

NVT HARVEST REPORT



REVISED MAY 2023

Esperance
Western Region

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PHOTO: Isabelle Rogers

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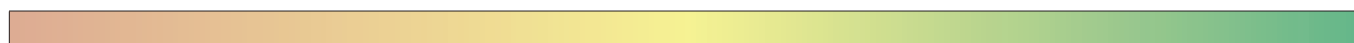
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grdc.com.au/harvestreports

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LEGEND: MEAN VARIETY YIELD PERFORMANCE



LOW

HIGH

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

DISEASE RATING COLOUR RANGE

VS	SVS	S	MSS	MS	MRMS	MR	RMR	R
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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 **Esperance**. The information has been generated from the Grains Research and Development Corporation's (GRDC) National Variety Trials (NVT) database. This publication provides a summary of the 2022 and long-term yield performance of varieties of crop species suitable for production in **Esperance** together with their quality and disease responses.

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

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

GRDC 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 **Esperance** 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 **Esperance**.

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

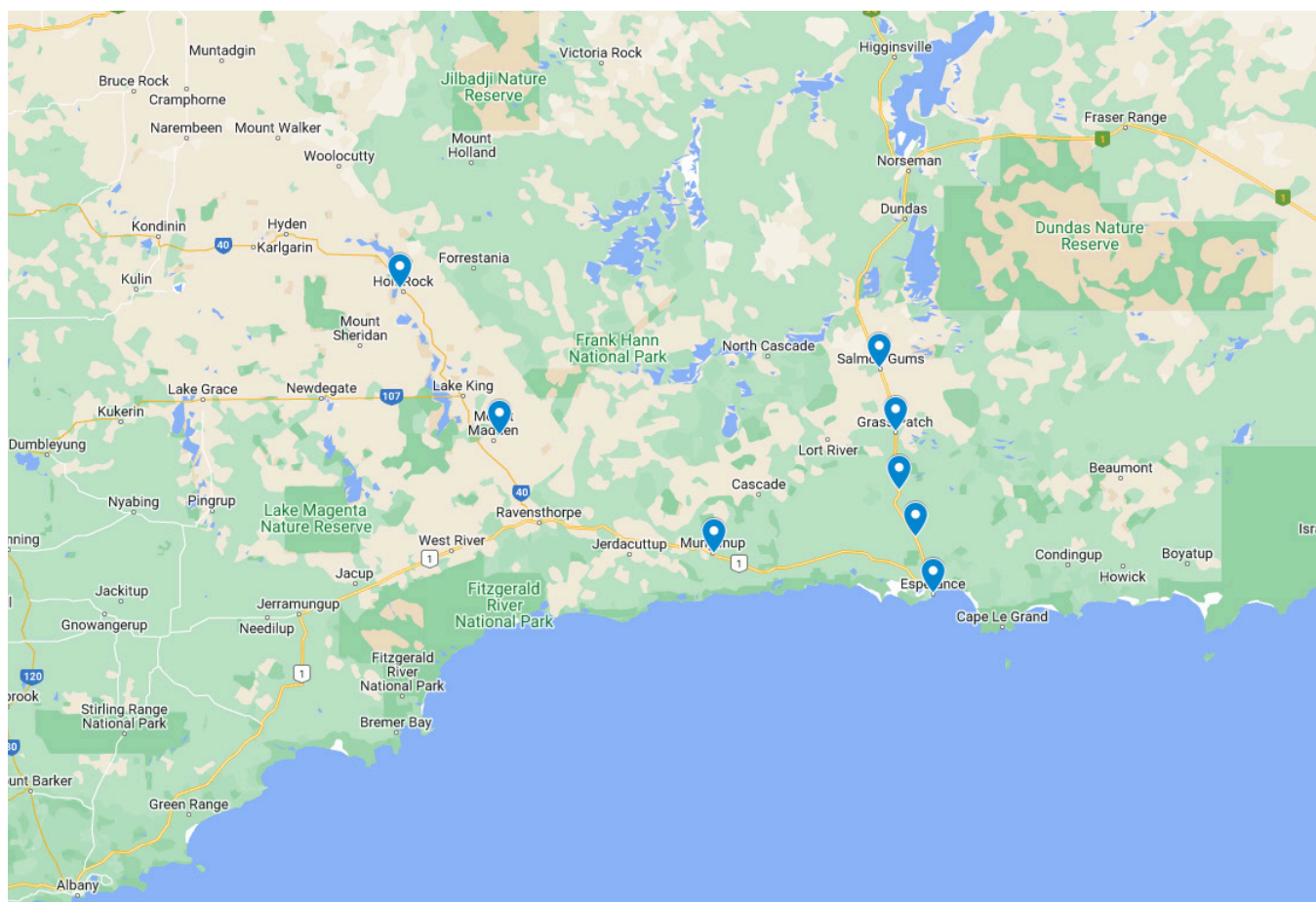
Trials listed as compromised are not suitable for making variety decisions. Results can be found in the [Quarantined trial reports](#).

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

NVT SITE LOCATIONS – Esperance

Figure 1: Locality of NVT trial sites in Esperance 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 [Ⓛ]	InterGrain	Milling	3.50	Mid-maturing, with a slightly later time of flowering than Scepter [Ⓛ] , although earlier than RockStar [Ⓛ] . Well-suited to May sowing.
LRPB Anvil [Ⓛ]	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 [Ⓛ]	LongReach Plant Breeders Pty Ltd	Milling	4.00	A quick winter variety with similar growth habit and maturity to Longsword [Ⓛ] . Mowhawk [Ⓛ] has broad general adaption and is ideally suited to higher-production areas and early break scenarios. Mowhawk [Ⓛ] is quicker to heading and higher-yielding than the current benchmark winter variety, Illabo [Ⓛ] .
Stockade [Ⓛ]	LongReach Plant Breeders Pty Ltd	Milling	None provided.	Very slow spring maturity similar to RGT Accroc [Ⓛ] . 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 [Ⓛ] and LRPB Beaufort [Ⓛ] feed wheats.

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

WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FABA BEAN

FIELD PEA

LENTIL

LUPIN

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

Wheat variety yield performance – Esperance

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

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

Table 1: Gibson main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.00	4.30	4.70	5.48	5.04
RockStar ^{db}	112	114	107	111	109
Brumby ^{db}				111	108
Devil ^{db}	109	112	110	108	107
Scepter ^{db}	106	110	112	108	106
Vixen ^{db}	101	107	119	107	104
Ninja ^{db}	107	107	106	107	106
Kinsei ^{db}	109	109	101	108	106
Calibre ^{db}			109	102	107
Ballista ^{db}		105		103	107
Sting ^{db}		105	114	104	104
IMI-TOLERANT					
Sheriff CL Plus ^{db}		102	103	105	100
Chief CL Plus ^{db}	101	104	102	105	98
Valiant ^{db} CL Plus			89	104	102
Sowing date	15 May	8 May	12 May	14 May	16 May
Rainfall J–M (mm)	151	20	82	51	44
Rainfall A–O (mm)	417	352	346	510	521

Special thanks to 2022 trial cooperator, Laurina Farms.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 2: Mt. Madden main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.21	1.15	2.55	3.22	2.43
Vixen ^{db}	126	143	118	116	117
Calibre ^{db}			112	117	118
Sting ^{db}		139	112	113	114
LRPB Avenger ^{db}		143	112		111
Devil ^{db}	111	118	113	113	114
Scepter ^{db}	112	118	113	112	113
Ballista ^{db}		123		111	111
RockStar ^{db}	101	101	111	111	113
LRPB Havoc ^{db}	106	114	113	107	107
Mace ^{db}	109	118	105	104	104
IMI-TOLERANT					
LRPB Anvil ^{db}			110	108	108
Razor CL Plus ^{db}	113	121	106	104	105
Hammer CL Plus ^{db}			102	104	104
Sowing date	4 Jun	28 May	13 May	20 May	22 May
Rainfall J–M (mm)	56	14	76	89	37
Rainfall A–O (mm)	158	142	196	338	354

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

Table 3: Munglinup main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	3.55		2.68	3.01	3.40
RockStar ^{db}	108	Trial failed	118	114	118
Devil ^{db}	110		112	113	114
Brumby ^{db}				112	111
Calibre ^{db}			106	112	109
Scepter ^{db}	109		108	112	109
Denison ^{db}			118	105	116
Kinsei ^{db}	102		115	107	112
Boree ^{db}				110	
Vixen ^{db}	113		99	114	104
Catapult ^{db}	103			110	104
IMI-TOLERANT					
Valiant ^{db} CL Plus			116	100	117
Chief CL Plus ^{db}	102		102	102	107
Sheriff CL Plus ^{db}			103	102	102
Sowing date	10 Jun	9 May	7 May	19 May	17 May
Rainfall J–M (mm)	130	21	83	68	50
Rainfall A–O (mm)	331	292	314	431	584

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

Table 4: Salmon Gums main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.64		0.89		2.72
Vixen ^{db}	119	Compromised trial	167	Compromised trial	114
LRPB Avenger ^{db}			161		110
Sting ^{db}			150		110
Calibre ^{db}			137		111
LRPB Havoc ^{db}	109		147		109
Scepter ^{db}	110		128		109
Devil ^{db}	111		121		110
Ballista ^{db}					106
Mace ^{db}	107		126		104
RockStar ^{db}	106		101		108
IMI-TOLERANT					
LRPB Anvil ^{db}			165		109
Razor CL Plus ^{db}	108		138		105
Hammer CL Plus ^{db}			124		103
Sowing date	7 Jun	30 May	20 May	25 May	20 May
Rainfall J–M (mm)	17	28	92	99	38
Rainfall A–O (mm)	176	159	158	269	299

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

WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FABA BEAN

FIELD PEA

LENTIL

LUPIN

Table 5: Scaddan main season wheat.

