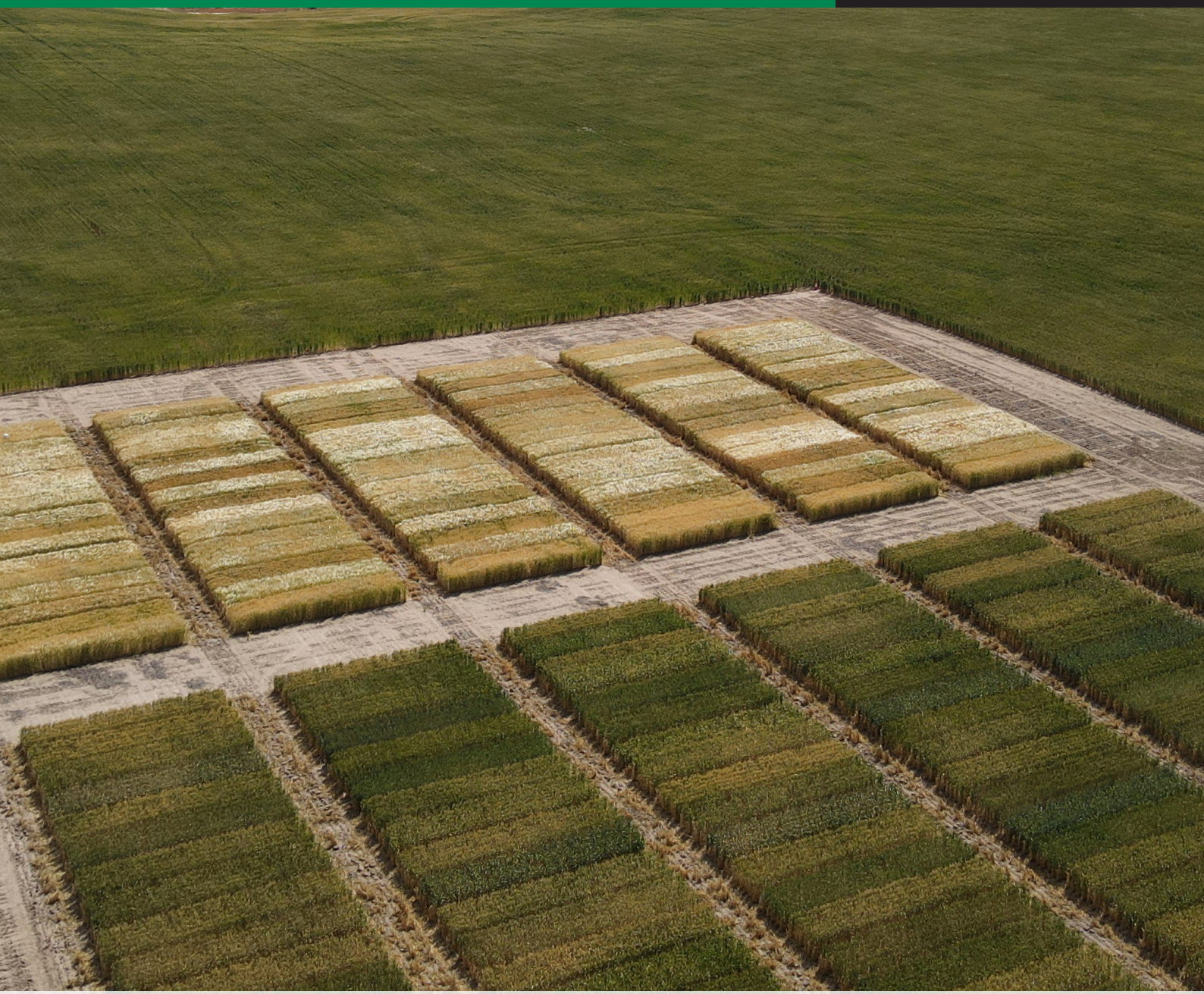
NVT HARVEST REPORT

GRDC NATIONAL VARIETY TRIALS™

REVISED MAY 2023



Kwinana West
Western Region

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COVER: NVT barley and wheat, Lake Grace, WA in 2022.
PHOTO: Isabelle Rogers

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grdc.com.au/harvestreports

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
grdc.com.au/nvt-crop-sowing-guides

INTRODUCTION

This ***NVT Harvest Report*** provides information to support growers and advisers with decisions on variety selection for **Kwinana West**. 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 2022 and long-term yield performance of varieties of crop species suitable for production in **Kwinana West** 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 acknowledges that an ongoing project of this type would not be possible without the cooperation of growers prepared to contribute sites and who often assist with the management of trials on their property.

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 Statistics for the Australian Grains Industry (SAGI) program.

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 this **Kwinana West** Harvest Report, 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 West**.

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.

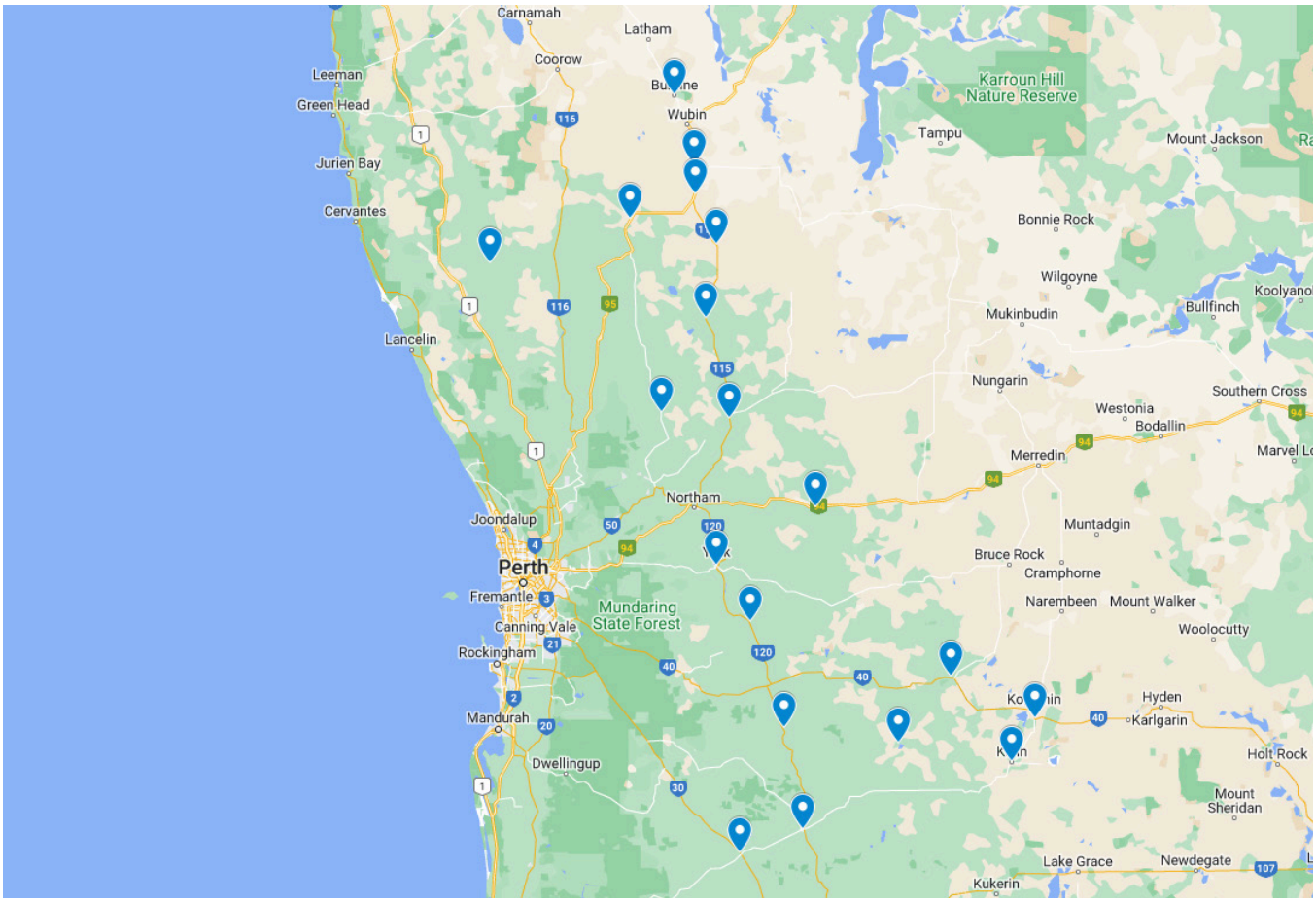
Trials listed as compromised are not suitable for making variety decisions. Results can be found in the Quarantined trial reports.

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

NVT SITE LOCATIONS – Kwinana West

Figure 1: Locality of NVT trial sites in Kwinana West from 2018 to 2022.

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.

Variety	Variety owner	Grain classification	End Point Royalty* ($)	Comments supplied by variety owner
Brumby(Ф)	InterGrain	Milling	3.50	Mid-maturing, with a slightly later time of flowering than Scepter(Ф), although earlier than RockStar(Ф). Well-suited to May sowing.
LRPB Anvil(Ф)	LongReach Plant Breeders Pty Ltd	Milling	4.25	Clearfield® Plus wheat with two-gene tolerance to label rates of Intervix® herbicide with quick maturity and bold early growth. Fast grain fill with large grain, suited to low to medium-rainfall areas. Bred by Grains Innovation Australia, developed by LongReach Plant Breeders and marketed by Pacific Seeds.
Mowhawk(Ф)	LongReach Plant Breeders Pty Ltd	Milling	4.00	A quick winter variety with similar growth habit and maturity to Longsword(Ф). Mowhawk(Ф) has broad general adaption and is ideally suited to higher-production areas and early break scenarios. Mowhawk(Ф) is quicker to heading and higher-yielding than the current benchmark winter variety, Illabo(Ф).
Stockade(Ф)	LongReach Plant Breeders Pty Ltd	Milling	None provided.	Very slow spring maturity similar to RGT Accroc(Ф). Suitable for high-rainfall zones of south-west Victoria, south-east South Australia and Tasmania as main target area but will have relevance to north-east Victoria and south-east slopes. Growth habit with high production canopy with steady biomass accumulation over season based on its slower maturity. Potential variety replacement for RGT Accroc(Ф) and LRPB Beaufort(Ф) feed wheats.

* EPR amount is ex-GST, (Ф) denotes Plant Breeder's Rights apply.

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

Wheat variety yield performance – Kwinana West

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: Ballidu main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.15	0.64	3.27		
Calibre(Ф)			109	No trial	No trial
Vixen(Ф)	108	127	111		
Sting(Ф)		125	110		
Devil(Ф)	111	112	107		
Scepter(Ф)	109	112	107		
RockStar(Ф)	112	101	105		
LRPB Avenger(Ф)		125	106		
Ninja(Ф)	106	99	104		
LRPB Havoc(Ф)	103	108	106		
Catapult(Ф)	106	105	100		
IMI-TOLERANT					
LRPB Anvil(Ф)			103		
Razor CL Plus(Ф)	100	114	106		
Hammer CL Plus(Ф)			103		
Sowing date	**25 May**	**7 Jun**	**8 May**		
Rainfall J–M (mm)	**55**	**6**	**105**		
Rainfall A–O (mm)	**341**	**235**	**170**		

