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NVT HARVEST REPORT



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KWINANA EAST

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LEGEND: MEAN VARIETY YIELD PERFORMANCE



Variation from the annual site mean yield

DISEASE RATING COLOUR RANGE



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

Refer to *2020 Western Australian Crop Sowing Guide* for further information at grdc.com.au/NVT-WA-Sowing-Guide

INTRODUCTION

This *NVT Harvest Report* provides information to support growers and advisers with decisions on variety selection for Kwinana East. The information has been generated from the Grains Research and Development Corporation's (GRDC) National Variety Trials (NVT) database. This publication provides a summary of the 2019 and long-term yield performance of varieties of crop species suitable for production in Kwinana East together with their quality and disease responses.

The NVT program provides growers and advisers with comparative data 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.

Refer to *2020 Western Australian Crop Sowing Guide* for further information at grdc.com.au/NVT-WA-Sowing-Guide

INTERPRETING LONG-TERM YIELD DATA

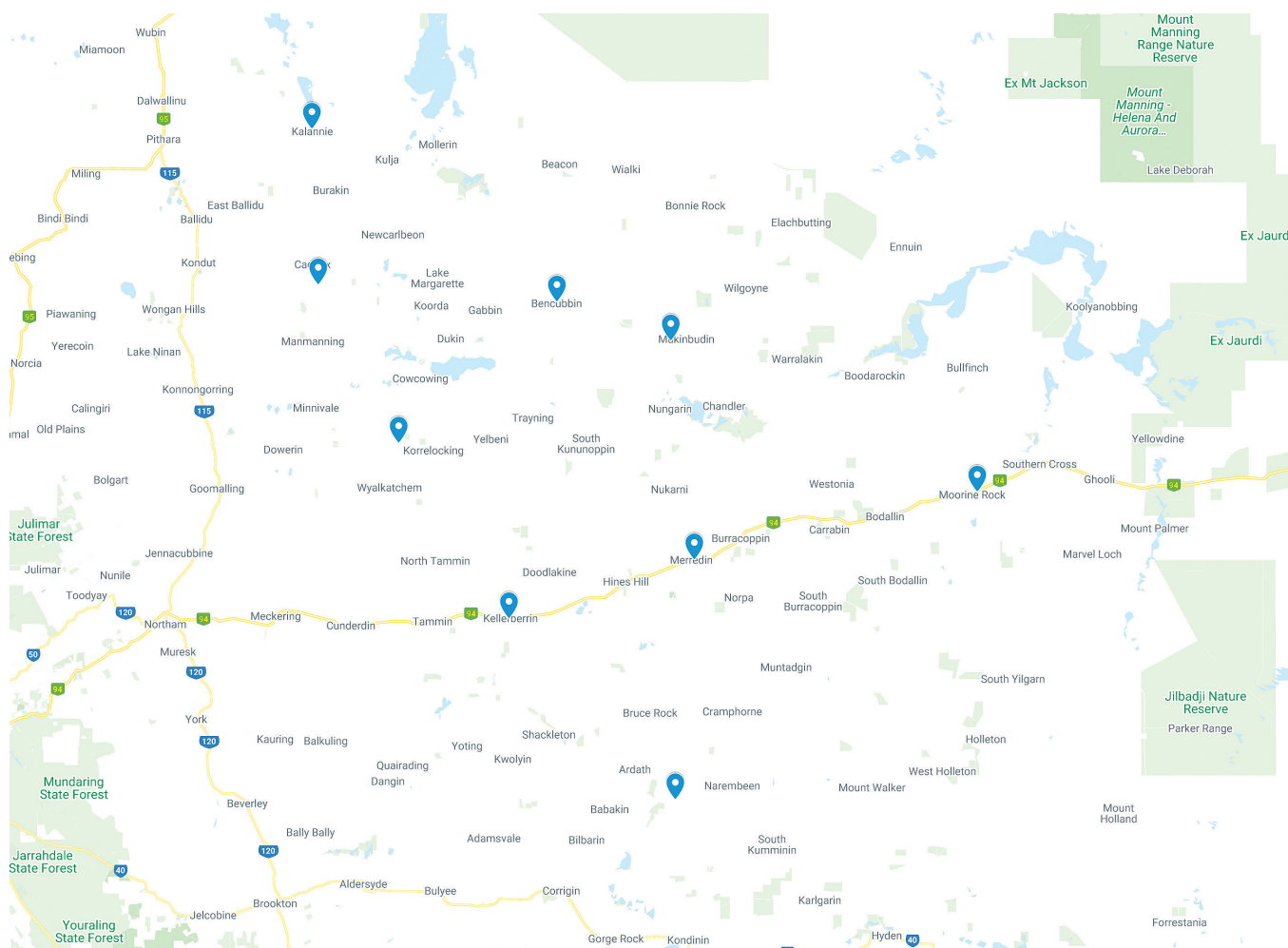
A factor analytic (FA) mixed model approach is used in the multi-environment trial (MET) analysis conducted by GRDC, supported by the Statistics for the Australian Grains Industry (SAGI) program. This approach generates long-term MET values for varieties at an individual trial level.

This format provides more detailed data 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 East Harvest Report, results are presented for yield and quality in year groupings for 2019 and the previous four years. Further detailed interrogation of the NVT Online dataset using the NVT Long Term Yield Reporting Tool will provide more specific performance data on all varieties of each crop species in each NVT location throughout Kwinana East.