Year	2018	2019	2020	2021	2022	
Mean yield (t/ha)	3.64		1.97	3.84	4.46	
Vixen ^{db}	114	Trial failed	129	110	105	
Calibre ^{db}			123	112	107	
Devil ^{db}	111		115	112	111	
RockStar ^{db}	109		107	112	114	
Scepter ^{db}	110		115	110	109	
Brumby ^{db}				111	112	
Sting ^{db}				123	108	103
Ballista ^{db}					110	105
LRPB Avenger ^{db}				123		99
LRPB Havoc ^{db}	108			115	104	103
IMI-TOLERANT						
LRPB Anvil ^{db}			123	99	96	
Razor CL Plus ^{db}	104		113	101	98	
Chief CL Plus ^{db}	103		101	100	103	
Sowing date	8 Jun	10 May	3 Jun	18 May	4 May	
Rainfall J–M (mm)	141	16	48	51	44	
Rainfall A–O (mm)	213	278	249	510	521	

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

Table 6: Gibson early season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	3.13	3.18	4.07		2.76
RockStar ^{db}		118	127	Trial failed	120
Mowhawk ^{db}					112
Kinsei ^{db}	116	121	119		114
Stockade ^{db}					112
Catapult ^{db}	111	121	116		113
Denison ^{db}			118		116
Cutlass ^{db}	111	112	118		113
Longsword ^{db}	116	107	109		100
Coota ^{db}			104		107
LRPB Trojan ^{db}	106	113	100		101
IMI-TOLERANT					
Valiant ^{db} CL Plus					112
Sheriff CL Plus ^{db}		111	93		99
Sowing date	2 May	17 Apr	23 Apr	22 Apr	29 Apr
Rainfall J–M (mm)	151	20	82	51	44
Rainfall A–O (mm)	417	352	346	510	521

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

WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FABA BEAN

FIELD PEA

LENTIL

LUPIN

Wheat variety quality – Esperance

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

The following figures show the grain quality trends as histograms from 2021 and 2022 NVT averaged for trials in the Esperance region. Only the varieties evaluated at every site are included. These are plotted in order of performance, up to a maximum of 20.

Protein and yield comparisons

Figure 1: Protein (%) and yield (t/ha) comparisons for main season wheat varieties from four NVT sites in Esperance in 2021.

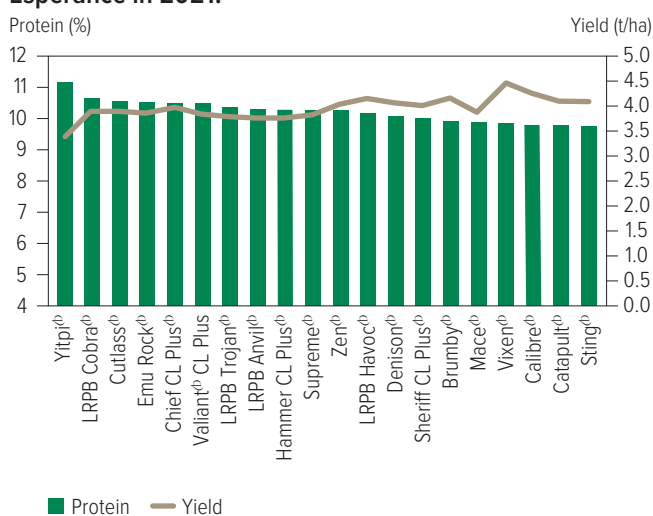


Figure 2: Protein (%) and yield (t/ha) comparisons for main season wheat varieties from five NVT sites in Esperance in 2022.

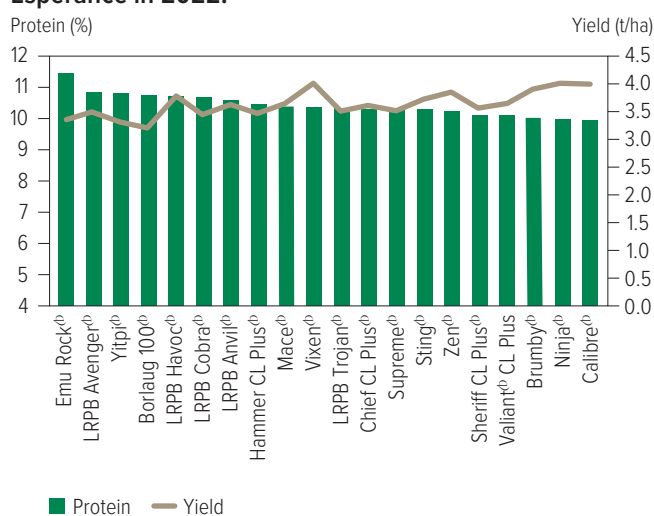
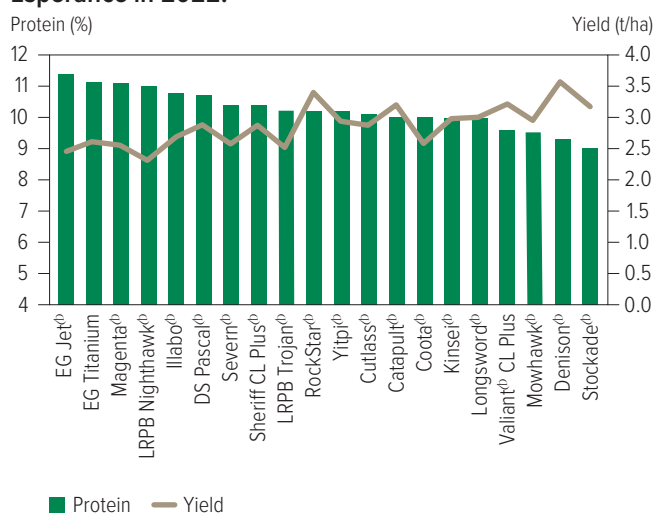


Figure 3: Protein (%) and yield (t/ha) comparisons for early season wheat varieties in Esperance in 2021.



Figure 4: Protein (%) and yield (t/ha) comparisons for early season wheat varieties from one NVT site in Esperance in 2022.



WHEAT

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FIELD PEA

LENTIL

LUPIN

Test weight comparisons

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

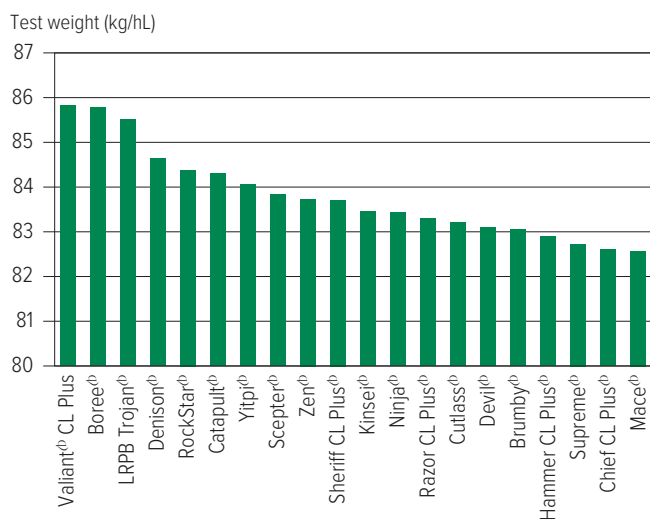


Figure 6: Test weight (kg/hL) comparisons for main season wheat varieties from five NVT sites in Esperance in 2022.

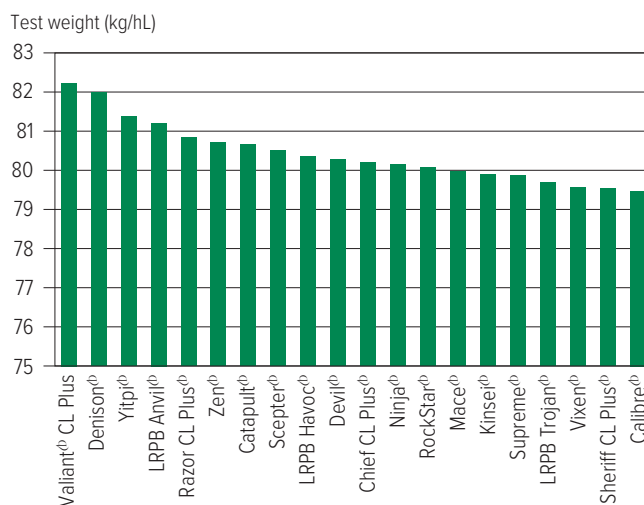


Figure 7: Test weight (kg/hL) comparisons for early season wheat varieties in Esperance in 2021.