No 2022 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 2: Beverley main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.84	2.94		4.55	5.69
Vixen(Ф)	114	114	Compromised trial	112	102
Calibre(Ф)				112	110
Ballista(Ф)		106		110	111
Devil(Ф)	108	107		110	108
Sting(Ф)		110		110	104
Scepter(Ф)	109	108		109	106
RockStar(Ф)	106	104		109	110
Brumby(Ф)				108	109
Ninja(Ф)	104	103		106	108
LRPB Havoc(Ф)	110	109		105	96
IMI-TOLERANT					
Razor CL Plus(Ф)	106	107		104	98
Hammer CL Plus(Ф)				103	100
LRPB Anvil(Ф)				103	90
Sowing date	**30 May**	**7 Jun**	**11 May**	**22 May**	**12 May**
Rainfall J–M (mm)	**100**	**3**	**50**	**91**	**11**
Rainfall A–O (mm)	**237**	**282**	**213**	**434**	**387**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 3: Bolgart main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		3.09		6.40	6.22
RockStar(Ф)	Compromised trial	105	Compromised trial	110	111
Calibre(Ф)				108	108
Devil(Ф)		108		110	108
Brumby(Ф)				110	110
Ballista(Ф)		108		107	110
Scepter(Ф)		108		110	106
Vixen(Ф)		113		112	100
Sting(Ф)		112		108	102
Ninja(Ф)		102		106	109
Kinsei(Ф)		99		105	109
IMI-TOLERANT					
Razor CL Plus(Ф)		105		104	97
Hammer CL Plus(Ф)				101	99
Sheriff CL Plus(Ф)		97		102	100
Sowing date	**25 May**	**7 Jun**	**25 May**	**24 May**	**3 May**
Rainfall J–M (mm)	**99**	**0**	**49**	**122**	**57**
Rainfall A–O (mm)	**349**	**270**	**185**	**353**	**399**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 4: Buntine main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.76	1.30	1.49		3.99
Calibre(Ф)			113	Compromised trial	109
Vixen(Ф)	111	132	119		105
Devil(Ф)	109	117	111		111
RockStar(Ф)	109	107	108		114
Scepter(Ф)	109	116	112		109
Sting(Ф)		128	114		104
Ballista(Ф)		119			106
Brumby(Ф)					111
LRPB Avenger(Ф)		129	114		100
LRPB Havoc(Ф)	106	111	113		101
IMI-TOLERANT					
LRPB Anvil(Ф)			113		96
Razor CL Plus(Ф)	103	114	108		97
Hammer CL Plus(Ф)			105		98
Sowing date	**25 May**	**7 Jun**	**27 May**	**10 May**	**20 May**
Rainfall J–M (mm)	**74**	**9**	**113**	**115**	**59**
Rainfall A–O (mm)	**254**	**173**	**149**	**331**	**258**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 5: Corrigin main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.18	2.14	1.43	4.41	5.48
Calibre(Ф)			124	113	110
Vixen(Ф)	108	114	131	114	104
Devil(Ф)	113	108	114	112	108
RockStar(Ф)	114	105	104	111	109
Sting(Ф)		111	124	112	104
Scepter(Ф)	110	108	115	111	106
Ballista(Ф)		107		110	107
Brumby(Ф)				110	106
LRPB Avenger(Ф)		112	128		100
Ninja(Ф)	108	102	100	107	105
IMI-TOLERANT					
LRPB Anvil(Ф)			130	104	98
Razor CL Plus(Ф)	99	106	115	105	98
Hammer CL Plus(Ф)			112	103	101
Sowing date	**25 May**	**7 Jun**	**25 May**	**18 May**	**12 May**
Rainfall J–M (mm)	**96**	**29**	**66**	**64**	**44**
Rainfall A–O (mm)	**230**	**244**	**167**	**397**	**377**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 6: Cunderdin main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.77	1.89	3.38	3.85	4.09
Calibre(Ф)			110	112	110
Devil(Ф)	112	112	108	110	108
Vixen(Ф)	108	122	115	115	97
RockStar(Ф)	113	107	105	108	112
Ballista(Ф)		111		108	110
Scepter(Ф)	109	112	109	110	105
Sting(Ф)		118	111	112	101
Brumby(Ф)				107	109
Ninja(Ф)	107	102	103	104	108
Catapult(Ф)	108	103	101	102	109
IMI-TOLERANT					
Hammer CL Plus(Ф)			104	104	99
LRPB Anvil(Ф)			110	108	87
Razor CL Plus(Ф)	99	109	106	106	94
Sowing date	**31 May**	**7 Jun**	**28 May**	**26 May**	**12 May**
Rainfall J–M (mm)	**25**	**6**	**98**	**87**	**74**
Rainfall A–O (mm)	**248**	**199**	**136**	**309**	**310**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 7: Dalwallinu main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)				4.27	4.75
RockStar(Ф)	No trial	No trial	No trial	109	117
Devil(Ф)				111	111
Brumby(Ф)				108	112
Denison(Ф)				102	117
Kinsei(Ф)				103	114
Scepter(Ф)				111	106
Calibre(Ф)				107	109
Ninja(Ф)				104	109
Vixen(Ф)				118	96
Catapult(Ф)				99	113
IMI-TOLERANT					
Valiant(Ф) CL Plus				99	116
Chief CL Plus(Ф)				109	99
Sheriff CL Plus(Ф)				104	100
Sowing date				**18 May**	**18 May**
Rainfall J–M (mm)				**134**	**121**
Rainfall A–O (mm)				**331**	**306**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 8: Dandaragan main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.03	5.14	4.92	5.29	3.57
RockStar(Ф)	111	111	109	112	115
Devil(Ф)	109	111	108	109	112
Brumby(Ф)				110	112
Denison(Ф)		107	104	110	112
Kinsei(Ф)	108	106	106	109	111
Scepter(Ф)	106	108	107	107	109
Calibre(Ф)			107	104	109
Ninja(Ф)	105	104	107	106	108
Catapult(Ф)	106	107	102	104	108
Vixen(Ф)	103	109	106	104	104
IMI-TOLERANT					
Valiant(Ф) CL Plus			100	108	109
Chief CL Plus(Ф)	103	104	99	104	101
Sheriff CL Plus(Ф)		100	101	103	102
Sowing date	**11 Jun**	**7 Jun**	**25 May**	**17 May**	**20 May**
Rainfall J–M (mm)	**25**	**10**	**77**	**84**	**40**
Rainfall A–O (mm)	**248**	**241**	**220**	**455**	**576**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 9: Goomalling main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	3.19	2.87	1.27	4.68	6.93
Vixen(Ф)	116	123	120	113	107
Sting(Ф)		118	119	111	107
Calibre(Ф)			120	116	107
Scepter(Ф)	109	111	111	113	107
Devil(Ф)	106	109	110	115	107
Ballista(Ф)		109		111	108
RockStar(Ф)	104	102	105	116	107
LRPB Havoc(Ф)	116	114	107	105	103
Brumby(Ф)				112	107
LRPB Avenger(Ф)		119	113		101
IMI-TOLERANT					
Razor CL Plus(Ф)	109	112	111	101	103
LRPB Anvil(Ф)			110	102	98
Hammer CL Plus(Ф)			109	101	101
Sowing date	**5 Jun**	**7 Jun**	**25 May**	**31 May**	**24 May**
Rainfall J–M (mm)	**99**	**10**	**84**	**93**	**119**
Rainfall A–O (mm)	**349**	**250**	**153**	**330**	**314**

Special thanks to 2022 trial cooperator, Doug French & Co.
Learn more via the NVT Long Term Yield Reporter

Table 10: Kondinin main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			1.51	4.56	5.24
Calibre(Ф)	No trial	No trial	121	112	114
Vixen(Ф)			120	116	108
Devil(Ф)			111	111	111
Sting(Ф)			118	112	108
Scepter(Ф)			111	111	109
Ballista(Ф)				108	110
RockStar(Ф)			105	108	112
Brumby(Ф)				107	109
LRPB Avenger(Ф)			115		102
Ninja(Ф)			103	104	107
IMI-TOLERANT					
LRPB Anvil(Ф)			114	108	99
Razor CL Plus(Ф)			109	106	100
Hammer CL Plus(Ф)			109	104	101
Sowing date			**25 May**	**25 May**	**16 May**
Rainfall J–M (mm)			**71**	**72**	**26**
Rainfall A–O (mm)			**169**	**345**	**350**

Special thanks to 2022 trial cooperator, Chris Browning, Comb & Co Holdings.
Learn more via the NVT Long Term Yield Reporter

Table 11: Kulin main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		1.68	2.82	4.61	4.96
Vixen(Ф)	Compromised trial	127	124	116	110
Sting(Ф)		119	119	111	108
LRPB Havoc(Ф)		119	114	113	106
LRPB Avenger(Ф)		123	117		104
Calibre(Ф)			117	108	109
Scepter(Ф)		114	112	110	108
Devil(Ф)		113	110	108	108
Ballista(Ф)		107		106	108
Brumby(Ф)				107	107
RockStar(Ф)		106	104	106	107
IMI-TOLERANT					
LRPB Anvil(Ф)			115	110	102
Razor CL Plus(Ф)		112	113	108	104
Hammer CL Plus(Ф)			109	103	102
Sowing date	**27 May**	**7 Jun**	**14 May**	**21 May**	**26 May**
Rainfall J–M (mm)	**98**	**5**	**50**	**59**	**33**
Rainfall A–O (mm)	**160**	**171**	**175**	**388**	**319**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 12: Miling main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.38	1.38	2.39	4.70	5.76
Vixen(Ф)	109	128	123	110	97
Devil(Ф)	107	107	107	108	108
Brumby(Ф)				109	111
RockStar(Ф)	106	98	102	109	112
Scepter(Ф)	107	111	110	108	105
LRPB Havoc(Ф)	108	117	120	111	94
Sting(Ф)		122	115	105	99
Calibre(Ф)			108	102	105
Ninja(Ф)	103	99	101	104	109
LRPB Avenger(Ф)		124	119		91
IMI-TOLERANT					
Chief CL Plus(Ф)	104	99	106	108	97
Razor CL Plus(Ф)	103	117	113	103	94
Sheriff CL Plus(Ф)		97	102	104	101
Sowing date	**26 May**	**7 Jun**	**28 May**	**21 May**	**17 May**
Rainfall J–M (mm)	**70**	**8**	**120**	**126**	**114**
Rainfall A–O (mm)	**356**	**270**	**152**	**403**	**401**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 13: Narrogin main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	**2.62**	**3.69**	**2.23**	**4.21**	**5.28**
RockStar(Ф)	108	107	113	108	126
Devil(Ф)	108	110	114	111	118
Calibre(Ф)			112	117	110
Scepter(Ф)	107	110	114	111	112
Vixen(Ф)	107	115	119	116	101
Brumby(Ф)				106	119
Sting(Ф)		112	113	114	100
Ballista(Ф)		107		112	105
Kinsei(Ф)	104	101	105	101	120
Denison(Ф)		98	103	97	125
IMI-TOLERANT					
Valiant(Ф) CL Plus			98	94	123
Chief CL Plus(Ф)	100	102	105	98	106
LRPB Anvil(Ф)				108	89
Sowing date	**11 Jun**	**7 Jun**	**25 May**	**21 May**	**28 May**
Rainfall J–M (mm)	**99**	**13**	**68**	**63**	**19**
Rainfall A–O (mm)	**402**	**324**	**250**	**477**	**350**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 14: Yealering main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	**3.50**		**3.71**	**3.16**	**5.03**
RockStar(Ф)	110	No trial	112	111	110
Calibre(Ф)			113	113	108
Devil(Ф)	110		111	112	109
Vixen(Ф)	111		108	115	108
Scepter(Ф)	109		109	111	108
Brumby(Ф)				107	108
Sting(Ф)			108	111	106
Ballista(Ф)				105	105
Ninja(Ф)	107		108	104	105
Kinsei(Ф)	105		107	103	105
IMI-TOLERANT					
Razor CL Plus(Ф)	103		101	104	101
LRPB Anvil(Ф)			95	111	102
Valiant(Ф) CL Plus			100	102	103
Sowing date	**25 May**		**9 May**	**31 May**	**27 May**
Rainfall J–M (mm)	**58**		**67**	**62**	**25**
Rainfall A–O (mm)	**243**		**182**	**366**	**316**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 15: York main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	**4.24**	**2.78**	**2.65**	**4.38**	**5.29**
Calibre(Ф)			114	103	107
Vixen(Ф)	115	121	113	105	95
Devil(Ф)	107	109	112	105	106
Ballista(Ф)		106		105	108
Sting(Ф)		115	111	104	99
Scepter(Ф)	108	110	111	105	103
RockStar(Ф)	104	103	111	105	109
Brumby(Ф)				106	107
Ninja(Ф)	102	101	108	104	106
LRPB Avenger(Ф)		118	105		91
IMI-TOLERANT					
Razor CL Plus(Ф)	108	110	104	102	94
Hammer CL Plus(Ф)			103	100	98
LRPB Anvil(Ф)				97	87
Sowing date	**31 May**	**7 Jun**	**25 May**	**17 May**	**12 May**
Rainfall J–M (mm)	**119**	**4**	**54**	**135**	**11**
Rainfall A–O (mm)	**306**	**250**	**180**	**447**	**371**

Special thanks to 2022 trial cooperator, Jonlorrie Farms York KLKL.
Learn more via the NVT Long Term Yield Reporter

Table 16: Narrogin early season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		**3.58**		**5.03**	**5.96**
Mowhawk(Ф)	Compromised trial		Compromised trial		115
RockStar(Ф)		105		123	108
Kinsei(Ф)		104		122	109
Denison(Ф)				110	118
Catapult(Ф)		103		120	109
Cutlass(Ф)		106		109	114
Longsword(Ф)		106		111	108
Stockade(Ф)					108
Coota(Ф)				113	107
RGT Zanzibar				104	105
IMI-TOLERANT					
Valiant(Ф) CL Plus				111	112
Sheriff CL Plus(Ф)		93		110	92
Sowing date	**28 Apr**	**18 Apr**	**29 Apr**	**28 Apr**	**29 Apr**
Rainfall J–M (mm)	**99**	**13**	**68**	**63**	**19**
Rainfall A–O (mm)	**402**	**324**	**250**	**477**	**350**
Irrigation A–O (mm)			**10**	**10**	**10**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 17: York early season wheat.					
Year	2018	2019	2020	2021	2022
Mean yield (t/ha)				4.78	5.29
Longsword(Ⓑ)	Compromised trial	Trial failed	Compromised trial	116	124
Illabo(Ⓑ)				109	122
Mowhawk(Ⓑ)					116
Stockade(Ⓑ)					118
RGT Zanzibar				109	116
LRPB Nighthawk(Ⓑ)				99	113
Cutlass(Ⓑ)				105	99
Kinsei(Ⓑ)				108	92
LRPB Trojan(Ⓑ)				105	91
Catapult(Ⓑ)				106	89
IMI-TOLERANT					
Valiant(Ⓑ) CL Plus				105	97
Sheriff CL Plus(Ⓑ)				97	81
Sowing date	**25 May**	**25 Apr**	**24 Apr**	**23 Apr**	**14 Apr**
Rainfall J–M (mm)	**119**	**4**	**54**	**135**	**11**
Rainfall A–O (mm)	**306**	**250**	**180**	**447**	**371**
Irrigation A–O (mm)			**10**	**10**	**10**

Special thanks to 2022 trial cooperator, Jonlorrie Farms York KLKL.
Learn more via the NVT Long Term Yield Reporter

Wheat variety quality – Kwinana West

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 2021 and 2022 NVT averaged for trials in the Kwinana West 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 13 NVT sites in Kwinana West in 2021.

