MS	MR	S (P)
Mandelup(Φ)	MRMS	S (P)	MRMS	S	MR	S (P)
PBA Barlock(Φ)	S	MS (P)	MRMS	MR	MR	S (P)
PBA Bateman(Φ)	MRMS	MR (P)	MR	S	RMR	S (P)
PBA Gunyidi(Φ)	MS	MS (P)	MRMS	MRMS	RMR	S (P)
PBA Jurien(Φ)	MS	MRMS (P)	MS	MRMS	RMR	S (P)
PBA Leeman(Φ)	MR	S (P)	MRMS	MRMS	MR	S (P)
Rosemont(Φ)	MRMS (P)	MRMS (P)	MR	MRMS	MR	S (P)
Wonga	MS	MS (P)	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, T = tolerant, MT = moderately tolerant, MI = moderately intolerant, I = intolerant, VI = very intolerant, (P) = provisional rating, - hyphen indicates a range, / indicates pathotype differences, # warning, may be more susceptible to alternate pathotypes, ^ line contains a few susceptible off types, ( ) show outlier.

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