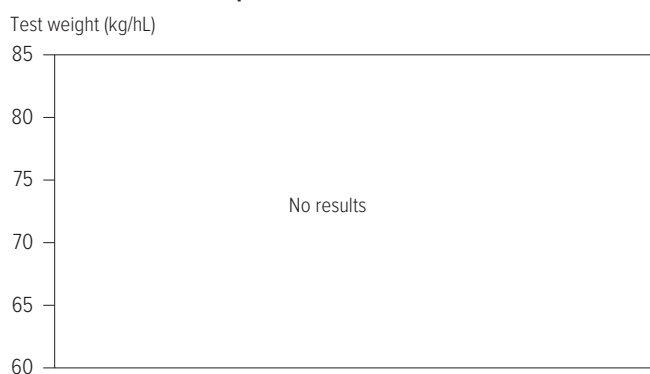
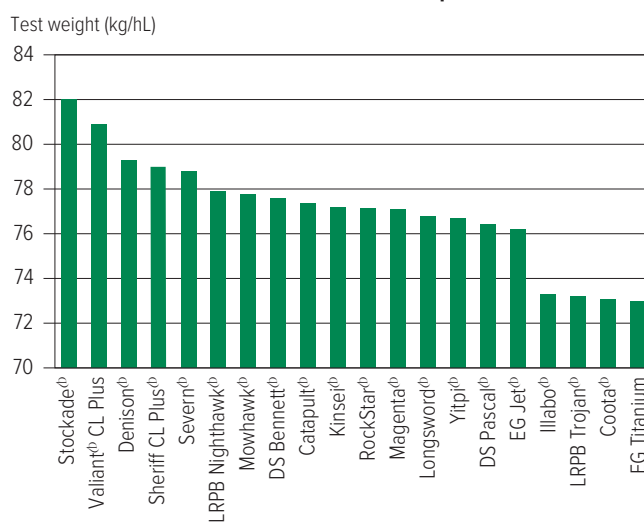


Figure 8: Test weight (kg/hL) comparisons for early season wheat varieties from one NVT site in Esperance in 2022.



WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FABA BEAN

FIELD PEA

LENTIL

LUPIN

Screenings comparisons

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

Screenings (%<2.0mm)

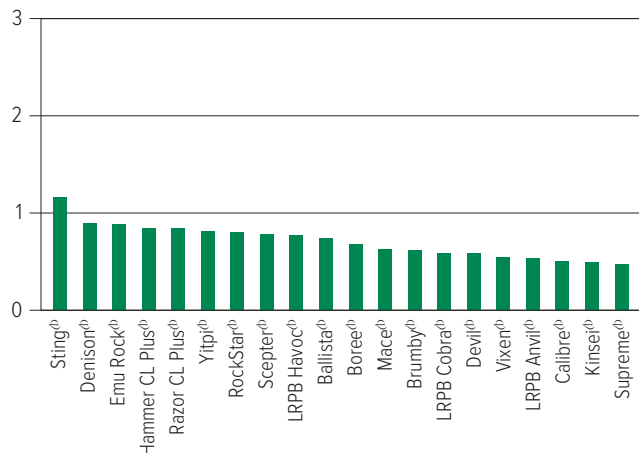


Figure 11: Screenings (<2.0mm) comparisons for early season wheat varieties in Esperance in 2021.

Screenings (%<2.0mm)



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

Screenings (%<2.0mm)

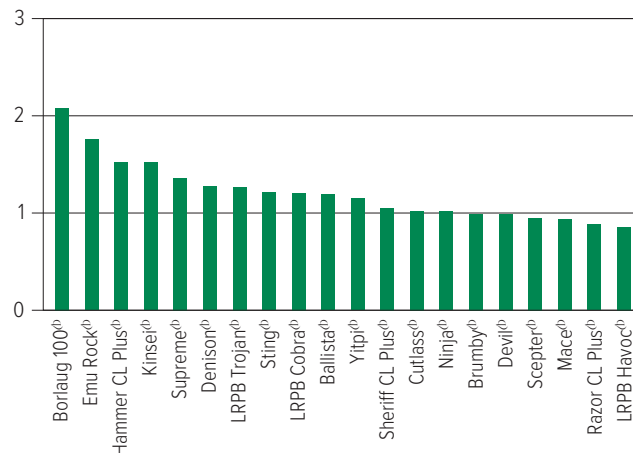
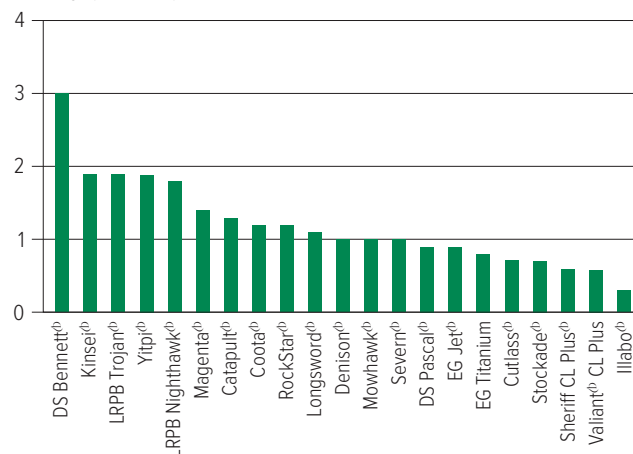


Figure 12: Screenings (<2.0mm) comparisons for early season wheat varieties from one NVT site in Esperance in 2022.

Screenings (%<2.0mm)



WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FABA BEAN

FIELD PEA

LENTIL

LUPIN

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 7: Wheat disease guide for Western Australia.

Variety	Yellow spot	Nodorum blotch (leaf)	Nodorum blotch (glume)	Stem rust	Stripe rust (west coast resistance)	Leaf rust	Powdery mildew	Septoria tritici blotch	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus quasitereoides</i>)	CCN	Crown rot
Ballista ^{db}	MS	MRMS	MS	MR	RMR	S	S	SVS	S		MRMS	S
Borlaug 100 ^{db}	MRMS	MRMS	MRMS	MR	RMR	MR	S	MS	S		MS	MSS
Brumby ^{db}	MRMS	MS	MRMS	MR	RMR	SVS	R	MSS (P)	MRMS		MRMS	S
Calibre ^{db}	MRMS	MSS	MSS	MR	RMR	S	MSS	SVS	S	MR (P)	MRMS	S
Catapult ^{db}	MRMS	MRMS	MRMS	MR	RMR	S	S	S	S	MRMS	R	MSS
Chief CL Plus ^{db}	MRMS	MRMS	MS	MR	S	MR	S	MSS	MRMS	MRMS	MS	MSS
Coota ^{db}	MSS	MS	MRMS	RMR	MR	MR	S	MSS	MR		MR	MSS
Cutlass ^{db}	MSS	MRMS	MRMS	R	RMR	RMR	S	MSS	MSS	MS (P)	MR	S
Denison ^{db}	MRMS	MRMS	MR	MS	MR	S	S	MS	S	MR (P)	MS	MSS
Devil ^{db}	MRMS	MRMS	MS	S	MR	SVS	S	SVS	MSS	MRMS	MSS	MSS
DS Bennett ^{db}	MRMS	MR	MR	MS	RMR	SVS	RMR (SVS)	MR	S		S	VS
DS Pascal ^{db}	MS	MRMS	MRMS	MSS	RMR	MS	RMR	MS	S		S	S
EG Jet ^{db}	MRMS		MSS	S	RMR	S	MS	MSS	S		MRMS	S
EG Titanium	MSS		MRMS	MS	RMR	MS	MSS	MSS	MSS		R	MSS
EGA Wedgetail ^{db}	MSS	MRMS	MRMS	MRMS	MS	MSS	MRMS	MRMS	S		S	S
Emu Rock ^{db}	MS	MRMS	S	MS	MRMS	SVS	MSS	S	MSS	MS (P)	S	MSS
Hammer CL Plus ^{db}	MRMS	MRMS	MRMS	MR	RMR	S	SVS	MSS	MSS	MR (P)	MRMS	MSS
Illabo ^{db}	MS	MR	MR	MRMS	RMR	S	RMR	MR	MSS	RMR	MRMS	S
Kinsei ^{db}	MS	MRMS	MRMS	MSS	MRMS	MSS	S	MSS	S	S	MSS	MSS
Longsword ^{db}	MRMS	MRMS	MRMS	MR	RMR	MR#	MRMS	MRMS	MRMS		MRMS	MSS
LRPB Anvil ^{db}	MSS	MSS	MSS	MR	RMR	SVS	S	S	MSS		MRMS	MSS
LRPB Avenger ^{db}	MS	MS	S	MS	MRMS	S	S	MSS	MSS		MRMS	SVS
LRPB Cobra ^{db}	MRMS	MS	MRMS	MR	MSS	MR#	MSS	S	MSS	MSS (P)	MS	S
LRPB Havoc ^{db}	MRMS	MRMS	MS	S	MR	S	MSS	MRMS	S	MRMS	S	MSS
LRPB Nighthawk ^{db}	MS	MR	MRMS	RMR	RMR	MSS	MSS	MRMS	MSS	MRMS (P)	MS	MSS
LRPB Nyala ^{db}	MS	MR	MSS	SVS	RMR	S	R	SVS	S		MSS	MSS
LRPB Oryx ^{db}	MSS	MSS	S	MR	RMR	RMR#	RMR	SVS	MSS	MSS (P)	S	MSS
LRPB Trojan ^{db}	MSS	MS	MS	MRMS	MR	MR#	S	S	MSS	MS (P)	MS	MS
Mace ^{db}	MRMS	MS	MS	MRMS	RMR	S	MSS	S	MS	MRMS	MRMS	S
Mowhawk ^{db}	MRMS (P)			RMR (P)	RMR (P)	MR (P)						
Razor CL Plus ^{db}	MSS	MS	MS	MRMS	RMR	S	MSS	SVS	S		MR	S
RockStar ^{db}	MRMS	MRMS	MRMS	MRMS	RMR	S	MS	S	MRMS	MS	MSS	S
Scepter ^{db}	MRMS	MSS	MRMS	MRMS	RMR	MSS	S	S	S	MS	MRMS	MSS
Severn ^{db}	MRMS	MR (P)	MR	MS	RMR	MRMS	R	MS (P)	S		MSS (P)	S
Sheriff CL Plus ^{db}	MRMS	MRMS	MRMS	MS	MS	SVS	SVS	S	MRMS	MRMS (P)	MS	S
Sting ^{db}	MRMS	MS	MS	MRMS	MR	SVS	S	S	MRMS	MS (P)	MS	MSS
Stockade ^{db}	MRMS	MR	MRMS	MS	RMR	MR (P)	S	MS (P)	S		MRMS	S
Valiant ^{db} CL Plus	MRMS	MRMS	MR	MR	RMR	S	S	MRMS	S	MS (P)	MSS (P)	S
Vixen ^{db}	MRMS	MSS	MSS	MRMS	MRMS	SVS	SVS	MSS	MRMS	MSS	MSS	S
Yitpi ^{db}	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 ^{db}	InterGrain	Feed	3.50	Mid-maturity suited to all regions. Semi-prostrate growth habit that will provide more weed competition than Rosalind ^{db} . A potential variety replacement for Rosalind ^{db} with a more competitive plant type.
Fandaga ^{db}	AGF Seeds	Feed	None provided.	Slower maturity than RGT Planet ^{db} .
Titan AX ^{db}	Australian Grain Technologies	Under malt evaluation	4.55	The world's first CoAXium® barley variety. Mid-season maturity, slightly later than Compass ^{db} , similar to RGT Planet ^{db} . Agronomically similar to Compass ^{db} .
Zena ^{db} CL	InterGrain	Under malt evaluation	4.25	Zena ^{db} CL is an imidazolinone-tolerant barley variety best-suited to medium-high rainfall environments.