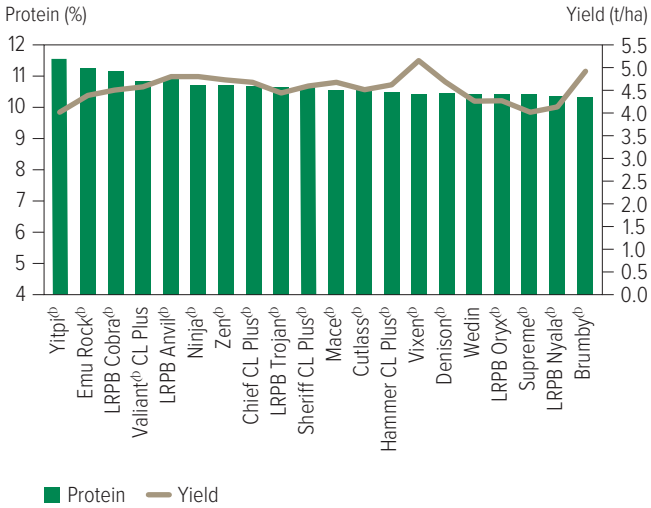


Figure 2: Protein (%) and yield (t/ha) comparisons for main season wheat varieties from 14 NVT sites in Kwinana West in 2022.

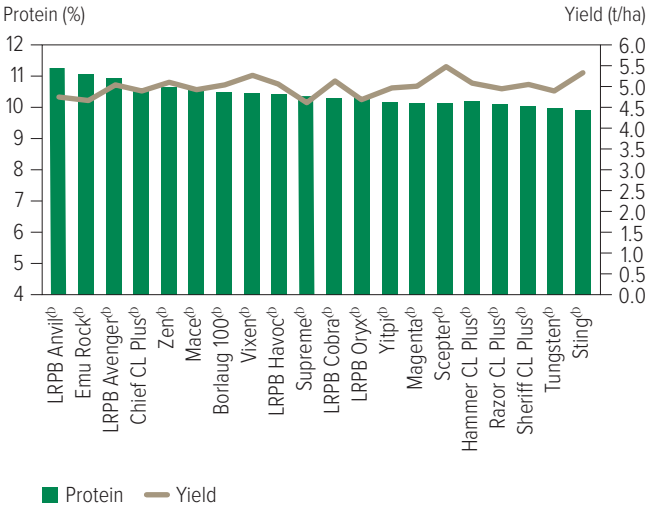


Figure 3: Protein (%) and yield (t/ha) comparisons for early season wheat varieties from two NVT sites in Kwinana West in 2021.

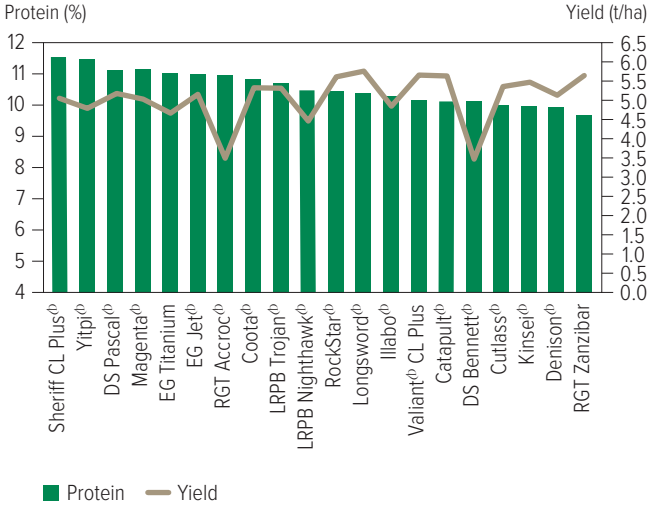
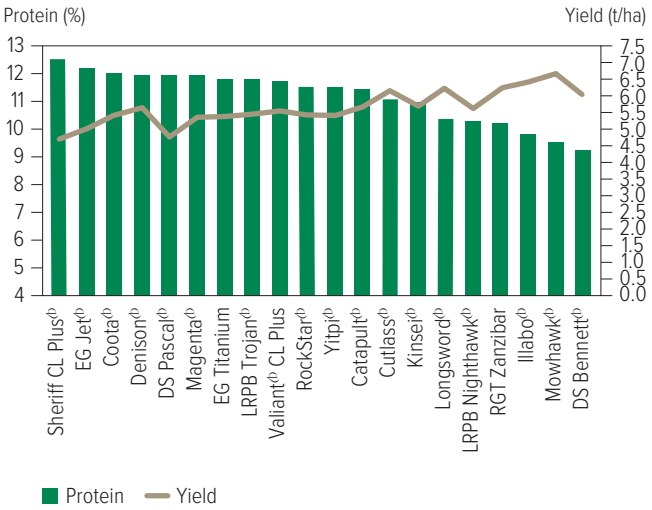


Figure 4: Protein (%) and yield (t/ha) comparisons for early season wheat varieties from two NVT sites in Kwinana West in 2022.



Test weight comparisons

Figure 5: Test weight (kg/hL) comparisons for main season wheat varieties from 13 NVT sites in Kwinana West in 2021.

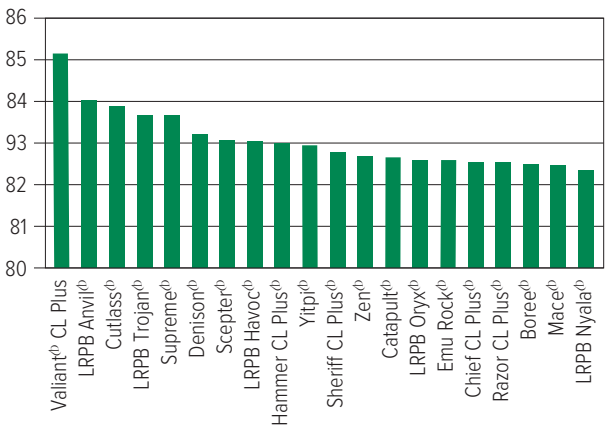


Figure 6: Test weight (kg/hL) comparisons for main season wheat varieties from 14 NVT sites in Kwinana West in 2022.

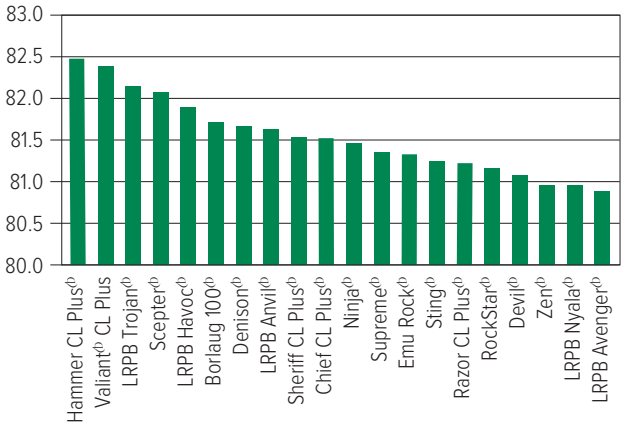


Figure 7: Test weight (kg/hL) comparisons for early season wheat varieties from two NVT sites in Kwinana West in 2021.

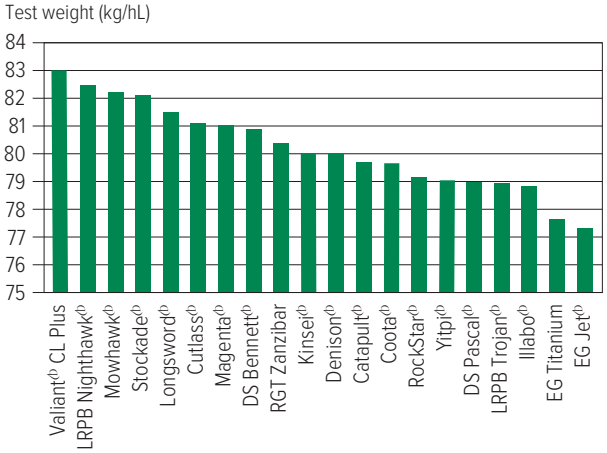
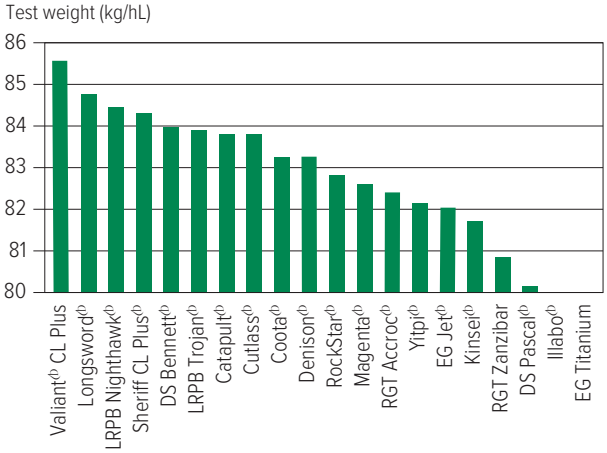


Figure 8: Test weight (kg/hL) comparisons for early season wheat varieties from two NVT sites in Kwinana West in 2022.



Screenings comparisons

Figure 9: Screenings (<2.0mm) comparisons for main season wheat varieties from 13 NVT sites in Kwinana West in 2021.

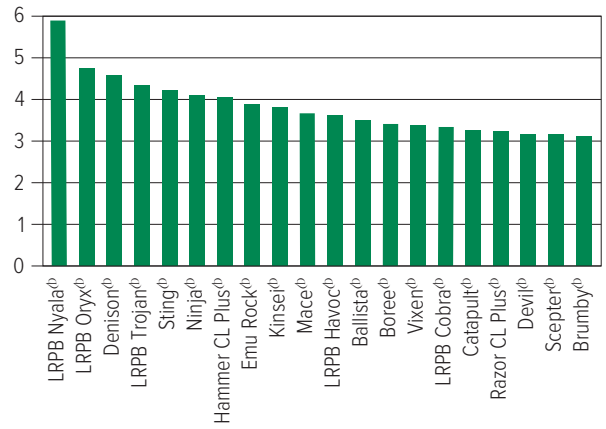


Figure 10: Screenings (<2.0mm) comparisons for main season wheat varieties from 14 NVT sites in Kwinana West in 2022.

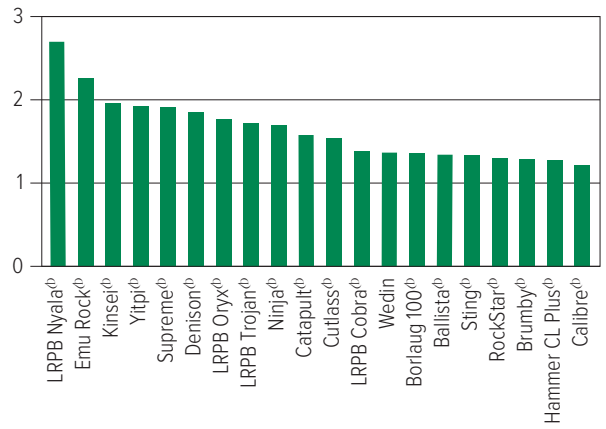


Figure 11: Screenings (<2.0mm) comparisons for early season wheat varieties from two NVT sites in Kwinana West in 2021.

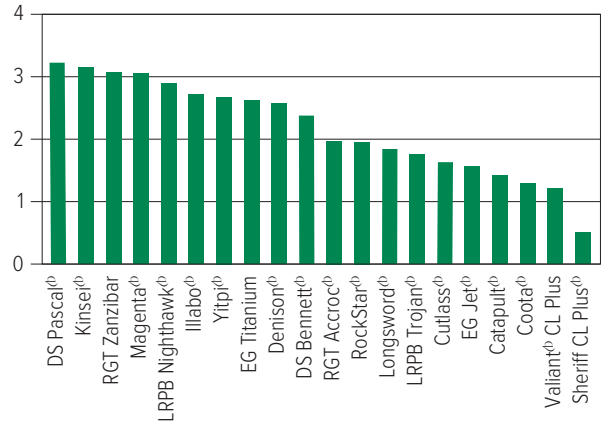
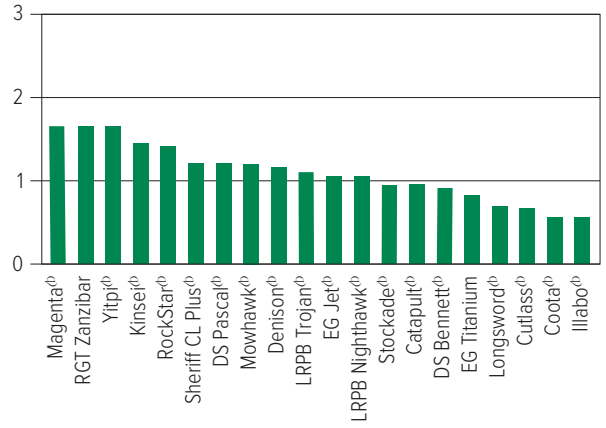


Figure 12: Screenings (<2.0mm) comparisons for early season wheat varieties from two NVT sites in Kwinana West in 2022.