NVT SITE LOCATIONS – KWINANA EAST 2015–2019

FIGURE 1 Location of NVT trial sites in Kwinana East from 2015–2019.



SOURCE: NVT ONLINE

WHEAT

NEW WHEAT VARIETIES

The following information is for wheat varieties released during 2019 and since the 2020 Western Australian Crop Sowing Guide was published.

Variety	Breeding company	End Point Royalty* (\$)	Comments supplied by breeding company
Catapult [Ⓛ]	Australian Grain Technologies	3.25	Longer season than Scepter [Ⓛ] , with a mid-late maturity allowing growers to achieve Scepter [Ⓛ] -like yields when sown in late April. Catapult [Ⓛ] has a very flexible sowing window with wide adaptation and is viewed as a great alternative to Trojan [Ⓛ] , Magenta [Ⓛ] , Cutlass [Ⓛ] and Yitpi [Ⓛ] . Catapult [Ⓛ] offers a unique combination of features to growers with Australian Hard quality (WA/SA/VIC/southern NSW).
EG Jet [Ⓛ]	Elders/Seedmark	n/a	Not supplied
LRPB Nyala [Ⓛ]	LongReach Plant Breeders Pty Ltd	3.75	Soft biscuit wheat for Western Australia.
RockStar [Ⓛ]	InterGrain	3.50	High-yielding, mid-late flowering variety with a similar time to flowering as LRPB Trojan [Ⓛ] and Magenta [Ⓛ] . It has an AH classification in WA, SA and VIC and has a potential AH classification in southern NSW. The variety provides a large yield improvement within the mid-late flowering variety class. RockStar [Ⓛ] offers an opportunity to maximise sowing opportunities and spread flowering windows during critical spring stress periods. It has good Stem rust (MR), Yellow leaf spot (MRMS) and Stripe rust (RMR) resistance. It has a good grain size, good test weight and has a moderate plant height similar to Mace [Ⓛ] . RockStar [Ⓛ] is an excellent varietal alternative to LRPB Trojan [Ⓛ] , Magenta [Ⓛ] , Yitpi [Ⓛ] and Cutlass [Ⓛ] .

n/a not available, * EPR amount is ex-GST, [Ⓛ] denotes Plant Breeder's Rights apply.

Refer to 2020 Western Australian Crop Sowing Guide for further information at grdc.com.au/NVT-WA-Sowing-Guide

WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FIELD PEA

LUPIN

WHEAT VARIETY YIELD PERFORMANCE – KWINANA EAST

The following tables contain yield results from the top-performing varieties within each NVT location in Kwinana East for the past five seasons. Data is 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.

TABLE 1 Bencubbin main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.33		1.30	3.09	0.88
Vixen ^{db}		Trial failed	113	122	138
Scepter ^{db}	107		110	113	115
Devil ^{db}			110	109	116
RockStar ^{db}				106	104
Mace ^{db}	99		106	107	114
LRPB Havoc ^{db}			100	108	121
LRPB Oryx ^{db}				107	111
Ninja ^{db}	106		104	104	100
Catapult ^{db}				104	101
Hydra ^{db}	103		103	104	101
CLEARFIELD® PLUS					
Razor CL Plus ^{db}			110	111	120
Chief CL Plus ^{db}			95	98	100
Sheriff CL Plus ^{db}					98
Sowing date	18 May	25 May	10 May	13 Jun	7 Jun
Rainfall J–M (mm)	101	91	122	69	24
Rainfall A–O (mm)	266	160	146	191	153

For more information click this [LINK](#)

TABLE 3 Kellerberrin main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.88	2.98	2.95	3.95	1.53
Vixen ^{db}			115	103	121
Devil ^{db}			110	112	111
Scepter ^{db}	110	111	109	111	109
RockStar ^{db}				116	103
LRPB Havoc ^{db}		106	109	102	110
Mace ^{db}	105	105	106	104	109
Corack ^{db}	107	103	108	101	114
Ninja ^{db}	104	106	102	108	99
Kinsei ^{db}			101	110	99
Catapult ^{db}				107	102
CLEARFIELD® PLUS					
Razor CL Plus ^{db}			107	100	111
Chief CL Plus ^{db}		98	102	104	100
Sheriff CL Plus ^{db}		99			99
Sowing date	25 May	15 May	25 May	25 May	7 Jun
Rainfall J–M (mm)	66	149	164	39	7
Rainfall A–O (mm)	159	240	258	245	216

For more information click this [LINK](#)

The performance of varieties not listed within these tables can be found by further interrogation of the NVT website via the links below each table.

Error bars, normally used to compare data, can be viewed within the graph option also found via the website links below each table.

Rainfall is provided for January to March (J–M) and April to October (A–O).