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

WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FABA BEAN

FIELD PEA

LENTIL

LUPIN

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

Barley variety yield performance – Esperance

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

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

Table 1: Gibson main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	5.39	5.26	5.46	6.05	5.66
Combat ^{db}				111	115
RGT Planet ^{db}	116	112	115	108	109
Minotaur ^{db}			115	106	112
Fandaga ^{db}					109
Cyclops ^{db}			106	105	105
Rosalind ^{db}	104	106	106	104	108
Bottler ^{db}	108	102	107	100	106
Laperouse ^{db}	99	104	102	102	102
Leabrook ^{db}	98	104	99	105	98
Buff ^{db}	105	101	94	101	100
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Zena ^{db} CL				107	110
Titan AX ^{db}					97
Maximus ^{db} CL	94	100	100	98	104
Spartacus CL ^{db}	89	94	95	95	98
Sowing date	15 May	8 May	12 May	14 May	17 May
Rainfall J–M (mm)	151	20	82	51	44
Rainfall A–O (mm)	417	352	346	510	521

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

Table 3: Munglinup main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.47	2.90	2.54		4.36
Combat ^{db}					117
Cyclops ^{db}			123		107
Minotaur ^{db}			112		109
Laperouse ^{db}	104	110	118		101
Rosalind ^{db}	106	105	105		104
RGT Planet ^{db}	105	97	96		113
Fandaga ^{db}					109
Buff ^{db}	101	109	94		107
Leabrook ^{db}	102	104	108		101
Beast ^{db}		106	114		95
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Maximus ^{db} CL	104	110	118		96
Titan AX ^{db}					104
Zena ^{db} CL					113
Spartacus CL ^{db}	100	104	110		90
Sowing date	10 Jun	9 May	7 May	17 May	17 May
Rainfall J–M (mm)	130	21	83	68	50
Rainfall A–O (mm)	331	292	314	431	584

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

Table 2: Mt. Madden main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.37	1.16	3.00	4.17	3.85
Rosalind ^{db}	122	150	112	106	111
Beast ^{db}		118	125	107	106
Combat ^{db}				111	110
Compass ^{db}	105	113	112	106	107
Leabrook ^{db}	104	84	112	109	107
La Trobe ^{db}	107	130	112	100	101
Cyclops ^{db}			122	106	99
Minotaur ^{db}			108	104	105
Laperouse ^{db}	105	93	119	103	98
Fathom ^{db}	100	115	107	102	101
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Maximus ^{db} CL	116	142	125	99	97
Spartacus CL ^{db}	109	137	118	97	95
Commodus ^{db} CL			110	103	103
Titan AX ^{db}				108	105
Sowing date	4 Jun	28 May	13 May	20 May	22 May
Rainfall J–M (mm)	56	14	76	89	37
Rainfall A–O (mm)	158	160	196	338	354

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

Table 4: Salmon Gums main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			1.05		3.48
Beast ^{db}			174		116
Rosalind ^{db}			153		116
Compass ^{db}			163		108
La Trobe ^{db}			145		107
Leabrook ^{db}			135		109
Cyclops ^{db}			115		113
Combat ^{db}					115
Laperouse ^{db}			120		109
Fathom ^{db}			130		104
Minotaur ^{db}			109		110
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Maximus ^{db} CL			150		114
Spartacus CL ^{db}			147		108
Commodus ^{db} CL			151		104
Titan AX ^{db}					104
Sowing date			20 May	25 May	20 May
Rainfall J–M (mm)			92	99	38
Rainfall A–O (mm)			158	269	299

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

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Table 5: Scaddan main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.17		1.98	4.47	4.38
Beast ^ᵒ		Compromised trial	138	117	111
Combat ^ᵒ				112	114
Cyclops ^ᵒ			128	110	111
Leabrook ^ᵒ	103		122	114	110
Rosalind ^ᵒ	106		125	112	104
Laperouse ^ᵒ	104		123	107	108
Compass ^ᵒ	99		124	114	105
Minotaur ^ᵒ			111	105	110
La Trobe ^ᵒ	99		118	105	101
Fathom ^ᵒ	98			114	106
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Maximus ^ᵒ CL	103		131	106	103
Titan AX ^ᵒ				110	107
Commodus ^ᵒ CL			117	109	104
Spartacus CL ^ᵒ	99		121	103	100
Sowing date	9 Jun	10 May	3 Jun	18 May	4 May
Rainfall J–M (mm)	141	16	48	51	44
Rainfall A–O (mm)	213	278	250	510	521

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

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Barley variety quality – Esperance

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

The following figures show the grain quality trends as histograms from 2021 and 2022 NVT averaged for trials in the Esperance region. Only the varieties evaluated at every site are included. These are plotted in order of performance, up to a maximum of 20.

Protein and yield comparisons

Figure 1: Protein (%) and yield (t/ha) comparisons for main season barley varieties from three NVT sites in Esperance in 2021.

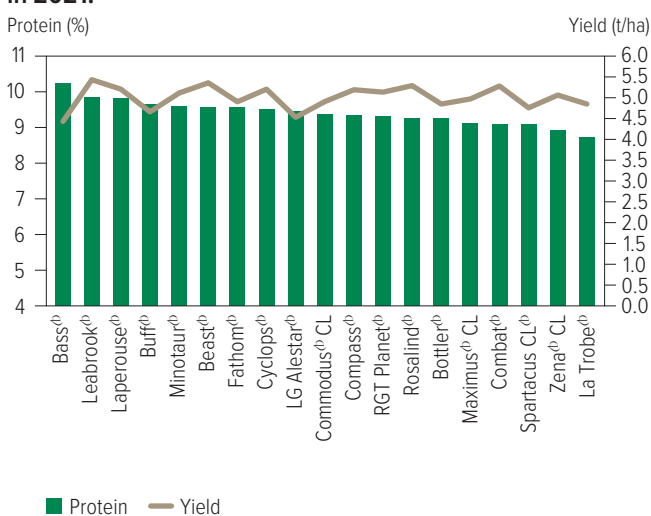
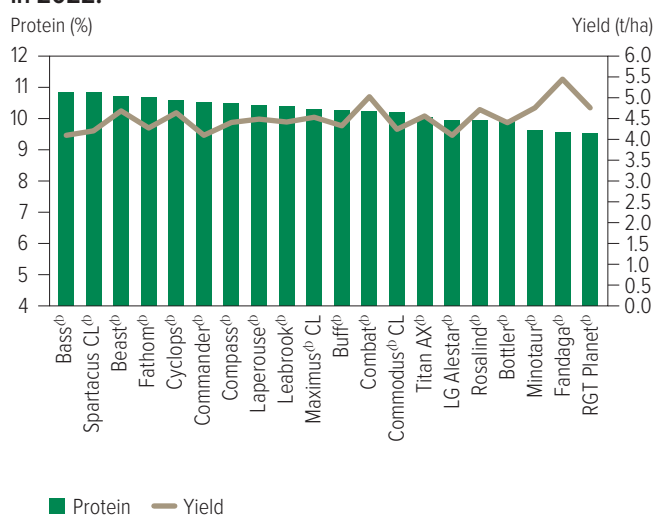


Figure 2: Protein (%) and yield (t/ha) comparisons for main season barley varieties from five NVT sites in Esperance in 2022.