Wheat variety disease ratings – Western Australia

The following table contains varietal ratings for the predominant diseases of wheat in Western Australia. These ratings are updated annually by crop pathologists and were released in March 2023.

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 18: Wheat disease guide for Western Australia.

Variety	Yellow spot	Nodorum blotch (leaf)	Nodorum blotch (glume)	Stem rust	Stripe rust (west coast resistance)	Leaf rust	Powdery mildew	Septoria tritici blotch	RLN resistance (*Pratylenchus neglectus*)	RLN resistance (*Pratylenchus quasitereoides*)	CCN	Crown rot
Ballista(b)	MS	MRMS	MS	MR	RMR	S	S	SVS	S		MRMS	S
Borlaug 100(b)	MRMS	MRMS	MRMS	MR	RMR	MR	S	MS	S		MS	MSS
Brumby(b)	MRMS	MS	MRMS	MR	RMR	SVS	R	MSS (P)	MRMS		MRMS	S
Calibre(b)	MRMS	MSS	MSS	MR	RMR	S	MSS	SVS	S	MR (P)	MRMS	S
Catapult(b)	MRMS	MRMS	MRMS	MR	RMR	S	S	S	S	MRMS	R	MSS
Chief CL Plus(b)	MRMS	MRMS	MS	MR	S	MR	S	MSS	MRMS	MRMS	MS	MSS
Coota(b)	MSS	MS	MRMS	RMR	MR	MR	S	MSS	MR		MR	MSS
Cutlass(b)	MSS	MRMS	MRMS	R	RMR	RMR	S	MSS	MSS	MS (P)	MR	S
Denison(b)	MRMS	MRMS	MR	MS	MR	S	S	MS	S	MR (P)	MS	MSS
Devil(b)	MRMS	MRMS	MS	S	MR	SVS	S	SVS	MSS	MRMS	MSS	MSS
DS Bennett(b)	MRMS	MR	MR	MS	RMR	SVS	RMR (SVS)	MR	S		S	VS
DS Pascal(b)	MS	MRMS	MRMS	MSS	RMR	MS	RMR	MS	S		S	S
EG Jet(b)	MRMS		MSS	S	RMR	S	MS	MSS	S		MRMS	S
EG Titanium	MSS		MRMS	MS	RMR	MS	MSS	MSS	MSS		R	MSS
EGA Wedgetail(b)	MSS	MRMS	MRMS	MRMS	MS	MSS	MRMS	MRMS	S		S	S
Emu Rock(b)	MS	MRMS	S	MS	MRMS	SVS	MSS	S	MSS	MS (P)	S	MSS
Hammer CL Plus(b)	MRMS	MRMS	MRMS	MR	RMR	S	SVS	MSS	MSS	MR (P)	MRMS	MSS
Illabo(b)	MS	MR	MR	MRMS	RMR	S	RMR	MR	MSS	RMR	MRMS	S
Kinsei(b)	MS	MRMS	MRMS	MSS	MRMS	MSS	S	MSS	S	S	MSS	MSS
Longsword(b)	MRMS	MRMS	MRMS	MR	RMR	MR#	MRMS	MRMS	MRMS		MRMS	MSS
LRPB Anvil(b)	MSS	MSS	MSS	MR	RMR	SVS	S	S	MSS		MRMS	MSS
LRPB Avenger(b)	MS	MS	S	MS	MRMS	S	S	MSS	MSS		MRMS	SVS
LRPB Cobra(b)	MRMS	MS	MRMS	MR	MSS	MR#	MSS	S	MSS	MSS (P)	MS	S
LRPB Havoc(b)	MRMS	MRMS	MS	S	MR	S	MSS	MRMS	S	MRMS	S	MSS
LRPB Nighthawk(b)	MS	MR	MRMS	RMR	RMR	MSS	MSS	MRMS	MSS	MRMS (P)	MS	MSS
LRPB Nyala(b)	MS	MR	MSS	SVS	RMR	S	R	SVS	S		MSS	MSS
LRPB Oryx(b)	MSS	MSS	S	MR	RMR	RMR#	RMR	SVS	MSS	MSS (P)	S	MSS
LRPB Trojan(b)	MSS	MS	MS	MRMS	MR	MR#	S	S	MSS	MS (P)	MS	MS
Mace(b)	MRMS	MS	MS	MRMS	RMR	S	MSS	S	MS	MRMS	MRMS	S
Mowhawk(b)	MRMS (P)			RMR (P)	RMR (P)	MR (P)						
Razor CL Plus(b)	MSS	MS	MS	MRMS	RMR	S	MSS	SVS	S		MR	S
RockStar(b)	MRMS	MRMS	MRMS	MRMS	RMR	S	MS	S	MRMS	MS	MSS	S
Scepter(b)	MRMS	MSS	MRMS	MRMS	RMR	MSS	S	S	S	MS	MRMS	MSS
Severn(b)	MRMS	MR (P)	MR	MS	RMR	MRMS	R	MS (P)	S		MSS (P)	S
Sheriff CL Plus(b)	MRMS	MRMS	MRMS	MS	MS	SVS	SVS	S	MRMS	MRMS (P)	MS	S
Sting(b)	MRMS	MS	MS	MRMS	MR	SVS	S	S	MRMS	MS (P)	MS	MSS
Stockade(b)	MRMS	MR	MRMS	MS	RMR	MR (P)	S	MS (P)	S		MRMS	S
Valiant(b) CL Plus	MRMS	MRMS	MR	MR	RMR	S	S	MRMS	S	MS (P)	MSS (P)	S
Vixen(b)	MRMS	MSS	MSS	MRMS	MRMS	SVS	SVS	MSS	MRMS	MSS	MSS	S
Yitpi(b)	SVS	MRMS	MS	S	MRMS	S	MS	MS	MSS	MS	MR	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.

Variety	Variety owner	Grain classification#	End point royalty* ($)	Comments supplied by variety owner
Combat(Φ)	InterGrain	Feed	3.50	Mid-maturity suited to all regions. Semi-prostrate growth habit that will provide more weed competition than Rosalind(Φ). A potential variety replacement for Rosalind(Φ) with a more competitive plant type.
Fandaga(Φ)	AGF Seeds	Feed	None provided.	Slower maturity than RGT Planet(Φ).
Titan AX(Φ)	Australian Grain Technologies	Under malt evaluation	4.55	The world's first CoAXium® barley variety. Mid-season maturity, slightly later than Compass(Φ), similar to RGT Planet(Φ). Agronomically similar to Compass(Φ).
Zena(Φ) CL	InterGrain	Under malt evaluation	4.25	Zena(Φ) CL is an imidazolinone-tolerant barley variety best-suited to medium-high rainfall environments.

* EPR amount is ex-GST, (Φ) denotes Plant Breeder's Rights apply, # barley malting quality accreditation correct at time of download (10 March 2023).

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

Barley variety yield performance – Kwinana West

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: Beverley main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)				3.98	6.88
Combat[Ф]	No trial	No trial	Compromised trial	108	110
RGT Planet[Ф]				109	106
Leabrook[Ф]				110	105
Minotaur[Ф]				102	107
Beast[Ф]				105	105
Compass[Ф]				108	103
Rosalind[Ф]				101	106
Cyclops[Ф]				102	104
Laperouse[Ф]				100	102
Litmus[Ф]				105	98
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Zena[Ф] CL				108	106
Titan AX[Ф]					104
Commodus[Ф] CL				105	101
Maximus[Ф] CL				91	100
Sowing date			11 May	22 May	12 May
Rainfall J–M (mm)			50	91	11
Rainfall A–O (mm)			213	434	387

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 2: Bolgart main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.94	3.04	4.08	5.55	5.91
Combat[Ф]				116	113
Cyclops[Ф]			112	109	106
Buff[Ф]	125	105	104	97	103
Leabrook[Ф]	106	104	107	107	105
RGT Planet[Ф]	106	102	104	107	108
Rosalind[Ф]	97	107	106	109	107
Minotaur[Ф]			107	110	107
Laperouse[Ф]	101	103	107	106	103
Beast[Ф]		105	107	108	103
Compass[Ф]	97	103	102	103	101
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Titan AX[Ф]					104
Zena[Ф] CL				106	108
Maximus[Ф] CL	89	103	104	104	100
Commodus[Ф] CL			99	101	98
Sowing date	**25 May**	**7 Jun**	**25 May**	**24 May**	**3 May**
Rainfall J–M (mm)	**99**	**0**	**49**	**122**	**57**
Rainfall A–O (mm)	**349**	**270**	**185**	**353**	**399**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 3: Buntine main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	5.39	1.05	1.10	3.57	3.72
Buff[Ф]	101	154	161	113	113
Rosalind[Ф]	109	136	112	99	115
Beast[Ф]		126	113	104	104
Cyclops[Ф]			127	109	103
Fathom[Ф]	104	129	125	106	102
Combat[Ф]				104	109
Compass[Ф]	108	121	105	103	101
Laperouse[Ф]	105	111	119	106	101
Leabrook[Ф]	107	110	105	107	100
La Trobe[Ф]	105	120	111	100	103
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Maximus[Ф] CL	106	131	128	101	107
Titan AX[Ф]					100
Spartacus CL[Ф]	104	119	115	98	102
Commodus[Ф] CL			95	100	97
Sowing date	**25 May**	**7 Jun**	**27 May**	**10 May**	**20 May**
Rainfall J–M (mm)	**74**	**9**	**113**	**115**	**59**
Rainfall A–O (mm)	**254**	**173**	**149**	**331**	**258**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 4: Corrigin main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.81	2.63	1.16	4.53	5.65
Rosalind[Ф]	107	113	152	108	107
Beast[Ф]		112	148	106	100
Combat[Ф]				110	111
Cyclops[Ф]			98	110	103
Leabrook[Ф]	110	105	118	103	101
Compass[Ф]	109	109	142	100	97
Laperouse[Ф]	108	105	104	106	101
Minotaur[Ф]			111	106	106
La Trobe[Ф]	104	108	132	102	98
Buff[Ф]	103	108	86	105	105
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Maximus[Ф] CL	107	112	134	108	100
Spartacus CL[Ф]	103	109	131	103	96
Titan AX[Ф]					101
Commodus[Ф] CL			133	99	96
Sowing date	**25 May**	**7 Jun**	**25 May**	**18 May**	**12 May**
Rainfall J–M (mm)	**96**	**29**	**66**	**64**	**44**
Rainfall A–O (mm)	**230**	**244**	**167**	**397**	**377**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 5: Dandaragan main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	**3.31**	**5.42**	**5.51**	**5.18**	**4.28**
Combat(ф)				119	114
Cyclops(ф)			106	114	108
Minotaur(ф)			109	112	109
Rosalind(ф)	103	100	106	105	111
Laperouse(ф)	104	103	104	106	104
RGT Planet(ф)	100	101	105	106	106
Buff(ф)	101	103	95	118	100
Beast(ф)		105	104	86	108
Leabrook(ф)	106	107	101	88	106
La Trobe(ф)	101	100	100	92	102
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Maximus(ф) CL	103	99	105	110	105
Zena(ф) CL				107	106
Titan AX(ф)					104
Spartacus CL(ф)	101	98	102	98	100
Sowing date	**11 Jun**	**7 Jun**	**25 May**	**17 May**	**20 May**
Rainfall J–M (mm)	**25**	**10**	**77**	**84**	**40**
Rainfall A–O (mm)	**248**	**241**	**220**	**455**	**576**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 6: Miling main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	**4.76**	**1.39**	**2.90**	**3.67**	**6.78**
Rosalind(ф)	111	136	116	114	104
Beast(ф)		124	118	113	103
Combat(ф)				113	106
Cyclops(ф)			109	115	106
Laperouse(ф)	106	107	108	112	104
Minotaur(ф)			106	112	104
La Trobe(ф)	105	116	110	108	101
Compass(ф)	109	114	112	100	99
Leabrook(ф)	109	106	108	102	101
Fathom(ф)	106	108	106	100	100
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Maximus(ф) CL	108	127	115	122	106
Spartacus CL(ф)	104	118	112	115	103
Commodus(ф) CL			109	100	98
Titan AX(ф)					100
Sowing date	**26 May**	**7 Jun**	**28 May**	**21 May**	**17 May**
Rainfall J–M (mm)	**70**	**8**	**120**	**126**	**114**
Rainfall A–O (mm)	**356**	**270**	**152**	**403**	**401**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 7: Narrogin main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	**2.52**	**3.78**	**3.67**	**4.97**	**5.74**
Combat(ф)				109	115
Cyclops(ф)			109	108	109
Leabrook(ф)	111	110	110	109	104
Beast(ф)		111	113	105	98
Laperouse(ф)	107	105	107	104	104
RGT Planet(ф)	108	96	98	103	112
Compass(ф)	104	111	110	105	94
Buff(ф)	101	109	104	106	99
Minotaur(ф)			102	101	109
Rosalind(ф)	103	107	108	102	98
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Titan AX(ф)					105
Zena(ф) CL				102	109
Commodus(ф) CL			106	102	94
Maximus(ф) CL	98	104	106	98	96
Sowing date	**11 Jun**	**7 Jun**	**25 May**	**21 May**	**28 May**
Rainfall J–M (mm)	**99**	**13**	**68**	**63**	**19**
Rainfall A–O (mm)	**402**	**324**	**250**	**477**	**350**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 8: Yealering main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	**3.82**		**4.52**	**3.21**	**4.73**
Combat(ф)		No trial		118	119
Cyclops(ф)			112	114	115
Beast(ф)			106	115	110
Leabrook(ф)	118		106	116	107
Rosalind(ф)	111		106	111	114
Laperouse(ф)	113		107	108	109
Minotaur(ф)			105	105	110
Compass(ф)	114		101	112	102
Buff(ф)	104		106	109	107
Fathom(ф)	107		101	107	102
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Titan AX(ф)					105
Maximus(ф) CL	108		105	102	110
Commodus(ф) CL			99	106	99
Zena(ф) CL				104	103
Sowing date	**25 May**		**9 May**	**31 May**	**27 May**
Rainfall J–M (mm)	**58**		**67**	**62**	**25**
Rainfall A–O (mm)	**243**		**182**	**366**	**316**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 9: York main season barley.					
Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			3.39	4.31	6.37
Combat[Φ]	No trial	No trial		111	113
Cyclops[Φ]			107	115	103
Rosalind[Φ]			111	102	107
Minotaur[Φ]			106	105	107
Fandaga[Φ]					108
Laperouse[Φ]			105	110	100
RGT Planet[Φ]			97	99	111
Beast[Φ]			107	107	100
Buff[Φ]			104	103	103
Leabrook[Φ]			100	106	103
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Zena[Φ] CL				97	112
Maximus[Φ] CL			112	107	96
Titan AX[Φ]					104
Spartacus CL[Φ]			108	102	93
Sowing date			**25 May**	**17 May**	**12 May**
Rainfall J–M (mm)			**54**	**135**	**11**
Rainfall A–O (mm)			**180**	**447**	**371**