TABLE 2 Cadoux main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)			2.31	4.22	2.35
Devil ^{db}	Trial failed	Trial failed	115	111	109
Vixen ^{db}			116	108	112
RockStar ^{db}				112	109
Scepter ^{db}			112	109	111
Corack ^{db}			112	105	101
Catapult ^{db}				104	103
LRPB Havoc ^{db}			106	105	103
Mace ^{db}			107	103	105
Ninja ^{db}			102	105	106
Kinsei ^{db}					102
CLEARFIELD® PLUS					
Razor CL Plus ^{db}			103	100	109
Chief CL Plus ^{db}			102	103	97
Sheriff CL Plus ^{db}					98
Sowing date	18 May	4 May	11 May	25 May	7 Jun
Rainfall J–M (mm)	83	93	162	55	28
Rainfall A–O (mm)	267	256	148	341	187

For more information click this [LINK](#)

TABLE 4 Merredin main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.92		2.67	2.00	1.25
Vixen [Ⓓ]		Trial failed	122	106	116
Devil [Ⓓ]			114	110	116
Scepter [Ⓓ]	110		113	109	114
RockStar [Ⓓ]				111	114
LRPB Havoc [Ⓓ]			106	105	113
Corack [Ⓓ]	107		112	106	111
Mace [Ⓓ]	105		106	105	108
Catapult [Ⓓ]				106	107
Ninja [Ⓓ]	105		102	104	104
Zen [Ⓓ]	104		99	105	105
CLEARFIELD® PLUS					
Razor CL Plus [Ⓓ]			107	101	102
Chief CL Plus [Ⓓ]			98	106	109
Sheriff CL Plus [Ⓓ]					103
Sowing date	18 May	27 May	6 May	25 May	7 Jun
Rainfall J–M (mm)	94	129	106	58	14
Rainfall A–O (mm)	230	253	195	231	208

For more information click this [LINK](#)

TABLE 5 Moorine Rock main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.61		2.17		1.67
RockStar ^{db}		Trial failed		Trial failed	114
Cutlass ^{db}	136		108		105
Devil ^{db}			110		121
Catapult ^{db}					110
Scepter ^{db}	107		109		118
Yitpi ^{db}	125		102		101
Magenta ^{db}	132		103		92
Ninja ^{db}	114		106		104
Kinsei ^{db}			106		103
LRPB Nyala ^{db}					
CLEARFIELD® PLUS					
Chief CL Plus ^{db}			103		102
Sheriff CL Plus ^{db}					101
Razor CL Plus ^{db}			95		105
Sowing date	6 May	3 May	9 May	25 May	7 Jun
Rainfall J–M (mm)	84	98	175	90	61
Rainfall A–O (mm)	203	196	141	219	234

For more information click this [LINK](#)

TABLE 7 Narembreen main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.43		2.78	2.68	0.99
Vixen ^{db}		Trial failed	108	115	135
Scepter ^{db}	112		111	110	116
Devil ^{db}			111	110	114
RockStar ^{db}				108	106
LRPB Havoc ^{db}			106	108	123
Corack ^{db}	104		103	107	116
Mace ^{db}	104		102	106	115
Ninja ^{db}	106		106	103	101
Catapult ^{db}				103	102
Hydra ^{db}	103		103	102	103
CLEARFIELD® PLUS					
Razor CL Plus ^{db}			99	107	118
Chief CL Plus ^{db}			104	101	105
Sheriff CL Plus ^{db}			102		98
Sowing date	19 May	10 May	31 May	27 May	7 Jun
Rainfall J–M (mm)	n/a	190	193	75	26
Rainfall A–O (mm)	n/a	245	229	265	227

n/a = Not available

For more information click this [LINK](#)

TABLE 6 Mukinbudin main season wheat.

Year	2015	2016	2017	2018	2019	
Mean yield (t/ha)	1.47		1.44	1.40	0.50	
Vixen ^{db}		Trial failed	112	129	159	
Scepter ^{db}	115		110	112	126	
Devil ^{db}			111	111	129	
LRPB Havoc ^{db}			105	111	119	
Corack ^{db}	105		106	110	131	
Mace ^{db}	105		104	111	122	
RockStar ^{db}				102	105	
LRPB Oryx ^{db}				110	130	
Emu Rock ^{db}	102			97	113	119
Ninja ^{db}	107			104	102	99
CLEARFIELD® PLUS						
Razor CL Plus ^{db}			104	123	131	
Chief CL Plus ^{db}			101	93	93	
Sheriff CL Plus ^{db}					92	
Sowing date	18 May	3 May	10 May	25 May	7 Jun	
Rainfall J–M (mm)	107	100	127	63	18	
Rainfall A–O (mm)	210	185	152	160	161	

For more information click this [LINK](#)

TABLE 8 Wyalkatchem main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.71	3.62	1.41	4.00	1.10
Devil ^{db}			112	112	117
Vixen ^{db}			114	106	137
Scepter ^{db}	105	109	110	110	119
RockStar ^{db}				113	104
Ninja ^{db}	106	108	102	106	101
Catapult ^{db}				105	110
Kinsei ^{db}			102	108	89
Corack ^{db}	96	98	109	105	113
Mace ^{db}	97	101	105	102	114
Hydra ^{db}	102	103	101	102	104
CLEARFIELD® PLUS					
Razor CL Plus ^{db}			105	98	120
Chief CL Plus ^{db}		99			92
Sheriff CL Plus ^{db}		93	98	104	94
Sowing date	18 May	4 May	10 May	25 May	7 Jun
Rainfall J–M (mm)	56	99	122	43	10
Rainfall A–O (mm)	208	253	161	272	250

For more information click this [LINK](#)

TABLE 9 Bencubbin early season wheat.