Test weight comparisons

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

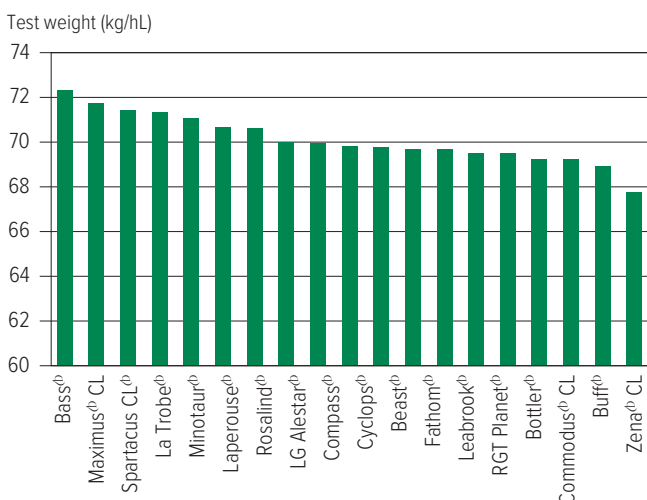
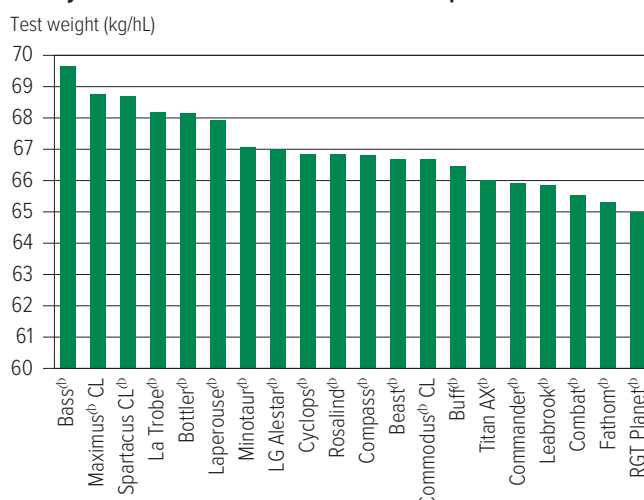


Figure 4: Test weight (kg/hL) comparisons for main season barley varieties from five NVT sites in Esperance in 2022.



Screenings comparisons

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

Screenings (%<2.5mm)

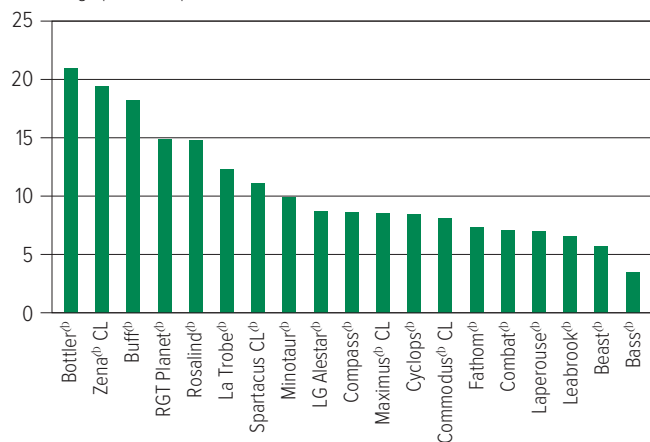
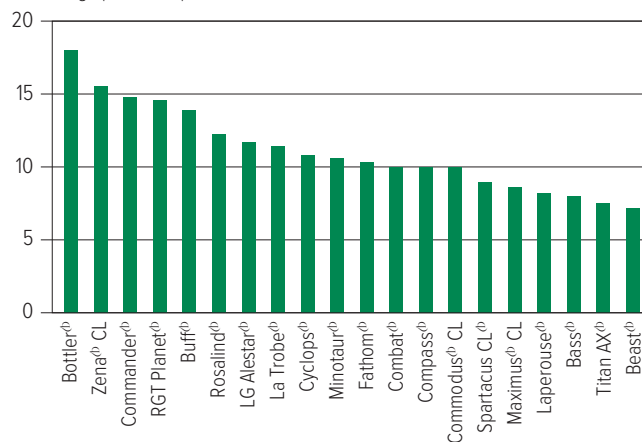


Figure 6: Screenings (<2.5mm) comparisons for main season barley varieties from five NVT sites in Esperance in 2022.

Screenings (%<2.5mm)



Retention comparisons

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

Retention (%>2.5mm)

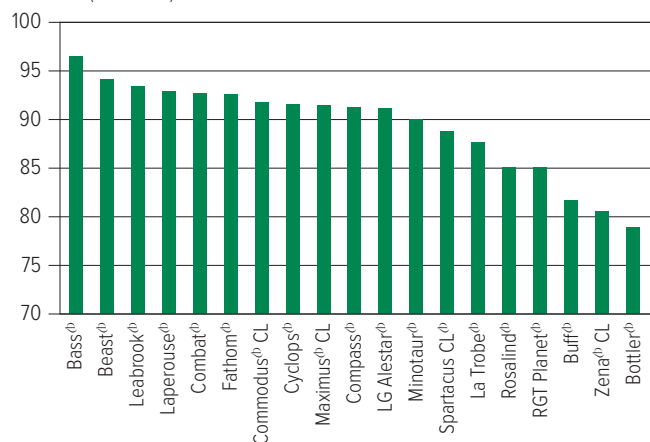
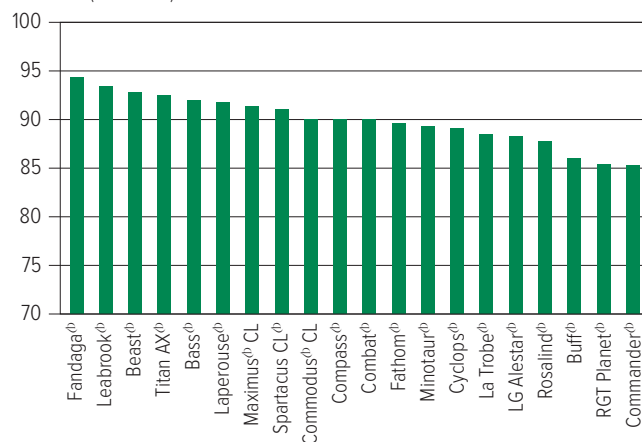


Figure 8: Retention (>2.5mm) comparisons for main season barley varieties from five NVT sites in Esperance in 2022.

Retention (%>2.5mm)



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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.