Special thanks to 2022 trial cooperator, Jonlorrie Farms York KLKL.
Learn more via the NVT Long Term Yield Reporter

Barley variety quality – Kwinana West

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 2021 and 2022 NVT averaged for trials in the Kwinana West 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 nine NVT sites in Kwinana West in 2021.

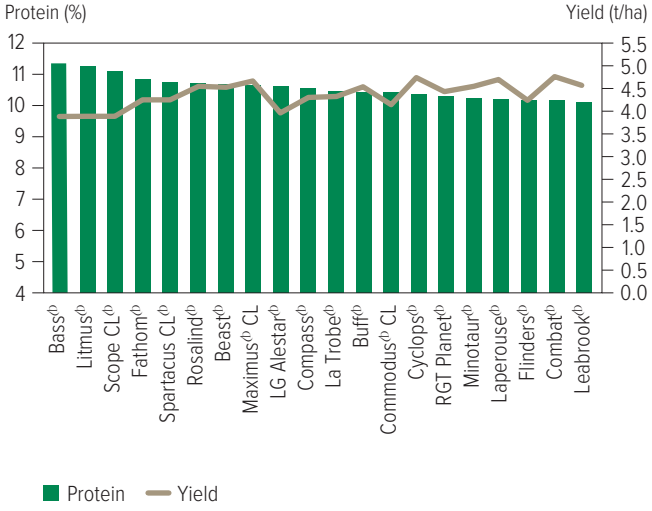
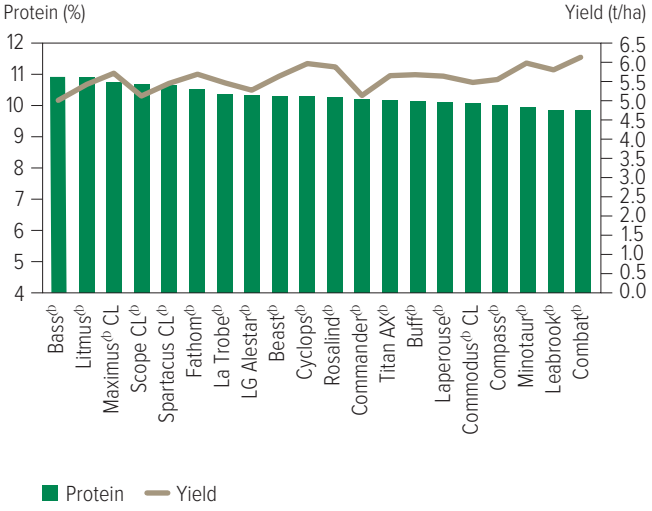


Figure 2: Protein (%) and yield (t/ha) comparisons for main season barley varieties from nine NVT sites in Kwinana West in 2022.



Test weight comparisons

Figure 3: Test weight (kg/hL) comparisons for main season barley varieties from nine NVT sites in Kwinana West in 2021.

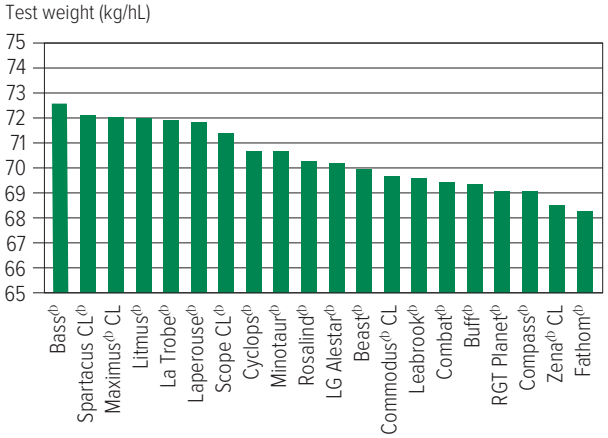
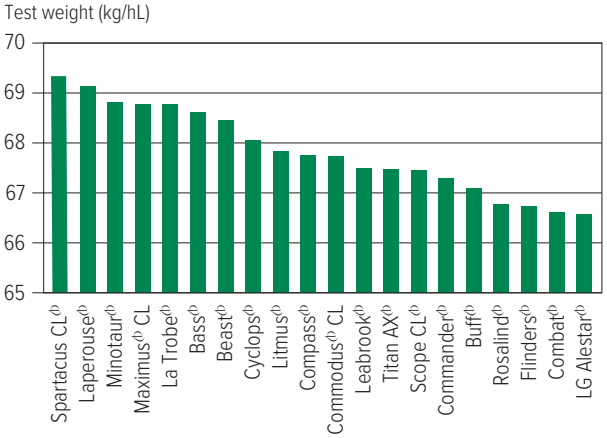


Figure 4: Test weight (kg/hL) comparisons for main season barley varieties from nine NVT sites in Kwinana West in 2022.



Screenings comparisons

Figure 5: Screenings (<2.5mm) comparisons for main season barley varieties from nine NVT sites in Kwinana West in 2021.

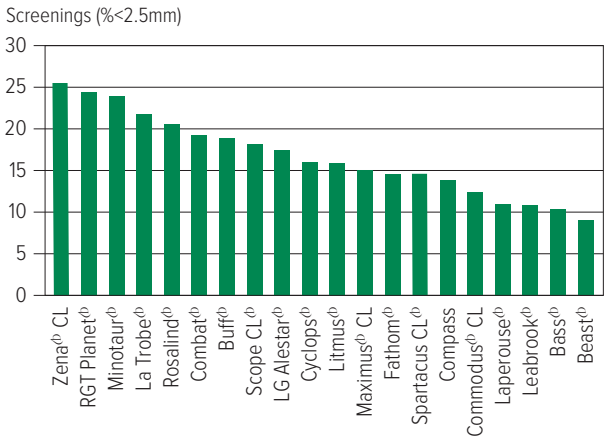
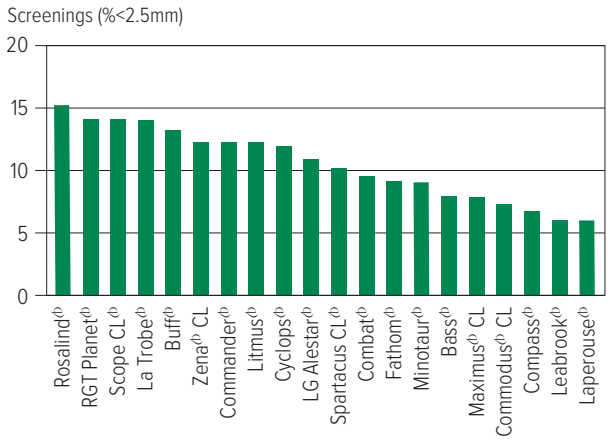


Figure 6: Screenings (<2.5mm) comparisons for main season barley varieties from nine NVT sites in Kwinana West in 2022.



Retention comparisons

Figure 7: Retention (>2.5mm) comparisons for main season barley varieties from nine NVT sites in Kwinana West in 2021.

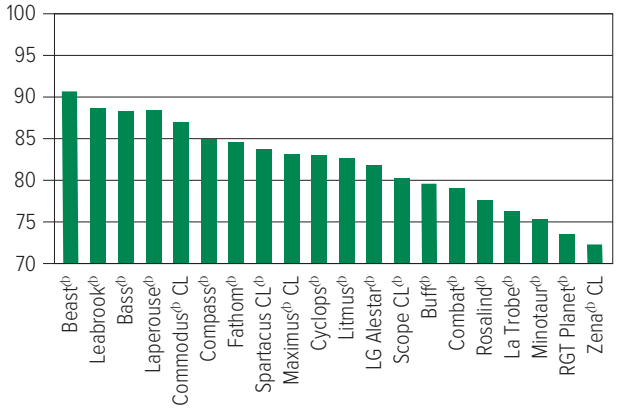
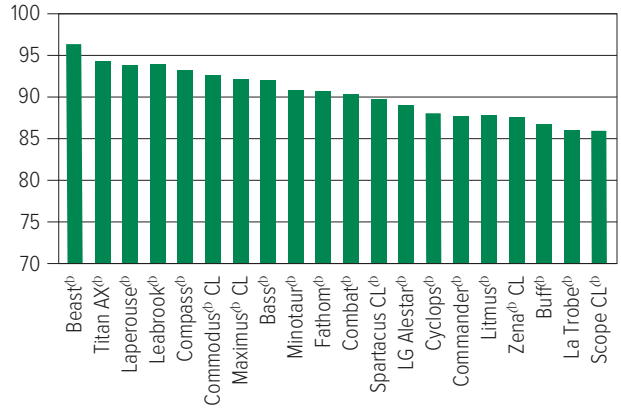


Figure 8: Retention (>2.5mm) comparisons for main season barley varieties from nine NVT sites in Kwinana West in 2022.



Barley variety disease ratings – Western Australia

The following table contains varietal ratings for the predominant diseases of barley in Western Australia. These ratings are updated annually by crop pathologists and were released in March 2023.

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 10: Barley disease guide for Western Australia.

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

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, ^ 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.

Variety	Variety owner	Grain classification	End point royalty* ($)	Comments supplied by variety owner
Koala$^{\Phi}$	National Oat Breeding Program	Grain	None provided.	High-yielding, tall dwarf variety with similar height to Bannister$^{\Phi}$ and taller than Mitika$^{\Phi}$, Bilby$^{\Phi}$ or Kowari$^{\Phi}$. Koala$^{\Phi}$ has a mid-season maturity that can be seven days later to head compared with Bannister$^{\Phi}$ and Williams$^{\Phi}$. Early vigour is similar to Bannister$^{\Phi}$and slightly slower than Bilby$^{\Phi}$ and Yallara$^{\Phi}$. Commercialised by Seednet.

* EPR amount is ex-GST, $^{\Phi}$ denotes Plant Breeder's Rights apply.