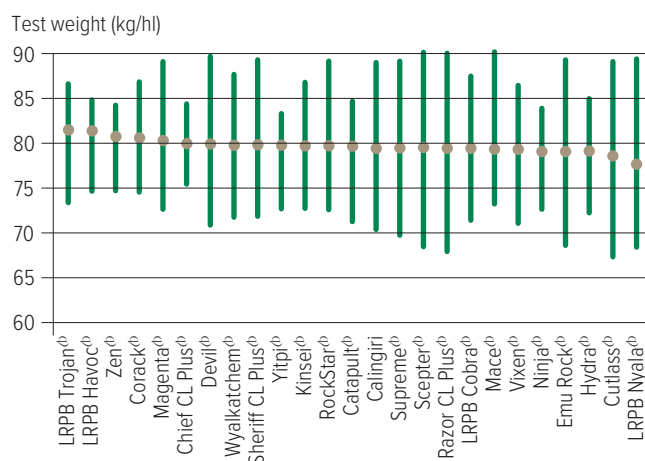
Year	2015	2016	2017	2018	2019
Mean yield (t/ha)			1.24	2.91	
Catapult [Ⓢ]	No trial	No trial		120	No trial
Kinsei [Ⓢ]			119	113	
Cutlass [Ⓢ]			112	114	
Scepter [Ⓢ]				114	
LRPB Trojan [Ⓢ]			105	111	
Coolah [Ⓢ]			109	106	
Magenta [Ⓢ]			103	105	
EG Jet [Ⓢ]				103	
Yitpi [Ⓢ]			101	105	
Beckom [Ⓢ]				102	
Sowing date			24 Apr	30 Apr	
Rainfall J–M (mm)			122	69	
Rainfall A–O (mm)			146	191	

For more information click this [LINK](#)

WHEAT VARIETY QUALITY – WESTERN AUSTRALIA

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 either higher test weights or low grain screenings under a wider range of environments. The following figures show the grain quality trends as either histograms or box and whisker plots from 2018 and 2019 NVT averaged for all trials

FIGURE 1 Test weight (kg/hl) comparisons for main season wheat varieties from 38 NVT sites in WA 2019.



in Western Australia. Only the varieties evaluated at every site are included. Histograms are used where there were fewer than 10 sites of data for either 2018 or 2019 to enable comparison across years. For the box and whisker plots, each figure shows the median value (circle) and variability (lines) of each wheat variety. The range of the lines represents the middle 50 per cent of grain screenings and test weights for each variety. The shorter the lines, the less variable the variety for the depicted trait.

FIGURE 2 Test weight (kg/hl) comparisons for main season wheat varieties from 38 NVT sites in WA 2018.



FIGURE 3 Test weight (kg/hl) comparisons for early season wheat varieties from six NVT sites in WA 2019.

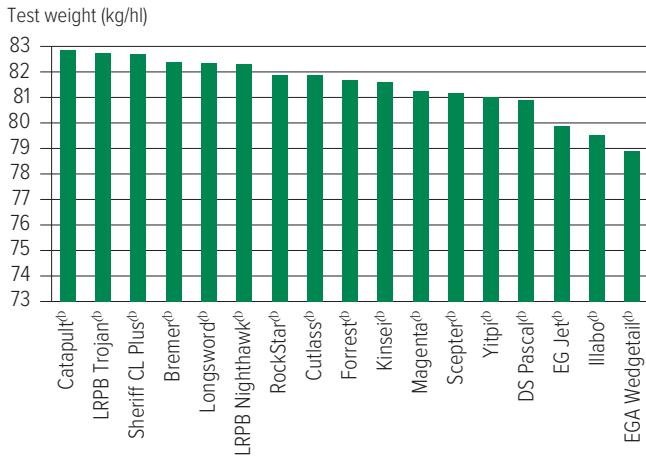


FIGURE 4 Test weight (kg/hl) comparisons for early season wheat varieties from four NVT sites in WA 2018.

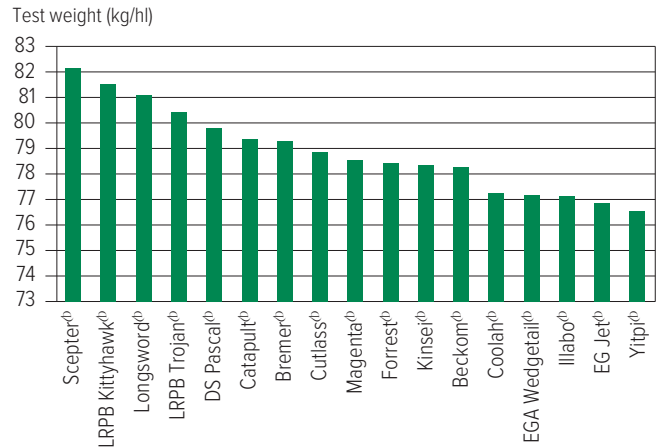


FIGURE 5 Screenings (<2.0mm) comparisons for main season wheat varieties from 38 NVT sites in WA 2019.

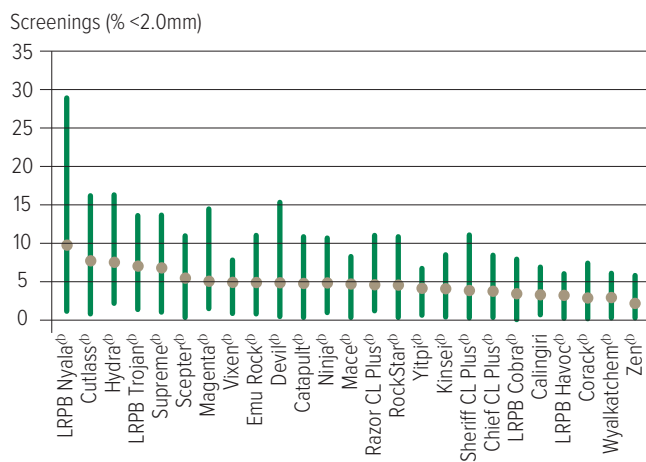


FIGURE 6 Screenings (<2.0mm) comparisons for main season wheat varieties from 38 NVT sites in WA 2018.