Variety	Scald	Net form net blotch	Spot form net blotch	Powdery mildew	Leaf rust	Crown rot	Barley yellow dwarf virus	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus quasitereoides</i>)	CCN	Ramularia	
Bass ^{db}	MRMS-MS	MRMS-SVS	MSS	MSS	SVS	MSS	MRMS	MS	MSS	S	VS (P)	WHEAT
Beast ^{db}	S	MRMS-S	MSS	MR	MSS	S	MS	MRMS	MS (P)	MR	SVS (P)	BARLEY
Bottler ^{db}	S	MR-MS	MSS	RMR	MS	SVS	MRMS	MS			SVS (P)	
Buff ^{db}	MRMS-MS	MR-MSS	MSS	S	S	S	MRMS-MS	MRMS	S		SVS (P)	
Combat ^{db}	S	MRMS-S	MRMS	R	MS	S (P)	MRMS	MR		MRMS	SVS (P)	
Commander ^{db}	MS-S	MRMS-S	MSS	MR	MSS	S	MRMS-MS	MRMS		R	SVS (P)	
Commodus ^{db} CL	MS	MRMS-S	MSS	R-MRMS	S	S (P)	MRMS	MRMS	MS (P)	R	SVS (P)	OAT
Compass ^{db}	MS	MR-S	MSS	R-MRMS	S	S	MS	MRMS	S	R	SVS (P)	
Cyclops ^{db}	MRMS	MR-S	S	MR	S	S (P)	S	MRMS	MSS (P)	S	SVS (P)	
Fairview ^{db}	S	MRMS-VS	MSS	R	S	MSS	MRMS	MR			SVS (P)	
Fandaga ^{db}	VS	R-MSS	S	RMR	MSS	MSS (P)	MS	MR		R	VS (P)	CANOLA
Fathom ^{db}	MR	MS-SVS	MR	MR-MRMS	MS	SVS	MRMS	MRMS	MSS	R	SVS (P)	
Flinders ^{db}	S	MRMS-S	MSS	RMR	MS	MSS	MRMS	MRMS	MSS (P)	S	SVS (P)	
La Trobe ^{db}	RMR	MRMS-S	MSS	S	S	S	MS-S	MRMS	S	R	SVS (P)	
Laperouse ^{db}	S	MR-S	MS	R-MR	MSS	S	MRMS-MS	MR	MS (P)	S	VS (P)	CHICKPEA
Leabrook ^{db}	MS	MRMS-S	MSS	R-MR	MSS	S	MS-MSS	MRMS	MS	RMR	VS (P)	
LG Alestar ^{db}	S	MRMS-S	S	R	MS	S	MRMS-MS	MR		R ^a (P)	SVS (P)	FABA BEAN
Litmus ^{db}	S	MS-SVS	MSS	MR	S	S	S	MS	MSS (P)	MS	VS (P)	
Maximus ^{db} CL	R	MR-S	MSS	MR	MSS	S	MRMS	MRMS	S	R	VS (P)	
Minotaur ^{db}	VS	MRMS-MS	S	S	S	MS	MSS	MRMS	MS (P)	R	SVS (P)	
RGT Planet ^{db}	RMR	MRMS-SVS	S	R	MRMS-MS	MSS	MRMS-MS	MRMS	MS	R (P)	VS (P)	
Rosalind ^{db}	MSS	MR-S	MSS	MSS	MR	MSS	MRMS-MS	MRMS	MSS	R	VS (P)	
Scope CL ^{db}	MS	MR-MSS	MSS	MR	MSS	S	MRMS	MRMS	MRMS	S	SVS (P)	FIELD PEA
Spartacus CL ^{db}	RMR	MRMS-S	SVS	MSS	MSS	S	MSS	MRMS	MSS	R	VS (P)	
Titan AX ^{db}	S	MR-MSS	MS	RMR	S	MSS (P)	MS	R		MR (P)	VS (P)	LENTIL
Zena ^{db} CL	MR	MRMS-SVS	SVS	R	MS	MSS (P)	MRMS-MS	MRMS		R	VS (P)	LUPIN

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 ^{db}	National Oat Breeding Program	Grain	None provided.	High-yielding, tall dwarf variety with similar height to Bannister ^{db} and taller than Mitika ^{db} , Bilby ^{db} or Kowari ^{db} . Koala ^{db} has a mid-season maturity that can be seven days later to head compared with Bannister ^{db} and Williams ^{db} . Early vigour is similar to Bannister ^{db} and slightly slower than Bilby ^{db} and Yallara ^{db} . Commercialised by Seednet.

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

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

Oat variety yield performance – Esperance

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

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

Table 1: Gibson oat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	4.82	4.52	3.63	4.91	5.42
Koala ^{db}	135	112	120	112	116
Bannister ^{db}	117	109	115	107	109
Kojonup ^{db}	112	107	118	110	107
Wandering	111	109	119	105	107
Williams ^{db}	114	106	111	98	104
Bilby ^{db}	95	102	105	102	100
Kowari ^{db}	87	96	94	97	95
Carrolup	92	91	85	84	88
Koorabup ^{db}	97	84	66	76	84
Yallara ^{db}	91	83	64	76	83
Sowing date	14 May	9 May	12 May	14 May	17 May
Rainfall J–M (mm)	151	20	82	51	44
Rainfall A–O (mm)	417	352	346	510	521

Special thanks to 2022 trial cooperator, Laurina Farms.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 2: Holt Rock oat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	3.08	0.87	3.00	2.06	5.44
Koala ^{db}	107	45	104	99	119
Bannister ^{db}	108	79	106	103	110
Wandering	109	81	105	103	108
Williams ^{db}	109	71	99	101	108
Bilby ^{db}	101	111	104	102	98
Kowari ^{db}	96	118	98	99	93
Kojonup ^{db}	90	50	93	83	108
Yallara ^{db}	93	98	80	93	90
Durack ^{db}	88	123	84	92	84
Carrolup	91	78	80	85	94
Sowing date	2 Jun	22 May	4 May	21 May	27 Apr
Rainfall J–M (mm)	90	13	75	98	100
Rainfall A–O (mm)	160	163	155	287	331

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

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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 3: Oat disease guide for Western Australia.

Variety	Septoria blotch	Leaf rust (crown rust)	Stem rust	Barley yellow dwarf virus (BYDV)	RLN resistance (<i>Pratylenchus neglectus</i>)	CCN
Bannister ^{db}	MSS	MR/MRMS	MS	MS	MS	MR
Bilby ^{db}	S	MRMS	SVS	S	S	S
Carrolup	MSS	VS	S	SVS	MRMS	VS
Durack ^{db}	S	MRMS	SVS	S	MS	MRMS
Echidna	SVS	SVS	S	MSS	MSS	MS
Koala ^{db}	MSS	MR	MRMS	MSS	MS	R
Kojonup ^{db}	MSS	SVS	MSS	MS	MSS	VS
Koorabup ^{db}	MRMS#	MRMS	MSS	MSS	MSS	MRMS
Kowari ^{db}	S	MR/MRMS	S	S	MSS	S
Mitika ^{db}	SVS	MRMS	S	SVS	S	VS
Mulgara ^{db}	S/MRMS	MR	MR	MS		R
Possum	S	MR/MS	S	S	MS	MSS
Tungoo ^{db}	MRMS#	RMR	MS	MSS	MSS	MR
Wandering	MSS	VS	SVS	S	MSS	VS
Williams ^{db}	MSS	MR	MSS	MSS	MRMS	S
Wintaroo ^{db}	MSS	S	MS	MS	MSS	R
Yallara ^{db}	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.

WHEAT

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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 [Ⓢ]	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 [Ⓢ]	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.
Hyola [®] Solstice CL	Pacific Seeds	-	Mid-maturity Clearfield [®] tolerant hybrid. Suitable for medium and high-rainfall zones, dryland and irrigation. Medium height, vigorous early growth and even flowering.
HyITec [®] 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 [Ⓢ]	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.
VICTORY [®] V55-04TF	Cargill	-	First release TruFlex [®] high stability oil hybrid in Australia. Mid-maturity variety. Preferred growing regions Victoria, South Australia and southern NSW. Medium height, replacing VICTORY [®] V5003RR. Marketed by AWB under contract.

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

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

Canola variety yield performance – Esperance

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

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

Table 1: Gibson med-high rainfall GLY.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.61	3.19	2.90	3.25	
Nuseed® Condor TF		105	110	114	Compromised trial
Hyola® Regiment XC				113	
Nuseed® Eagle TF				114	
Pioneer® 45Y28 RR	104		107	114	
InVigor® R 4520P		107	109	100	
Nuseed® Raptor TF		103	106	110	
Pioneer® 44Y30 RR			107	101	
Hyola® Garrison XC		96	98	101	
InVigor® R 4022P		103	101	90	
Hyola® Battalion XC			97	95	
Sowing date	2 May	3 May	22 Apr	3 May	30 Apr
Rainfall J–M (mm)	151	20	82	51	44
Rainfall A–O (mm)	417	352	346	510	521

Special thanks to 2022 trial cooperator, Laurina Farms.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 2: Munglinup med-high rainfall GLY.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		1.85	3.08	2.75	
InVigor® R 4520P	Trial failed	107	104	112	Trial failed
Nuseed® Condor TF		108	109	105	
Nuseed® Eagle TF				105	
Pioneer® 44Y30 RR			103	112	
Pioneer® 45Y28 RR			109	104	
Nuseed® Raptor TF		106	105	104	
Hyola® Regiment XC				100	
InVigor® R 4022P		104	95	106	
DG Bindo TF				97	
DG Hotham TF				95	
Sowing date	19 May	29 Apr	30 Apr	23 Apr	28 Apr
Rainfall J–M (mm)	130	21	83	68	50
Rainfall A–O (mm)	331	292	314	431	584

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

Table 3: Scaddan med-high rainfall GLY.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			2.56	2.84	2.75
Nuseed® Hunter TF	No trial	No trial			106
InVigor® R 4520P			109	105	107
Nuseed® Condor TF					105
Pioneer® 44Y30 RR				104	105
Nuseed® Eagle TF					106
Pioneer® 44Y27 RR			106	103	102
Nuseed® Raptor TF			107	101	103
InVigor® R 4022P			104	102	101
Nuseed® Emu TF					97
Hyola® Battalion XC			102	97	96
Sowing date			23 Apr	26 Apr	14 Apr
Rainfall J–M (mm)			48	51	27
Rainfall A–O (mm)			250	510	322

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

Table 4: Gibson med-high rainfall IMI.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			3.08	3.30	
Pioneer® 45Y95 CL	No trial	No trial		119	Compromised trial
Pioneer® 45Y93 CL			109	116	
Pioneer® 44Y94 CL			113	112	
Hyola® Solstice CL				107	
Pioneer® 44Y90 CL			105		
Pioneer® 45Y91 CL			99		
Pioneer® 43Y92 CL			102		
Hyola® Equinox CL			102	97	
VICTORY® V75-03CL			92	94	
VICTORY® V7002CL			87		
Sowing date			22 Apr	3 May	30 Apr
Rainfall J–M (mm)			82	51	44
Rainfall A–O (mm)			346	510	521