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

Oat variety yield performance – Kwinana West

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: Corrigin oat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.23	2.69	1.05	4.18	5.36
Bannister[Φ]	105	104	88	106	105
Wandering	105	107	84	105	102
Koala[Φ]	102	97	65	108	110
Bilby[Φ]	103	102	110	103	100
Williams[Φ]	101	107	71	98	100
Kowari[Φ]	98	99	111	98	97
Kojonup[Φ]	92	85	54	103	102
Durack[Φ]	88	95	103	82	89
Yallara[Φ]	86	97	80	77	89
Carrolup	86	93	61	83	90
Sowing date	**25 May**	**7 Jun**	**25 May**	**18 May**	**12 May**
Rainfall J–M (mm)	**96**	**29**	**66**	**64**	**44**
Rainfall A–O (mm)	**230**	**244**	**167**	**397**	**377**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 2: Cunderdin oat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.18	1.30	3.02	4.19	4.50
Bannister[Φ]	114	99	97	102	100
Bilby[Φ]	100	105	104	105	101
Wandering	110	101	96	101	98
Koala[Φ]	116	81	86	99	100
Kowari[Φ]	91	102	104	101	100
Williams[Φ]	111	100	91	92	94
Durack[Φ]	78	100	99	86	94
Yallara[Φ]	89	98	92	75	90
Kojonup[Φ]	78	58	78	99	98
Koorabup[Φ]	87	90	85	71	87
Sowing date	**31 May**	**7 Jun**	**28 May**	**16 May**	**28 May**
Rainfall J–M (mm)	**25**	**6**	**98**	**113**	**52**
Rainfall A–O (mm)	**248**	**199**	**136**	**282**	**304**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 3: Dandaragan oat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		4.28	4.02	3.38	3.21
Wandering	Trial failed	109	106	107	102
Bilby[Φ]		103	106	106	105
Bannister[Φ]		103	102	102	101
Kowari[Φ]		100	102	103	102
Williams[Φ]		109	100	100	95
Koala[Φ]		96	92	95	98
Kojonup[Φ]		89	88	103	101
Durack[Φ]		97	91	91	89
Carrolup		99	86	92	85
Yallara[Φ]		98	84	80	80
Sowing date	**25 May**	**7 Jun**	**25 May**	**17 May**	**20 May**
Rainfall J–M (mm)	**25**	**10**	**77**	**84**	**40**
Rainfall A–O (mm)	**248**	**241**	**220**	**455**	**576**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 4: Williams oat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			3.78	4.24	5.54
Koala[Φ]	No trial	No trial	104	112	122
Bannister[Φ]			106	110	112
Wandering			107	110	109
Williams[Φ]			104	110	109
Kojonup[Φ]			94	96	111
Bilby[Φ]			102	100	98
Kowari[Φ]			98	94	92
Carrolup			89	90	93
Koorabup[Φ]			86	91	91
Yallara[Φ]			88	90	88
Sowing date			**25 May**	**3 Jun**	**12 May**
Rainfall J–M (mm)			**40**	**85**	**10**
Rainfall A–O (mm)			**288**	**519**	**384**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 5: York oat.					
Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.03	2.83	2.37	4.86	4.59
Bannister(Φ)	107	100	105	99	117
Koala(Φ)	103	93	107	96	125
Wandering	110	102	96	97	115
Bilby(Φ)	105	104	99	104	100
Williams(Φ)	103	97	94	89	113
Kowari(Φ)	99	102	96	103	89
Kojonup(Φ)	97	92	79	99	99
Durack(Φ)	82	94	89	92	70
Carrolup	83	88	76	84	81
Yallara(Φ)	76	88	93	81	79
Sowing date	**31 May**	**7 Jun**	**28 May**	**13 May**	**25 Apr**
Rainfall J–M (mm)	**119**	**4**	**54**	**92**	**9**
Rainfall A–O (mm)	**306**	**250**	**180**	**381**	**316**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Oat variety disease ratings – Western Australia

The following table contains varietal ratings for the predominant diseases of oat in Western Australia. These ratings are updated annually by crop pathologists and were released in March 2023.

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: 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
Bannister(b)	MSS	MR/MRMS	MS	MS	MS	MR
Bilby(b)	S	MRMS	SVS	S	S	S
Carrolup	MSS	VS	S	SVS	MRMS	VS
Durack(b)	S	MRMS	SVS	S	MS	MRMS
Echidna	SVS	SVS	S	MSS	MSS	MS
Koala(b)	MSS	MR	MRMS	MSS	MS	R
Kojonup(b)	MSS	SVS	MSS	MS	MSS	VS
Koorabup(b)	MRMS#	MRMS	MSS	MSS	MSS	MRMS
Kowari(b)	S	MR/MRMS	S	S	MSS	S
Mitika(b)	SVS	MRMS	S	SVS	S	VS
Mulgara(b)	S/MRMS	MR	MR	MS		R
Possum	S	MR/MS	S	S	MS	MSS
Tungoo(b)	MRMS#	RMR	MS	MSS	MSS	MR
Wandering	MSS	VS	SVS	S	MSS	VS
Williams(b)	MSS	MR	MSS	MSS	MRMS	S
Wintaroo(b)	MSS	S	MS	MS	MSS	R
Yallara(b)	MSS	MR	MSS	MSS	MR	R

Learn more via the NVT Disease Ratings.

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

Variety	Variety owner	End point royalty* ($)	Comments supplied by variety owner
Bandit TT$^{\phi}$	Australian Grain Technologies	10.00	Triazine-tolerant, open-pollinated variety suitable to low rainfall environments. Very quick to flower.
DG Hotham TF	Nutrien Ag Solutions Ltd	-	Mid-maturing glyphosate tolerant Truflex® hybrid. Medium to tall plant height. Suited to medium to high-rainfall zones.
DG Torrens TT$^{\phi}$	Nutrien Ag Solutions Ltd	5.00	Early-mid maturing, open-pollinated, triazine-tolerant variety. Short-medium plant height. Suited to low-medium rainfall zones.
Hyola® Regiment XC	Pacific Seeds	-	Mid-maturity dual-herbicide stacked TruFlex® and Clearfield® hybrid. Suitable for medium and high-rainfall zones, dryland and irrigation. Medium height, vigorous early growth and even flowering.
HyTTec® Velocity	Nuseed Pty Ltd	5.00	An early maturing variety that exhibits impressive early vigour, with a compact plant height and improved pod shatter tolerance built in to improve harvesting.
InVigor® T 4511	BASF Australia	-	InVigor® T 4511 is an early-mid triazine-tolerant hybrid of medium height. With excellent early vigour InVigor® T 4511 is ideally suited to early and mid-season growing regions. With higher seedling vigour, higher oil and better blackleg tolerance InVigor® T 4511 is a replacement for InVigor® T 3510 and InVigor® T 4510.
Nuseed® Eagle TF	Nuseed Pty Ltd	-	A mid-maturity TruFlex® hybrid that performs well in mid to high-rainfall zones. Nuseed® Eagle TF gives growers confidence with extremely good early vigour and biomass, increasing integrated weed management options.
Nuseed® Hunter TF	Nuseed Pty Ltd	-	An early-mid maturity TruFlex® hybrid canola with adaptability from low to high-rainfall regions. It has improved pod shatter tolerance with a compact plant height, reducing head loss, and is suitable for medium to quick-growing regions.
PY520TC	Pioneer Hi-Bred Aust Pty Ltd	-	A mid-maturity hybrid suited to medium-long season environments. Triazine-tolerant and Clearfield®-tolerant variety.
Renegade TT$^{\phi}$	Australian Grain Technologies	10.00	Triazine-tolerant, open-pollinated variety. Quick to flower with best performance under medium yield potential conditions.
RGT Baseline TT	RAGT	10.00	Mid-maturing triazine-tolerant hybrid variety. Suited to medium to high-rainfall zones. Medium-tall height. Marketed by Seed Force, an RAGT Company.

* EPR amount is ex-GST, $^{\phi}$ denotes Plant Breeder's Rights apply.

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

Canola variety yield performance – Kwinana West

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: Bolgart med-high rainfall GLY.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.42	1.23			3.40
Nuseed® Hunter TF			Compromised trial	Compromised trial	107
Nuseed® Condor TF		104			108
Nuseed® Raptor TF		102			105
Nuseed® Eagle TF					107
InVigor® R 4520P		112			106
Pioneer® 44Y27 RR	108	108			102
Pioneer® 44Y30 RR					104
Pioneer® 45Y28 RR	105				105
Nuseed® Emu TF					99
Hyola® Garrison XC		95			101
Sowing date	**3 May**	**7 Jun**	**6 May**	**4 May**	**26 Apr**
Rainfall J–M (mm)	**99**	**0**	**49**	**122**	**52**
Rainfall A–O (mm)	**349**	**270**	**185**	**353**	**371**

Special thanks to 2022 trial cooperator, John Young, Wyening Mission Farm.
Learn more via the NVT Long Term Yield Reporter

Table 2: Cunderdin med-high rainfall GLY.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.41	0.84	0.83	2.20	2.61
Nuseed® Emu TF		119	140		113
Nuseed® Hunter TF				113	109
Pioneer® 44Y27 RR	105	107	125	117	109
Nuseed® Raptor TF		104	114	108	110
Nuseed® Condor TF		110	108	105	109
Pioneer® 44Y30 RR				112	103
InVigor® R 4520P		116	104	109	101
Hyola® Garrison XC		106	108	93	108
InVigor® R 4022P		113	112	109	101
Hyola® Battalion XC			108	94	106
Sowing date	**25 May**	**7 Jun**	**25 May**	**7 May**	**26 Apr**
Rainfall J–M (mm)	**25**	**6**	**98**	**83**	**59**
Rainfall A–O (mm)	**248**	**199**	**136**	**292**	**312**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 3: Dandaragan med-high rainfall GLY.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		2.87		3.46	
InVigor® R 4520P	Trial failed	108	Compromised trial	114	Compromised trial
Nuseed® Condor TF		108		111	
Hyola® Regiment XC				108	
Pioneer® 44Y30 RR				111	
Nuseed® Eagle TF				109	
Pioneer® 45Y28 RR				107	
Nuseed® Raptor TF		104		106	
Pioneer® 44Y27 RR		103		106	
InVigor® R 4022P		104		105	
Hyola® Battalion XC				97	
Sowing date	**25 May**	**24 May**	**12 Jun**	**16 Apr**	**26 Apr**
Rainfall J–M (mm)	**25**	**10**	**77**	**84**	**40**
Rainfall A–O (mm)	**248**	**241**	**220**	**455**	**576**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 4: Williams med-high rainfall GLY.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		2.16	3.61		
InVigor® R 4520P	No trial	118	108	Trial failed	Compromised trial
Pioneer® 44Y30 RR			108		
Nuseed® Condor TF		110	104		
InVigor® R 4022P		110	104		
Pioneer® 43Y29 RR		106	104		
Pioneer® 44Y27 RR		100	106		
Pioneer® 45Y28 RR			103		
DG 408RR			106		
Nuseed® Raptor TF		101	103		
Nuseed® GT-53		97	102		
Sowing date		**16 May**	**6 May**	**29 Apr**	**12 May**
Rainfall J–M (mm)		**37**	**40**	**93**	**18**
Rainfall A–O (mm)		**335**	**288**	**544**	**445**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 5: York med-high rainfall GLY.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)				2.78	3.10
Nuseed® Hunter TF	No trial	No trial	Compromised trial		110
InVigor® R 4520P				107	107
Pioneer® 44Y30 RR				106	107
Nuseed® Condor TF				106	107
Pioneer® 44Y27 RR				103	108
Nuseed® Eagle TF					105
Hyola® Regiment XC				104	106
Nuseed® Raptor TF				103	106
Pioneer® 45Y28 RR				105	103
InVigor® R 4022P				102	104
Sowing date			**6 Jun**	**4 May**	**12 May**
Rainfall J–M (mm)			**54**	**127**	**13**
Rainfall A–O (mm)			**180**	**390**	**373**

Special thanks to 2022 trial cooperator, Jonlorrie Farms York KLKL.
Learn more via the NVT Long Term Yield Reporter

Table 6: Buntine low-med rainfall GLY.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.24	0.85	2.24	2.47	
Nuseed® Emu TF		131	114	106	No trial
Nuseed® Hunter TF				110	
Pioneer® 44Y27 RR		112	105	106	
Hyola® Regiment XC				102	
Pioneer® 44Y30 RR				105	
Hyola® Battalion XC			108	101	
Nuseed® Raptor TF		91	101	106	
InVigor® R 3520	100	113	93	100	
InVigor® R 4022P		101	91	103	
Hyola® 410XX		93	107	95	
Sowing date	**25 May**	**7 Jun**	**6 May**	**7 May**	
Rainfall J–M (mm)	**74**	**9**	**113**	**115**	
Rainfall A–O (mm)	**254**	**173**	**149**	**331**	

No 2022 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 7: Dalwallinu low-med rainfall GLY.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)					1.52
Nuseed® Emu TF	No trial	No trial	No trial	No trial	125
Nuseed® Hunter TF					114
Pioneer® 44Y27 RR					109
Hyola® Battalion XC					108
Pioneer® 44Y30 RR					103
Nuseed® Raptor TF					102
InVigor® R 4022P					100
DG Lofty TF					99
Hyola® Garrison XC					99
Hyola® 410XX					97
Sowing date					**19 May**
Rainfall J–M (mm)					**121**
Rainfall A–O (mm)					**306**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 8: Yealering low-med rainfall GLY.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.54		2.06		3.00
Nuseed® Hunter TF		No trial		Compromised trial	111
Nuseed® Emu TF			112		98
Pioneer® 44Y27 RR	117		112		106
InVigor® R 4520P			103		107
InVigor® R 4022P			101		102
Pioneer® 44Y30 RR					107
Nuseed® Raptor TF			90		106
Hyola® Battalion XC			94		97
Hyola® Garrison XC			88		98
Hyola® 410XX			90		94
Sowing date	**25 May**		**5 May**	**28 Apr**	**12 May**
Rainfall J–M (mm)	**58**		**63**	**68**	**26**
Rainfall A–O (mm)	**243**		**177**	**384**	**317**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 9: Bolgart med-high rainfall TT.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.59	1.14			3.47
HyTTec® Trident	121	114	Compromised trial	Compromised trial	110
HyTTec® Trifecta	115	111			113
HyTTec® Trophy	112	111			109
Hyola® Blazer TT					111
HyTTec® Velocity					105
InVigor® T 4511					107
InVigor® T 4510	108	111			106
SF Dynatron TT™		110			107
Hyola® Enforcer CT					105
RGT Capacity™ TT					105
Sowing date	**3 May**	**7 Jun**	**6 May**	**4 May**	**26 Apr**
Rainfall J–M (mm)	**99**	**0**	**49**	**122**	**52**
Rainfall A–O (mm)	**349**	**270**	**185**	**353**	**371**

Special thanks to 2022 trial cooperator, John Young, Wyening Mission Farm.
Learn more via the NVT Long Term Yield Reporter