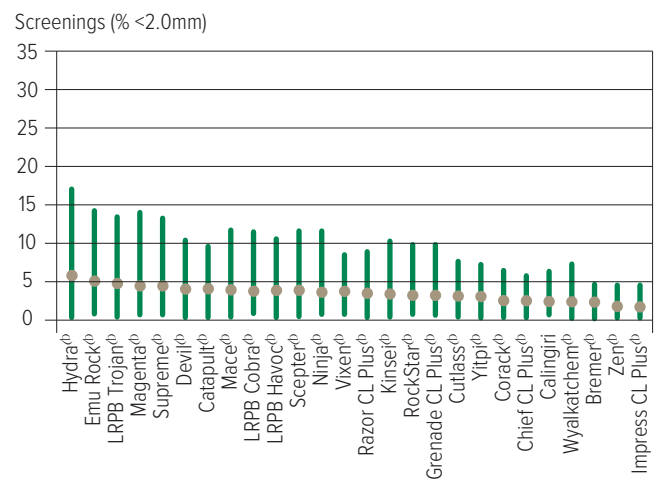


FIGURE 7 Screenings (<2.0mm) comparisons for early season wheat varieties from six NVT sites in WA 2019.

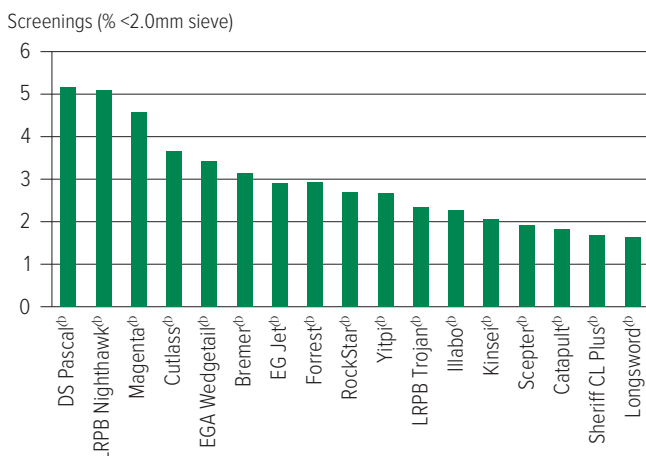
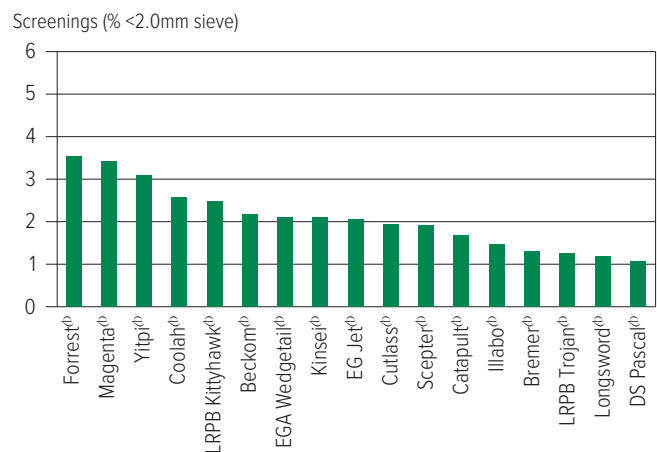


FIGURE 8 Screenings (<2.0mm) comparisons for early season wheat varieties from four NVT sites in WA 2018.



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 2020. Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and susceptibility ratings.

TABLE 10 Wheat disease guide for Western Australia.