Special thanks to 2022 trial cooperator, Laurina Farms.
Learn more via the [NVT Long Term Yield Reporter](#)

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Table 5: Gibson med-high rainfall TT.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.50	3.03	2.80	3.12	
HyITec® Trifecta	121	111	119	122	Compromised trial
Hyola® Blazer TT			117	122	
HyITec® Trophy	114	109	115	114	
PY520TC				120	
SF Dynatron TT™				112	
InVigor® T 4511				108	
InVigor® T 4510	112	107	110	104	
InVigor® T 6010		104	107	111	
RGT Capacity™ TT				107	
DG BIDGEE TT [Ⓛ]				117	
Sowing date	1 May	3 May	22 Apr	3 May	30 Apr
Rainfall J–M (mm)	151	20	82	51	44
Rainfall A–O (mm)	417	352	346	510	521

Special thanks to 2022 trial cooperator, Laurina Farms.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 7: Scaddan med-high rainfall TT.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.38	0.85	2.31	2.67	2.42
HyITec® Trifecta					113
HyITec® Trident		117	119	105	108
Hyola® Blazer TT		111	113	107	113
HyITec® Trophy	116	111	114	106	110
SF Dynatron TT™		106	109	106	110
InVigor® T 4511				105	107
InVigor® T 4510	107	108	111	105	107
HyITec® Velocity					105
RGT Capacity™ TT			106	104	107
RGT Baseline TT				103	109
Sowing date	20 May	7 May	23 Apr	26 Apr	14 Apr
Rainfall J–M (mm)	141	16	48	51	27
Rainfall A–O (mm)	213	278	250	510	322

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

Table 6: Munglinup med-high rainfall TT.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.45	1.92	2.73	2.34	2.55
HyITec® Trifecta	121	111	118	116	113
Hyola® Blazer TT			118	118	109
HyITec® Trophy		110	112	117	107
SF Dynatron TT™				116	107
PY520TC				114	106
InVigor® T 4511				114	106
InVigor® T 4510	120	108	105	114	106
RGT Capacity™ TT		104		110	107
InVigor® T 6010		100	110	104	109
InVigor® LT 4530P			97	109	105
Sowing date	19 May	29 Apr	30 Apr	23 Apr	28 Apr
Rainfall J–M (mm)	130	21	83	68	50
Rainfall A–O (mm)	331	292	314	431	584

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

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

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		1.26		1.91	3.15
Hyola® Blazer TT	Trial failed		Trial failed		117
HyITec® Trident		101		132	110
SF Dynatron TT™		113			114
HyITec® Trophy		104			110
InVigor® T 4510		107		114	108
HyITec® Velocity					104
InVigor® LT 4530P					109
InVigor® T 4511				107	105
RGT Capacity™ TT					103
Renegade TT [Ⓛ]				106	103
Sowing date	3 May	30 Apr	1 May	23 Apr	19 Apr
Rainfall J–M (mm)	56	14	76	89	37
Rainfall A–O (mm)	158	160	196	338	354

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

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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 9: 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 [Ⓢ]	RMR	R	R	Open pollinated
TRIAZINE-TOLERANT VARIETIES				
HyITec® Trident	R			Hybrid
HyITec® Trifecta	R			Hybrid
HyITec® Trophy	R	R	R	Hybrid
Hyola® Blazer TT	R			Hybrid
DG BIDGEE TT [Ⓢ]	R	R	R	Open pollinated
InVigor® T 4511	R	R		Hybrid
DG MURRAY TT [Ⓢ]	R			Open pollinated
DG Torrens TT [Ⓢ]	R		R	Open pollinated
Monola® H421TT	RMR			High stability oil, hybrid
Monola® 420TT	RMR			High stability oil, open pollinated
ATR-Bluefin [Ⓢ]	RMR			Open pollinated
InVigor® T 4510	MR	R	R	Hybrid
SF Spark TT	MR	R	R	Hybrid
HyITec® Velocity	MR			Hybrid
Renegade TT [Ⓢ]	MR	R	R	Open pollinated
Monola® 422TT	MR			High stability oil, open pollinated
ATR-Stingray [Ⓢ]	MRMS	R	R	Open pollinated
RGT Baseline™ TT	MRMS	R	R	Hybrid
ATR-Swordfish [Ⓢ]	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 [Ⓢ]	MRMS	R	R	Open pollinated
AFP Cutubury [Ⓢ]	MS	RMR	RMR	Open pollinated
ATR-Bonito [Ⓢ]	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](#).

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Table 9: 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](#).

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Chickpea variety yield performance – Esperance

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

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

Table 1: Scaddan desi chickpea.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			1.16	0.80	1.20
PBA Slasher ^{db}	No trial	No trial	108	116	109
PBA Striker ^{db}			104	123	90
Neelam ^{db}			99	107	84
Genesis™ 836			95	83	98
CBA Captain ^{db}			102	103	77
PBA Maiden ^{db}			93	112	74
Genesis™ 090			82	85	95
PBA Seamer ^{db}					70
Sowing date			3 Jun	13 May	18 May
Rainfall J–M (mm)			48	51	44
Rainfall A–O (mm)			250	510	521

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

Learn more via the [NVT Long Term Yield Reporter](#)

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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 2: Chickpea disease guide for Western Australia.

Variety	Ascochyta blight (pathogen group 2 – north)	Phytophthora root rot	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN tolerance (<i>Pratylenchus neglectus</i>)
DESI				
CBA Captain ^{db}	MS	S	MR	MT
Genesis™ 836	S		MR	MII
Neelam ^{db}	S		MRMS	MI
PBA Maiden ^{db}	S		MRMS	MI
PBA Seamer ^{db}	MS	S	MRMS	MI
PBA Slasher ^{db}	S		MRMS	MI
PBA Striker ^{db}	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.

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Faba bean variety yield performance – Esperance

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

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

Table 1: Scaddan faba bean.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			1.92	2.50	2.23
PBA Marne ^{db}	No trial	No trial	110	101	104
PBA Bendoc ^{db}			105	101	99
Nura ^{db}			98	97	98
PBA Zahra ^{db}			99	100	93
Farah ^{db}			96	97	97
PBA Samira ^{db}			94	98	95
PBA Amberley ^{db}			94	97	96
Fiesta VF			94	96	96
PBA Rana ^{db}				88	84
Sowing date			23 Apr	29 Apr	2 May
Rainfall J–M (mm)			48	51	44
Rainfall A–O (mm)			250	510	521

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

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

Faba bean variety disease ratings – Western Australia

The following table contains varietal ratings for the predominant diseases of faba bean in Western Australia. These ratings are updated annually by crop pathologists and were released in March 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: Faba bean disease guide for Western Australia.

Variety	Ascochyta blight	Cercospora leaf spot	Chocolate spot (Botrytis)	RLN resistance (<i>Pratylenchus thornei</i>)	Leaf rust
Farah [Ⓛ]	S	S	S	MS	VS
Fiesta VF	S	S	S	MS	VS
Nura [Ⓛ]	MR (P)	S	MS	MS	VS
PBA Amberley [Ⓛ]	MR	S	MRMS	MS	VS
PBA Bendoc [Ⓛ]	MR	S	S	MRMS	VS
PBA Marne [Ⓛ]	MS (P)	S	MS (P)	MS	MRMS
PBA Rana [Ⓛ]	MRMS	S	MS	MS	VS
PBA Samira [Ⓛ]	MR (P)	S	MS	MRMS	S
PBA Zahra [Ⓛ]	MRMS	S	MS	MRMS	S

Learn more via the [NVT Disease Ratings](#).

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

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Field pea variety yield performance – Esperance

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

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

Table 1: Grass Patch field pea.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.07		0.47	2.02	1.78
PBA Pearl	88	Trial results below standard	116		
PBA Butler [†]	85		106	112	105
PBA Oura [†]	107		100	102	103
GIA Ourstar ^{†*}			89	89	96
PBA Taylor [†]	92		105	98	98
PBA Wharton [†]	102		100	89	93
Kaspa [†]	81		97	98	92
PBA Gunyah [†]	81		102	94	92
PBA Twilight [†]	86		98	89	89
GIA Kastar ^{†*}			79	70	81
Sowing date	8 Jun	14 Jun	27 May	25 May	20 May
Rainfall J–M (mm)	17	28	92	99	38
Rainfall A–O (mm)	176	159	158	269	299

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

* herbicide-tolerant variety. Learn more via the [NVT Long Term Yield Reporter](#)

Table 2: Holt Rock field pea.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	0.51	0.76	1.25	0.89	1.29
PBA Butler [†]	134	103	103	114	118
PBA Taylor [†]	153	114	105	106	100
PBA Pearl	62	98	115		
Kaspa [†]	134	97	93	89	113
PBA Gunyah [†]	103	100	101	86	103
PBA Wharton [†]	114	108	103	93	87
PBA Oura [†]	69	97	101	101	96
PBA Twilight [†]	107	99	97	80	98
GIA Kastar ^{†*}			81	63	74
GIA Ourstar ^{†*}			92	79	81
Sowing date	3 Jun	23 May	4 Jun	28 May	22 May
Rainfall J–M (mm)	90	13	75	98	100
Rainfall A–O (mm)	160	163	155	287	331