Table 10: Cunderdin med-high rainfall TT.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.51	0.86		1.78	3.03
HyTTec® Trident	118	119	Trial failed	132	118
HyTTec® Velocity					109
HyTTec® Trophy	110	112		119	108
HyTTec® Trifecta	114				108
InVigor® T 4511				117	107
InVigor® T 4510	106	113		117	106
Hyola® Enforcer CT				104	108
Hyola® Blazer TT				112	103
InVigor® LT 4530P				112	101
SF Dynatron TT™		108		111	101
Sowing date	**25 May**	**7 Jun**	**25 May**	**7 May**	**26 Apr**
Rainfall J–M (mm)	**25**	**6**	**98**	**83**	**59**
Rainfall A–O (mm)	**248**	**199**	**136**	**292**	**312**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 11: Dandaragan med-high rainfall TT.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		2.52		3.09	
HyTTec® Trident	Trial failed	114	Compromised trial	120	Compromised trial
Hyola® Blazer TT				121	
HyTTec® Trophy		110		119	
SF Dynatron TT™		107		117	
InVigor® T 4511				115	
InVigor® T 4510		108		114	
PY520TC				116	
RGT Capacity™ TT				112	
InVigor® LT 4530P				109	
Hyola® Enforcer CT		108		107	
Sowing date	**25 May**	**24 May**	**12 Jun**	**16 Apr**	**26 Apr**
Rainfall J–M (mm)	**25**	**10**	**77**	**84**	**40**
Rainfall A–O (mm)	**248**	**241**	**220**	**455**	**576**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 12: Williams med-high rainfall TT.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.85	2.27	3.30		
HyTTec® Trifecta	120	117	111	Trial failed	Compromised trial
Hyola® Blazer TT			112		
HyTTec® Trophy	112	111	111		
SF Dynatron TT™			110		
InVigor® T 4510	109	111	109		
RGT Capacity™ TT		111	106		
InVigor® T 6010		111	103		
InVigor® LT 4530P			105		
Hyola® Enforcer CT		109	101		
SF Turbine TT	104	105	103		
Sowing date	**26 Apr**	**16 May**	**6 May**	**29 Apr**	**12 May**
Rainfall J–M (mm)	**103**	**37**	**40**	**93**	**18**
Rainfall A–O (mm)	**415**	**335**	**288**	**544**	**445**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 13: York med-high rainfall TT.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)				2.68	2.69
HyTTec® Trifecta	No trial	No trial	Compromised trial	113	113
Hyola® Blazer TT				113	110
HyTTec® Trophy				110	112
InVigor® T 4511				108	110
SF Dynatron TT™				110	108
InVigor® T 4510				107	110
PY520TC					106
RGT Capacity™ TT				107	105
InVigor® LT 4530P				104	106
InVigor® T 6010				106	100
Sowing date			**6 Jun**	**4 May**	**12 May**
Rainfall J–M (mm)			**54**	**127**	**13**
Rainfall A–O (mm)			**180**	**390**	**373**

Special thanks to 2022 trial cooperator, Jonlorrie Farms York KLKL.
Learn more via the NVT Long Term Yield Reporter

Table 14: Buntine low-med rainfall TT.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.20	0.84	2.24	2.09	
HyTTec® Trident	111	122	125	120	No trial
HyTTec® Velocity				115	
InVigor® T 4510	107	110	104	111	
InVigor® T 4511				109	
SF Dynatron TT™		100	103	111	
RGT Capacity™ TT		103	112	101	
SF Spark TT		109	103	103	
Bandit TT(b)				103	
InVigor® LT 4530P			94	107	
Renegade TT(b)				94	
Sowing date	**25 May**	**7 Jun**	**6 May**	**7 May**	
Rainfall J–M (mm)	**74**	**9**	**113**	**115**	
Rainfall A–O (mm)	**254**	**173**	**149**	**331**	

No 2022 trial cooperator.
Learn more via the NVT Long Term Yield Reporter

Table 15: Dalwallinu low-med rainfall TT.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)					2.87
HyTTec® Trident	No trial	No trial	No trial	No trial	115
HyTTec® Velocity					113
InVigor® T 4510					106
InVigor® T 4511					106
HyTTec® Trophy					105
Bandit TT(b)					104
SF Spark TT					104
SF Dynatron TT™					103
RGT Capacity™ TT					102
Hyola® Enforcer CT					102
Sowing date					**19 Apr**
Rainfall J–M (mm)					**121**
Rainfall A–O (mm)					**306**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 16: Yealering low-med rainfall TT.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.49		1.82		2.95
HyTTec® Trident	131	No trial	117	Compromised trial	117
HyTTec® Velocity					110
InVigor® T 4510	115		110		110
HyTTec® Trophy	111		109		111
SF Dynatron TT™			106		114
RGT Capacity™ TT			108		104
RGT Baseline TT					106
InVigor® LT 4530P			105		108
Hyola® Blazer TT			105		112
InVigor® T 4511					108
Sowing date	**25 May**		**5 May**	**28 Apr**	**12 May**
Rainfall J–M (mm)	**58**		**63**	**68**	**26**
Rainfall A–O (mm)	**243**		**177**	**384**	**317**

Special thanks to 2022 trial cooperator - permission to publish was not received.
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 2023.
Varieties are listed in alphabetical order and disease ratings are colour-coded to match resistance and susceptibility ratings.

Table 8: Canola disease guide – autumn 2023 ratings.

Variety	2023 autumn blackleg rating			Type
	Bare	Fluopyram (e.g. ILeVO®)	Pydiflumetofen (e.g. Saltro®)	
CONVENTIONAL VARIETIES				
Nuseed® Quartz	R			Hybrid
Nuseed® Diamond	RMR	R	R	Hybrid
Outlaw(Φ)	RMR	R	R	Open pollinated
TRIAZINE-TOLERANT VARIETIES				
HyTTec® Trident	R			Hybrid
HyTTec® Trifecta	R			Hybrid
HyTTec® Trophy	R	R	R	Hybrid
Hyola® Blazer TT	R			Hybrid
DG BIDGEE TT(Φ)	R	R	R	Open pollinated
InVigor® T 4511	R	R		Hybrid
DG MURRAY TT(Φ)	R			Open pollinated
DG Torrens TT(Φ)	R		R	Open pollinated
Monola® H421TT	RMR			High stability oil, hybrid
Monola® 420TT	RMR			High stability oil, open pollinated
ATR-Bluefin(Φ)	RMR			Open pollinated
InVigor® T 4510	MR	R	R	Hybrid
SF Spark TT	MR	R	R	Hybrid
HyTTec® Velocity	MR			Hybrid
Renegade TT(Φ)	MR	R	R	Open pollinated
Monola® 422TT	MR			High stability oil, open pollinated
ATR-Stingray(Φ)	MRMS	R	R	Open pollinated
RGT Baseline™ TT	MRMS	R	R	Hybrid
ATR-Swordfish(Φ)	MRMS			Open pollinated
SF Dynatron™ TT	MRMS	R	R	Hybrid
InVigor® T 6010	MRMS	R	R	Hybrid
RGT Capacity™ TT	MRMS	R	R	Hybrid
Bandit TT(Φ)	MRMS	R	R	Open pollinated
AFP Cutubury(Φ)	MS	RMR	RMR	Open pollinated
ATR-Bonito(Φ)	MS	RMR	R	Open pollinated
IMIDAZOLINONE-TOLERANT VARIETIES				
Hyola® Feast CL	R			Winter, hybrid, Clearfield®
RGT Nizza CL	R			Winter, hybrid, Clearfield®
Hyola® Solstice CL	R			Hybrid, Clearfield®
Captain CL	R			Winter, hybrid, Clearfield®
Hyola® Equinox CL	R			Hybrid, Clearfield®
Pioneer® 45Y93 CL	R		R	Hybrid, Clearfield®
RGT Clavier™ CL	R			Winter, hybrid, Clearfield®
Hyola® 970CL	R			Winter, hybrid, Clearfield®
Phoenix CL	R			Winter, hybrid, Clearfield®
Nuseed® Ceres IMI	R			Hybrid
VICTORY® V7002CL	R			High stability oil, hybrid, Clearfield®

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible.
Please check updated ratings using the Blackleg Management Guide or the NVT Disease Ratings.

Table 8: Canola disease guide – autumn 2023 ratings (continued).

Variety	2023 autumn blackleg rating			Type
	Bare	Fluopyram (e.g. ILeVO®)	Pydiflumetofen (e.g. Saltro®)	
Pioneer® 43Y92 CL	R		R	Hybrid, Clearfield®
Pioneer® 45Y95 CL	R		R	Hybrid, Clearfield®
Pioneer® 44Y94 CL	R		R	Hybrid, Clearfield®
VICTORY® V75-03CL	RMR	R		High stability oil, hybrid, Clearfield®
IMIDAZOLINONE AND TRIAZINE-TOLERANT VARIETIES				
Hyola® Enforcer CT	R			Hybrid, Clearfield®, Triazine
Pioneer® PY520 TC	RMR	R	R	Hybrid, Clearfield®, Triazine
GLYPHOSATE-TOLERANT VARIETIES				
Nuseed® Raptor TF	R			Hybrid, TruFlex®
Nuseed® Eagle TF	R		R	Hybrid, TruFlex®
DG Hotham TF	R		R	Hybrid, TruFlex®
VICTORY® V55-04TF	R	R		High stability oil, hybrid, TruFlex®
VICTORY® V5003RR	R	R		High stability oil, hybrid, Roundup Ready®
DG Lofty TF	R		R	Hybrid, TruFlex®
Pioneer® 45Y28RR	RMR		R	Hybrid, Roundup Ready®
Nuseed® Hunter TF	RMR		R	Hybrid, TruFlex®
Pioneer® 44Y27 RR	RMR	R	R	Hybrid, Roundup Ready®
InVigor® LR 4540P	RMR	R		Hybrid, LibertyLink®, TruFlex®
Pioneer® 44Y30 RR	RMR		R	Hybrid, Roundup Ready®
Nuseed® Emu TF	MR		R	Hybrid, TruFlex®
Hyola® 410XX	MR			Hybrid, TruFlex®
DG Bindo TF	MR			Hybrid, TruFlex®
InVigor® R 4022P	MR	R		Hybrid, TruFlex®
InVigor® R 4520P	MRMS	R		Hybrid, TruFlex®
GLYPHOSATE AND IMIDAZOLINONE-TOLERANT VARIETIES				
Hyola® Regiment XC	R			Hybrid, TruFlex®, Clearfield®
Hyola® Battalion XC	R			Hybrid, TruFlex®, Clearfield®
Hyola® Garrison XC	R			Hybrid, TruFlex®, Clearfield®
GLUFOSINATE AND TRIAZINE-TOLERANT VARIETIES				
InVigor® LT 4530P	RMR	R		Hybrid, LibertyLink®, Triazine

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible.
Please check updated ratings using the Blackleg Management Guide or the NVT Disease Ratings.

CHICKPEA

Chickpea variety yield performance – Kwinana West

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: Cunderdin desi chickpea.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			**0.74**	**1.28**	**1.20**
PBA Slasher(ф)	No trial	No trial	107	107	107
PBA Striker(ф)			109	105	107
CBA Captain(ф)			108	105	97
Neelam(ф)			103	100	101
PBA Maiden(ф)			104	93	100
Genesis™ 836			93	95	94
PBA Seamer(ф)					96
Genesis™ 090			76	79	100
Sowing date			**28 May**	**4 Jun**	**8 Jun**
Rainfall J–M (mm)			**98**	**98**	**45**
Rainfall A–O (mm)			**136**	**311**	**295**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 2: Dalwallinu desi chickpea.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			**0.85**	**1.82**	**1.06**
PBA Slasher(ф)	No trial	No trial	106	104	109
PBA Striker(ф)			105	105	106
Neelam(ф)			101	102	96
PBA Maiden(ф)			95	101	102
CBA Captain(ф)			104	100	93
Genesis™ 836			96	96	91
Genesis™ 090			86	100	85
PBA Seamer(ф)					88
Sowing date			**27 May**	**20 May**	**1 Jun**
Rainfall J–M (mm)			**97**	**134**	**42**
Rainfall A–O (mm)			**161**	**331**	**250**

Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Refer to the latest *Crop Sowing Guide* for further information at grdc.com.au/nvt-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 2023.

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

Table 3: Chickpea disease guide for Western Australia.

Variety	Ascochyta blight (pathogen group 2 – north)	Phytophthora root rot	RLN resistance (*Pratylenchus neglectus*)	RLN tolerance (*Pratylenchus neglectus*)
DESI				
CBA Captain[Φ]	MS	S	MR	MT
Genesis™ 836	S		MR	MII
Neelam[Φ]	S		MRMS	MI
PBA Maiden[Φ]	S		MRMS	MI
PBA Seamer[Φ]	MS	S	MRMS	MI
PBA Slasher[Φ]	S		MRMS	MI
PBA Striker[Φ]	S		MRMS	MI
KABULI				
Genesis™ 090	MS		MRMS	IVI

Learn more via the NVT Disease Ratings.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, T = tolerant, MT = moderately tolerant, MI = moderately intolerant, I = intolerant, VI = very intolerant.