Variety	Nodorum blotch (leaf)	Nodorum blotch (glume)	Septoria tritici blotch	Yellow spot	Stem rust	Stripe rust	Leaf rust	Powdery mildew	Flag smut	Common bunt	RLN resistance (<i>Pratylenchus quasitereoides</i>)	RLN resistance (<i>Pratylenchus neglectus</i>)	CCN	Crown rot
Bremer ^{db}			S	MSS	MR	MR	MR	S	MSS	RMR	MSS _p	SVS	MRMS	S
Chief CL Plus ^{db}	MS	MRMS	S	MRMS	MR	S	MR	S	SVS	MSS/MR		MRMS	MS	MSS
Corack ^{db}			S	MRMS	MR	MS	SVS	SVS	S	MSS	MSS	MSS	RMR	S
Cutlass ^{db}			MSS	MSS	R	RMR	R	S	MSS	S		MSS	MR	S
Devil ^{db}	MS	MRMS	S	MRMS	MS	MR	SVS	SVS	SVS	MS/MR	MS _p	S	MSS	MSS
DS Pascal ^{db}			MS	MRMS	MSS	RMR	MS	RMR	S	SVS		S	S	S
Emu Rock ^{db}			S	MRMS	MS	MRMS	SVS	S	MS/MR	SVS	MS	MSS	S	MSS
Grenade CL Plus ^{db}			S	S	MR	RMR	S	MSS	MR	SVS		MSS	R	S
Harper ^{db}			MSS	MSS	MS	RMR	S	MS	RMR	MSS		S	MRMS	S
Hydra ^{db}			MS	MRMS	MS	MS	SVS	S	VS	VS		S	S	S
Illabo ^{db}	MRMS	MR	MR	MS	MRMS	RMR	S	R	R	SVS/MS	MS _p	S	MRMS	Sp
Impress CL Plus ^{db}			MSS	MRMS	MR	MSS	RMR	SVS	VS	MRMS#		MRMS	MS	S
Longsword ^{db}	MRMS	MR	MRMS	MRMS	MR	RMR	MSS	MSS	MRMS	RMR		MRMS	MRMS	MSS
LRPB Arrow ^{db}			S	MRMS	S	S	SVS	S	MS	RMR		MRMS	MS	MSS
LRPB Cobra ^{db}			MSS	MRMS	MR [^]	MSS	MR/S	MSS	S	SVS	MS	MSS	MS	S
LRPB Havoc ^{db}	MS	MS	MRMS	MRMS	S	MR	MSS	MSS _p	MS	MSS/R		S	S	MSS
LRPB Nighthawk ^{db}	MS	MR	MRMS _p	MS	RMR	RMR	MSS	MSS	MSS	RMR		S	MS	MSS _p
LRPB Nyala ^{db}	MS	MR	SVS	MRMS	SVS	RMR	S	R	MSS	VS		S	MSS	MSS
LRPB Trojan ^{db}			S	MSS	MRMS	MR	MR/MS	S	SVS	SVS		MSS	MS	MS
Mace ^{db}			S	MRMS	MRMS	RMR	MSS	MSS	S	MS/MR	MRMS	MS	MRMS	S
Ninja ^{db}			MS	MRMS	SVS	MS	S	S	MR	RMR		S	MS	S
Razor CL Plus ^{db}	MRMS	MRMS	SVS	MSS	MRMS	RMR	S	MSS	RMR	RMR		S	MR	S
RockStar ^{db}	MRMS	MR	MSS	MRMS	MR	RMR	S	MS	VS	MR		MRMS	MSS	Sp
Scepter ^{db}			S	MRMS	MRMS	MR	MSS	S	MSS	MSS	MS	S	MRMS	MSS
Supreme ^{db}			MSS	MS	MRMS	MR	RMR	MS	MSS	SVS		MSS	S	MSS
Tungsten ^{db}			MSS	MSS	MS	RMR	MS#	MS	MRMS	S		MSS	MS	S
Wyalkatchem ^{db}	MSS	MR	S	MR	MSS	S	S	SVS	SVS	MSS/MR	MSS	MRMS	S	S
Yitpi ^{db}			MRMS	SVS	S	MRMS	S	MS	MR	S	MS	MSS	MR	S
Zen ^{db}			S	MRMS	S	MRMS	S	S	MS	MR	MS _p	MRMS	S	S

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, T = tolerant, MT = moderately tolerant,

MI = moderately intolerant, I = intolerant, VI = very intolerant, p = provisional rating, / indicates pathotype differences, # may be more susceptible to new pathotypes,

[^] line contains a few susceptible off types.

BARLEY

NEW BARLEY VARIETIES

The following information is for barley varieties released during 2019 and since the *2020 Western Australian Crop Sowing Guide* was published.

Variety	Breeding company	End Point Royalty* (\$)	Comments supplied by breeding company
Leabrook [Ⓛ]	University of Adelaide	3.80	Mid-early maturing, medium-tall variety under malting evaluation. Bred for yield and grain size improvement over Compass [Ⓛ] .
Maximus CL [Ⓛ]	InterGrain	n/a	Exceptionally high yielding, early to mid-flowering, potential malt, imidazoline-tolerant barley. Seed available 2021.

n/a not available, * EPR amount is ex-GST, [Ⓛ] denotes Plant Breeder's Rights apply.

Refer to *2020 Western Australian Crop Sowing Guide* for further information at grdc.com.au/NVT-WA-Sowing-Guide

WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FIELD PEA

LUPIN

BARLEY VARIETY YIELD PERFORMANCE – KWINANA EAST

The following tables contain yield results from the top-performing varieties within each NVT location in Kwinana East for the past five seasons. Data is 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.

TABLE 1 Kalannie main season barley.					
Year	2015	2016	2017	2018	2019
Mean yield (t/ha)				4.60	
Buff ^{db}	No trial	No trial	No trial	123	No trial
Rosalind ^{db}				106	
Leabrook ^{db}				105	
Bottler ^{db}				104	
RGT Planet ^{db}				102	
Lockyer ^{db}				102	
Mundah				102	
Commander ^{db}				102	
Compass ^{db}				101	
Banks ^{db}				101	
CLEARFIELD®					
Scope CL ^{db}				105	
Maximus CL ^{db}				100	
Spartacus CL ^{db}				93	
Sowing date				25 May	
Rainfall J–M (mm)				95	
Rainfall A–O (mm)				226	

For more information click this [LINK](#)

The performance of varieties not listed within these tables can be found by further interrogation of the NVT website via the links below each table.

Error bars, normally used to compare data, can be viewed within the graph option also found via the website links below each table.

Rainfall is provided for January to March (J–M) and April to October (A–O).