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

* herbicide-tolerant variety. Learn more via the [NVT Long Term Yield Reporter](#)

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

Table 3: Scaddan field pea.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.61	0.95	1.64	1.85	1.30
PBA Pearl	81	98	115		
PBA Taylor [Ⓛ]	107	110	105	107	106
PBA Butler [Ⓛ]	88	102	110	112	121
PBA Wharton [Ⓛ]	112	107	97	96	88
PBA Oura [Ⓛ]	102	97	98	98	98
Kaspa [Ⓛ]	81	99	102	98	101
PBA Gunyah [Ⓛ]	84	102	102	94	93
PBA Twilight [Ⓛ]	89	101	97	90	86
GIA Ourstar ^{Ⓛ*}			85	81	73
GIA Kastar ^{Ⓛ*}			78	74	56
Sowing date	19 Jun	4 Jun	3 Jun	27 May	18 May
Rainfall J–M (mm)	141	16	48	51	44
Rainfall A–O (mm)	213	278	250	510	521

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

* herbicide-tolerant variety. Learn more via the [NVT Long Term Yield Reporter](#)

Field pea variety disease ratings – Western Australia

The following table contains varietal ratings for the predominant diseases of field pea in Western Australia. These ratings are updated annually by crop pathologists and were released in March 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 4: Field pea disease guide for Western Australia.

Variety	Bacterial blight	Downy mildew	Powdery mildew	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)
GIA Kastar [Ⓛ]	S	S	RMR	MR	MS
GIA Ourstar [Ⓛ]	S (P)	S	S	MRMS	MSS
Kaspa [Ⓛ]	S	S	S	RMR	MRMS
PBA Butler [Ⓛ]	MS	S	S	RMR	MRMS
PBA Gunyah [Ⓛ]	S	S	S	RMR	MRMS
PBA Oura [Ⓛ]	MS	S	S	MR	MRMS
PBA Pearl	MS	S	S	MR	MRMS
PBA Percy	MRMS	S	S	RMR	RMR
PBA Taylor [Ⓛ]	S	S	S	RMR	MRMS
PBA Twilight [Ⓛ]	S	S	S	MR	MRMS
PBA Wharton [Ⓛ]	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.

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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 [®]	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 [®] 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 [®] . This variety has imidazolinone and soil residue sulfonylurea herbicide tolerance similar to existing XT varieties. GIA Leader [®] 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 [®]	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 [®] 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 [®] 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 [®] has the same Ascochyta blight disease rating as GIA Thunder [®] but is more susceptible to BGM. GIA Lightning [®] is not well suited to soil types or regions prone to BGM.
GIA Metro [®]	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 [®] is a large, lens-shaped red lentil with a grey seed coat.
GIA Sire [®]	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 [®] 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 [®] 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 [®] is available only under small, scale-controlled release.
GIA Thunder [®]	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 [®] is a mid-flowering and mid-maturing variety, with better vegetative frost tolerance than PBA HighlandXT [®] , PBA Hallmark XT [®] , PBA Hurricane XT [®] and GIA Lightning [®] . GIA Thunder [®] has similar Group 2 (imidazolinone and soil residue sulfonylurea) herbicide tolerance to existing XT varieties. GIA Thunder [®] has the same Ascochyta blight disease rating as PBA Hurricane XT [®] and GIA Lightning [®] 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 [®] .

* EPR amount is ex-GST, [®] 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[®] lentil is in the same small round lentil market class as PBA Hurricane XT[®]; 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 – Esperance

Yield results are presented from the top-performing varieties within each NVT location in the region for the past five seasons. Results are presented (as a percentage) for each variety relative to the mean trial yield for the location within each year. Varieties are listed in descending order of average yield over the period. The Long Term Yield Reporter provides additional information on varieties not listed and can be viewed as a table or chart with error bars. Rainfall is provided for January to March (J–M) and April to October (A–O) and, where relevant, irrigation from April to October.

Table 1: Scaddan lentil.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)			0.49	1.72	1.08
GIA Lightning ^{(b)*}	No trial	No trial	125	113	115
GIA Thunder ^{(b)*}			113	112	100
PBA HighlandXT ^{(b)*}			115	104	111
GIA Sire ^{(b)*}				93	119
PBA Bolt ^(b)			103	100	112
PBA Hurricane XT ^{(b)*}			110	104	102
PBA Hallmark XT ^{(b)*}			111	104	101
GIA Leader ^{(b)*}			103	105	98
PBA Ace ^(b)			88		102
PBA Kelpie XT ^{(b)*}			110	94	104
Sowing date			11 May	13 May	18 May
Rainfall J–M (mm)			48	51	44
Rainfall A–O (mm)			250	510	521

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 ^(b) virulent)	Ascochyta blight (Pathotype 1 Nipper ^(b) virulent)	Botrytis grey mould	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)
GIA Leader ^(b)	MR	MR	MRMS (P)	R	MR
GIA Lightning ^(b)	MRMS	R	MS	R	MR
GIA Metro ^(b)	RMR	MR	MRMS	MR	MRMS
GIA Sire ^(b)	MRMS (P)	R	MS	MR	MR
GIA Thunder ^(b)	MRMS	R	MRMS	MR	R
Nipper ^(b)	MR	MRMS	MRMS (P)	RMR	MR
PBA Ace ^(b)	MR	R	MS	MR	MRMS
PBA Blitz ^(b)	MR	MRMS	MS (P)	MR	MRMS
PBA Bolt ^(b)	MRMS	MR	S	MR	MR
PBA Hallmark XT ^(b)	MRMS	RMR	MRMS (P)	MR	MRMS
PBA HighlandXT ^(b)	MR	MR	MS	MR	MRMS
PBA Hurricane XT ^(b)	MRMS	RMR	MS	MRMS	MRMS
PBA Jumbo2 ^(b)	RMR (P)	R	MR (P)	MR	MRMS
PBA Kelpie XT ^(b)	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.

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LENTIL

LUPIN

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 ^{db}	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, ^{db} denotes Plant Breeder's Rights apply.

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

Lupin variety yield performance – Esperance

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

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

Table 1: Esperance/Gibson narrow-leaf lupin.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.10	1.82	2.00	1.70	
PBA Jurien [Ⓛ]		127	117		
Lawler [Ⓛ]			117	107	
PBA Barlock [Ⓛ]		115	101	101	
Coyote [Ⓛ]	135	121	120	108	
Mandelup [Ⓛ]		116	108	103	
PBA Bateman [Ⓛ]	123	108	108	105	
Wonga		84	67	84	
PBA Gunyidi [Ⓛ]		89	95	100	
PBA Leeman [Ⓛ]		97	98	93	
Coromup [Ⓛ]	50	95	97	95	
Sowing date	14 May	2 May	23 Apr	3 May	29 Apr
Rainfall J–M (mm)	85	24	82	51	44
Rainfall A–O (mm)	434	402	346	510	521

PBA Jurien[Ⓛ] was not included in 2021 due to a seed quality issue.

Special thanks to 2022 trial cooperator, Laurina Farms.

Learn more via the [NVT Long Term Yield Reporter](#)

Table 2: Holt Rock narrow-leaf lupin.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.71	1.21	1.23	1.82	2.66
PBA Jurien [Ⓛ]		107	109		111
Coyote [Ⓛ]	114	104	107	109	108
Lawler [Ⓛ]			106	106	106
PBA Bateman [Ⓛ]	107	103	105	105	108
Mandelup [Ⓛ]		103	103	101	103
PBA Barlock [Ⓛ]		104	103	98	103
PBA Gunyidi [Ⓛ]		100	100	101	103
Coromup [Ⓛ]	93	94	94	95	85
PBA Leeman [Ⓛ]		92	92	94	81
Wonga		94	87	80	81
Sowing date	4 May	1 May	1 May	24 Apr	6 May
Rainfall J–M (mm)	90	13	75	98	100
Rainfall A–O (mm)	160	163	155	287	331

PBA Jurien[Ⓛ] 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](#)

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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 : Lupin disease guide for Western Australia.

Variety	Anthraxnose resistance	Cucumber mosaic virus (CMV)	Phomopsis pod infection	Phomopsis stem infection
Coromup ^{db}	MR	MR	MS	MR
Coyote ^{db}	MRMS	MRMS	MRMS	S
Jenabillup ^{db}	MS	MRMS	MR	MS
Lawler ^{db}	MR	MRMS	MS	MR
Mandelup ^{db}	MRMS	MRMS	S	RMR
PBA Barlock ^{db}	RMR	MR	MR	MR
PBA Bateman ^{db}	MRMS	MR	MS	RMR
PBA Gunyidi ^{db}	MRMS	MRMS	MRMS	RMR
PBA Jurien ^{db}	RMR	MS	MR	RMR
PBA Leeman ^{db}	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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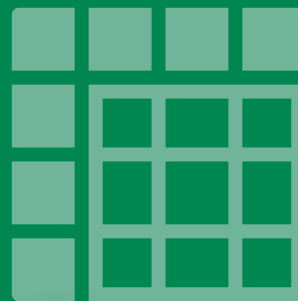
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