FIELD PEA

Field pea variety yield performance – Kwinana West

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: Dalwallinu field pea.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			**1.94**	**2.31**	**2.34**
PBA Taylor(Ф)	No trial	No trial	113	109	112
PBA Pearl			105		
PBA Butler(Ф)			103	113	104
PBA Wharton(Ф)			108	99	107
PBA Gunyah(Ф)			100	106	101
Kaspa(Ф)			94	104	98
PBA Twilight(Ф)			97	100	99
PBA Oura(Ф)			98	97	97
GIA Ourstar(Ф)*			85	78	85
GIA Kastar (Ф)*			87	70	89
Sowing date			**27 May**	**20 May**	**1 Jun**
Rainfall J–M (mm)			**97**	**134**	**42**
Rainfall A–O (mm)			**161**	**331**	**250**

Special thanks to 2022 trial cooperator, Matt Hyde.

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

Refer to the latest *Crop Sowing Guide* for further information at grdc.com.au/nvt-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 2023.

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*)
GIA Kastar[Φ]	S	S	RMR	MR	MS
GIA Ourstar[Φ]	S (P)	S	S	MRMS	MSS
Kaspa[Φ]	S	S	S	RMR	MRMS
PBA Butler[Φ]	MS	S	S	RMR	MRMS
PBA Gunyah[Φ]	S	S	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

Learn more via the NVT Disease Ratings.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, (P) = provisional rating.

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.

Variety	Variety owner	Grain classification	End point royalty* ($)	Comments supplied by variety owner
GIA Leader(Φ)	Grains Innovation Australia	Red	5.40	An imidazolinone-tolerant red lentil variety well suited to reliable lentil growing areas in medium to higher-rainfall zones. GIA Leader(Φ) has a good level of foliar disease resistance (both Botrytis grey mould (BGM) and Ascochyta blight) and improved vegetative frost tolerance compared to PBA Hurricane XT(Φ). This variety has imidazolinone and soil residue sulfonylurea herbicide tolerance similar to existing XT varieties. GIA Leader(Φ) has mid to late flowering and maturity, similar to Nugget, making it well suited to early sowing. It has a spreading plant type that can assist protection of pods at maturity. Uniform grey seed coat and the grain is well suited to the medium-sized Nugget-type market.
GIA Lightning(Φ)	Grains Innovation Australia	Red	5.40	An imidazolinone-tolerant, high-yielding small round red lentil with superior adaptation to light textured sandy soils than other lentil varieties, making it suitable for growing in Mallee regions. GIA Lightning(Φ) has an upright plant type, which aids harvestability. This variety has imidazolinone and soil residue sulfonylurea herbicide tolerance similar to existing XT varieties. GIA Lightning(Φ) is mid to late flowering with mid-maturity, has moderate resistance to pod drop and lodging, and is resistant/moderately resistant to shattering at maturity. GIA Lightning(Φ) has the same Ascochyta blight disease rating as GIA Thunder(Φ) but is more susceptible to BGM. GIA Lightning(Φ) is not well suited to soil types or regions prone to BGM.
GIA Metro(Φ)	Grains Innovation Australia	Red	7.50	The first lentil to combine imidazolinone and metribuzin herbicide tolerances. This unique combination of herbicide tolerance will expand weed control options in lentil, particularly in light-textured soils prone to damage from the application of Group 5 (previously Group C) herbicides. Grain yield is significantly lower than existing lentil varieties in the absence of weed pressure, or where weeds are controlled effectively without crop damage from Group 5 herbicides. GIA Metro(Φ) is a large, lens-shaped red lentil with a grey seed coat.
GIA Sire(Φ)	Grains Innovation Australia	Red	TBC	The first lentil with improved tolerance to Clopyralid soil residues from a prior crop applied according to product label directions. GIA Sire(Φ) is a premium, small, round red lentil with a grey seed coat. Its tolerance to imidazolinone and soil residue sulfonylurea is similar to existing XT varieties. GIA Sire(Φ) is slow-growing with smaller plant parts, increased basal branching and shorter plant height compared to other lentil varieties. It is best suited to agronomic practices such as early sowing and lentil growing environments that maximise growth, harvest height and grain yield. Avoid growing this variety in low-fertility sandy soils or low-rainfall, frost-prone environments. Seed of GIA Sire(Φ) is available only under small, scale-controlled release.
GIA Thunder(Φ)	Grains Innovation Australia	Red	5.40	A broadly adapted, imidazolinone-tolerant, small, round red lentil, offering growers high and stable yields across all lentil growing regions. GIA Thunder(Φ) is a mid-flowering and mid-maturing variety, with better vegetative frost tolerance than PBA HighlandXT(Φ), PBA Hallmark XT(Φ), PBA Hurricane XT(Φ) and GIA Lightning(Φ). GIA Thunder(Φ) has similar Group 2 (imidazolinone and soil residue sulfonylurea) herbicide tolerance to existing XT varieties. GIA Thunder(Φ) has the same Ascochyta blight disease rating as PBA Hurricane XT(Φ) and GIA Lightning(Φ) but an improved BGM rating over both. The grain is well suited to the small premium round grain market with a uniform grey seed coat with seed size similar to PBA Hurricane XT(Φ).

* EPR amount is ex-GST, (Φ) denotes Plant Breeder's Rights apply, TBC denotes to be confirmed.

The table above has been updated in this ***Revised May 2023*** harvest report. Please disregard all previous versions of this report, which regrettably contained incorrect information. Of specific importance, it should be noted that GIA Thunder(Φ) lentil is in the same small round lentil market class as PBA Hurricane XT(Φ); this was incorrectly stated in previous editions.

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

Lentil variety yield performance – Kwinana West

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: Dalwallinu lentil.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			**1.42**	**1.70**	**1.87**
GIA Thunder(Φ)*	No trial	No trial	132	115	115
GIA Lightning(Φ)*			128	105	105
PBA Kelpie XT(Φ)*			110	105	107
PBA HighlandXT(Φ)*			114	103	103
PBA Hurricane XT(Φ)*			112	99	100
PBA Hallmark XT(Φ)*			113	97	98
GIA Leader(Φ)*			107	98	98
PBA Jumbo2(Φ)			79	109	105
PBA Bolt(Φ)			90	94	93
PBA Ace(Φ)			83		93
Sowing date			**27 May**	**20 May**	**1 Jun**
Rainfall J–M (mm)			**97**	**134**	**42**
Rainfall A–O (mm)			**161**	**331**	**250**

Special thanks to 2022 trial cooperator - permission to publish was not received.
* 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 2023.

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*)
GIA Leader$^{\Phi}$	MR	MR	MRMS (P)	R	MR
GIA Lightning$^{\Phi}$	MRMS	R	MS	R	MR
GIA Metro$^{\Phi}$	RMR	MR	MRMS	MR	MRMS
GIA Sire$^{\Phi}$	MRMS (P)	R	MS	MR	MR
GIA Thunder$^{\Phi}$	MRMS	R	MRMS	MR	R
Nipper$^{\Phi}$	MR	MRMS	MRMS (P)	RMR	MR
PBA Ace$^{\Phi}$	MR	R	MS	MR	MRMS
PBA Blitz$^{\Phi}$	MR	MRMS	MS (P)	MR	MRMS
PBA Bolt$^{\Phi}$	MRMS	MR	S	MR	MR
PBA Hallmark XT$^{\Phi}$	MRMS	RMR	MRMS (P)	MR	MRMS
PBA HighlandXT$^{\Phi}$	MR	MR	MS	MR	MRMS
PBA Hurricane XT$^{\Phi}$	MRMS	RMR	MS	MRMS	MRMS
PBA Jumbo2$^{\Phi}$	RMR (P)	R	MR (P)	MR	MRMS
PBA Kelpie XT$^{\Phi}$	MRMS	MRMS	MS (P)	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.

Variety	Variety owner	End point royalty* ($)	Comments supplied by variety owner
Lawler[Φ]	Australian Grain Technologies	4.00	A widely adapted variety, offering growers high and stable yields across all NSW, Victorian and South Australian lupin growing regions.

* EPR amount is ex-GST, [Φ] denotes Plant Breeder's Rights apply.

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

Lupin variety yield performance – Kwinana West

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: Cunderdin narrow-leaf lupin.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	**1.52**	**0.73**	**1.22**	**2.25**	**1.01**
PBA Jurien$^{\phi}$		92	103		110
Coyote$^{\phi}$	111	109	104	112	114
Lawler$^{\phi}$			102	111	111
Mandelup$^{\phi}$		92	100	107	104
PBA Barlock$^{\phi}$		82	99	105	99
PBA Bateman$^{\phi}$	105	102	103	105	106
PBA Leeman$^{\phi}$	94	105	94	96	98
Coromup$^{\phi}$	92	105	96	96	98
PBA Gunyidi$^{\phi}$		104	102	96	98
Wonga		61	89	86	74
Sowing date	**25 May**	**7 Jun**	**25 May**	**7 May**	**2 May**
Rainfall J–M (mm)	**25**	**6**	**98**	**83**	**59**
Rainfall A–O (mm)	**248**	**199**	**136**	**292**	**312**

PBA Jurien$^{\phi}$ was not included in 2021 due to a seed quality issue.
Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 2: Dandaragan narrow-leaf lupin.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	**1.56**	**2.89**	**1.84**	**4.08**	**1.81**
PBA Jurien$^{\phi}$		104	112		123
Coyote$^{\phi}$	108	109	117	110	120
Lawler$^{\phi}$			111	111	118
Mandelup$^{\phi}$		101	102	110	112
PBA Bateman$^{\phi}$	99	104	110	106	110
PBA Barlock$^{\phi}$		96	96	111	109
PBA Gunyidi$^{\phi}$		100	102	95	94
PBA Leeman$^{\phi}$	118	98	86	91	91
Coromup$^{\phi}$	112	99	89	91	91
Wonga		78	60	95	75
Sowing date	**25 May**	**24 May**	**8 May**	**26 Apr**	**1 May**
Rainfall J–M (mm)	**25**	**10**	**77**	**84**	**40**
Rainfall A–O (mm)	**248**	**241**	**220**	**455**	**576**

PBA Jurien$^{\phi}$ was not included in 2021 due to a seed quality issue.
Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 3: Pingelly narrow-leaf lupin.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.46	2.48	3.33	2.58	2.85
PBA Jurien(Ф)		106	109		111
Coyote(Ф)	108	108	109	112	103
Lawler(Ф)			106	113	104
PBA Barlock(Ф)		99	100	113	108
Mandelup(Ф)		102	102	112	105
PBA Bateman(Ф)	104	104	107	106	104
PBA Gunyidi(Ф)		100	103	94	100
Coromup(Ф)	94	97	88	92	89
PBA Leeman(Ф)	94	96	84	92	87
Wonga		82	77	94	99
Sowing date	**25 May**	**23 May**	**6 May**	**19 May**	**12 May**
Rainfall J–M (mm)	**69**	**15**	**45**	**78**	**18**
Rainfall A–O (mm)	**365**	**301**	**293**	**441**	**367**

PBA Jurien(Ф) was not included in 2021 due to a seed quality issue.
Special thanks to 2022 trial cooperator - permission to publish was not received.
Learn more via the NVT Long Term Yield Reporter

Table 4: Wongan Hills R.S. narrow-leaf lupin.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.72	1.43		2.58	2.26
PBA Jurien(Ф)		95			111
Coyote(Ф)	109	106		110	118
Lawler(Ф)				109	116
Mandelup(Ф)		94		107	106
PBA Bateman(Ф)	105	103	Trial failed	107	104
PBA Barlock(Ф)		87		109	99
PBA Gunyidi(Ф)		105		99	92
Coromup(Ф)	91	99		87	108
PBA Leeman(Ф)	92	96		84	111
Wonga		71		88	74
Sowing date	**25 May**	**7 Jun**	**1 May**	**4 May**	**12 May**
Rainfall J–M (mm)	**55**	**6**	**74**	**110**	**63**
Rainfall A–O (mm)	**341**	**235**	**205**	**292**	**320**

PBA Jurien(Ф) was not included in 2021 due to a seed quality issue.
Special thanks to 2022 trial cooperator - permission to publish was not received.
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 2023.

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

Table 5: Lupin disease guide for Western Australia.

Variety	Anthracnose resistance	Cucumber mosaic virus (CMV)	Phomopsis pod infection	Phomopsis stem infection
Coromup(Ф)	MR	MR	MS	MR
Coyote(Ф)	MRMS	MRMS	MRMS	S
Jenabillup(Ф)	MS	MRMS	MR	MS
Lawler(Ф)	MR	MRMS	MS	MR
Mandelup(Ф)	MRMS	MRMS	S	RMR
PBA Barlock(Ф)	RMR	MR	MR	MR
PBA Bateman(Ф)	MRMS	MR	MS	RMR
PBA Gunyidi(Ф)	MRMS	MRMS	MRMS	RMR
PBA Jurien(Ф)	RMR	MS	MR	RMR
PBA Leeman(Ф)	MRMS	MRMS	MRMS	MR
Wonga	RMR	MR	MR	MR

Learn more via the NVT Disease Ratings.
R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible.

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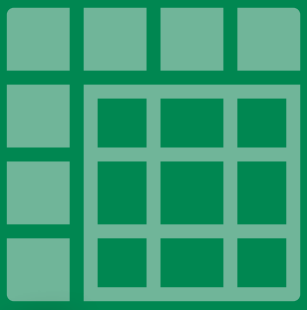

NVT Disease Ratings

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