TABLE 2 Merredin main season barley.					
Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.20		1.45	2.15	0.80
Rosalind ^{db}	125	Trial failed	138	110	126
Litmus ^{db}	112		115		154
Buff ^{db}			101	120	149
Compass ^{db}	116		128	96	114
Mundah	108		113	108	123
La Trobe ^{db}	115		125	98	104
Biere ^{db}			114		112
Fathom ^{db}	105		109	102	130
Banks ^{db}	109		114	103	107
Leabrook ^{db}	111		119	95	111
CLEARFIELD®					
Maximus CL ^{db}				105	114
Spartacus CL ^{db}	120		133	99	102
Scope CL ^{db}	101		102	106	123
Sowing date	18 May	26 May	6 May	25 May	7 Jun
Rainfall J–M (mm)	94	129	106	58	14
Rainfall A–O (mm)	230	253	195	230	208

For more information click this [LINK](#)

BARLEY VARIETY QUALITY – WESTERN AUSTRALIA

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 higher test weights, lower grain screenings or higher retentions under a wider range of environments. The following figures show the grain

quality trends as box and whisker plots from 2018 and 2019 NVT averaged for all trials in Western Australia. Only the varieties evaluated at every site are included. Each figure shows the median value (circle) and variability (lines) of each barley variety. The range of the lines represents the middle 50 per cent of grain screenings, test weights and retention for each variety. The shorter the lines, the less variable the variety for the depicted trait.

FIGURE 1 Test weight (kg/hl) comparisons for main season barley varieties from 20 NVT sites in WA 2019.

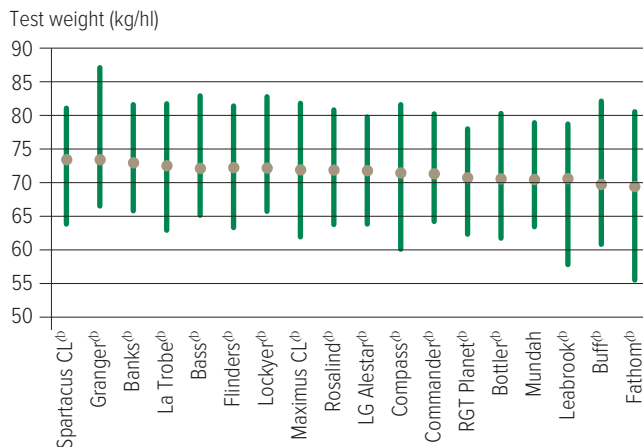


FIGURE 2 Test weight (kg/hl) comparisons for main season barley varieties from 20 NVT sites in WA 2018.

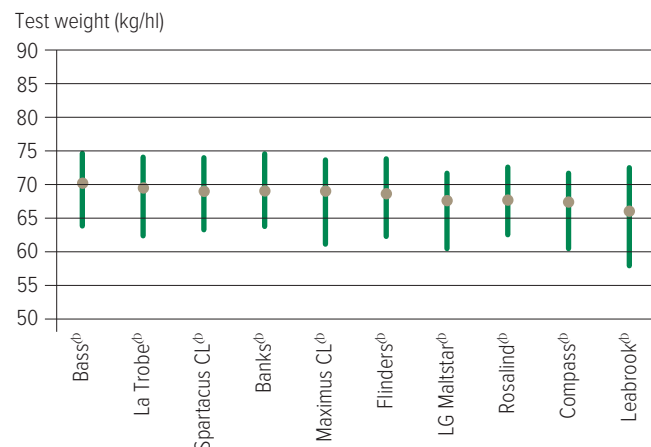


FIGURE 3 Screenings (<2.5mm) comparisons for main season barley varieties from 20 NVT sites in WA 2019.

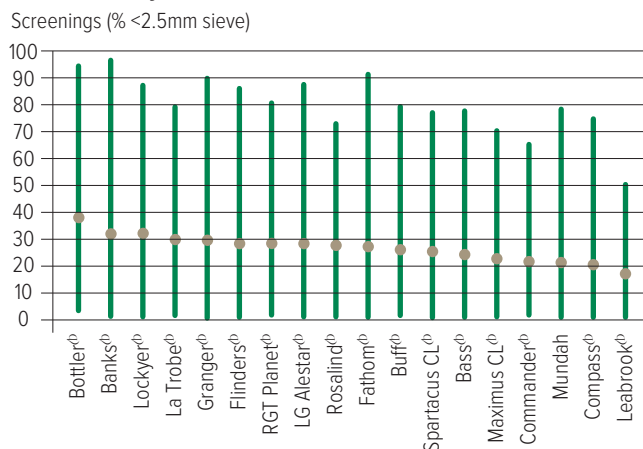


FIGURE 4 Screenings (<2.5mm) comparisons for main season barley varieties from 20 NVT sites in WA 2018.

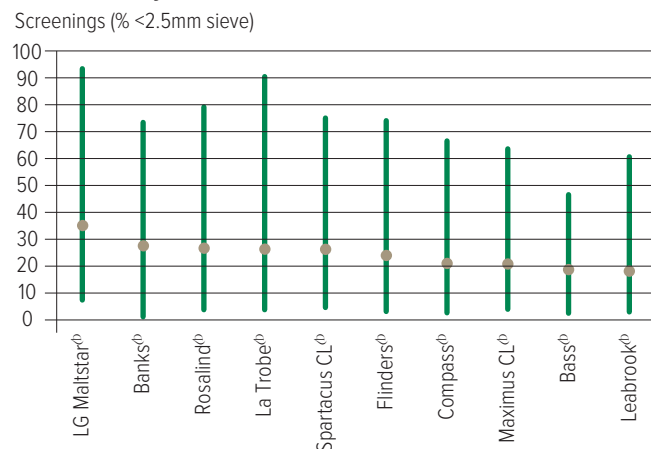


FIGURE 5 Retention (>2.5mm) comparisons for main season barley varieties from 20 NVT sites in WA 2019.

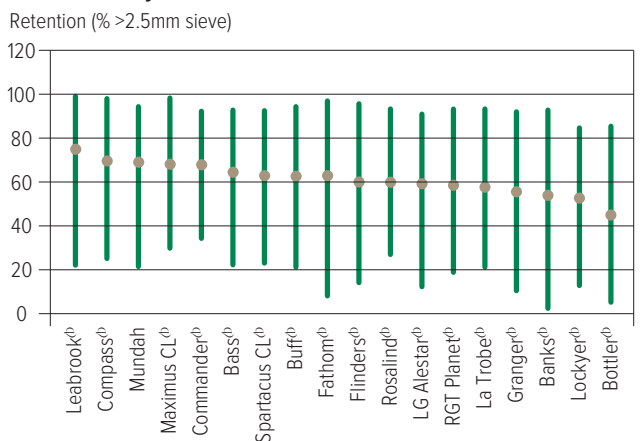
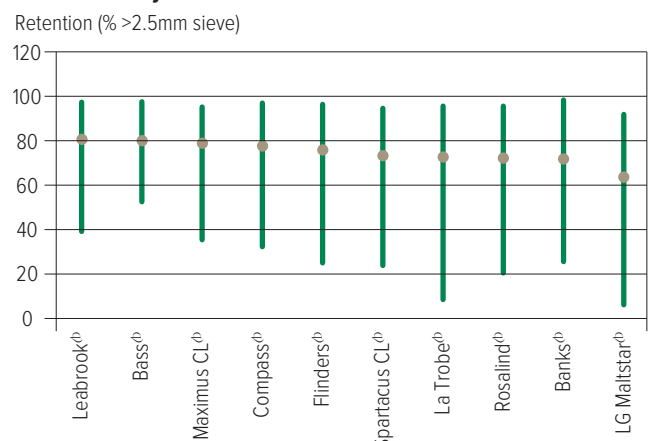


FIGURE 6 Retention (>2.5mm) comparisons for main season barley varieties from 20 NVT sites in WA 2018.



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 2020. Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and susceptibility ratings.

TABLE 10 Barley disease guide for Western Australia.

Variety	Scald	Net type net blotch	Spot type 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
LG Alestar ^{db}	S	MR-S	S	R	MS	S	MRMS-MS	MR		R ^a
Banks ^{db}	S	MRMS-MS	MSS	MR-MRMS	MSS	MSS	MRMS-MS	MRMS	MSS _p	S
Bass ^{db}	MS	MRMS-SVS	S	MSS	SVS	S	MRMS-MS	MS	MSS	S
Buff ^{db}	MSS	MRMS-S	S	SVS	MSS	S	MRMS	MRMS	MSS _p	
Compass ^{db}	S	MRMS-S	MSS	MRMS	S	S	MRMS-MS	MRMS	S	R
Fathom ^{db}	R-MR	MS-SVS	MR	MRMS	MRMS	S	MRMS	MRMS	MSS	R
Flinders ^{db}	S	MRMS-S	S	R	MRMS	SVS	MRMS	MRMS	MSS _p	S
Granger ^{db}	S	MR-MS	S	R	MRMS	SVS	MRMS	MRMS	MSS	R
La Trobe ^{db}	MR	MRMS-S	S	MS-S	MSS	SVS	MSS	MRMS	MSS	R
Leabrook ^{db}	MRMS-MS	RMR-S	MS	R-MRMS	MSS	S	MRMS-MSS	MR	MS _p	MRMS
Litmus ^{db}	SVS	MS-SVS	S	MR	S	MSS	S	MS	MSS _p	MS
Lockyer ^{db}	MRMS-MS	MR-S	S	MSS	MSS	S _p	MRMS	MR		
Maximus CL ^{db}	MR	MRMS-S	MS	RMR#	MSS	MSS _p	MRMS	MRMS	MSS _p	R
Mundah	SVS	MRMS-S	S	S	S	S _p	MSS	MS	MS _p	
Oxford	S	MR-VS	S	R#	MRMS	SVS	MR-MRMS	MR		S
RGT Planet ^{db}	MRMS	MRMS-S	S	R	MRMS	MSS	MR-MRMS	MRMS	MSS _p	R _p
Rosalind ^{db}	MS	MR-S	S	MRMS-MS	MR	MSS	MR-MRMS	MRMS		R
Scope CL ^{db}	MSS	MR-S	MSS	R	MSS	SVS	MRMS	MRMS	MS	S
Spartacus CL ^{db}	MR	MRMS-MSS	SVS	MR-MS	MSS	S	MS-S	MRMS	MSS _p	R

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, T = tolerant, MT = moderately tolerant, MI = moderately intolerant, I = intolerant, VI = very intolerant, _p = provisional rating, - hyphen indicates a range of reactions, # may be more susceptible to new pathotypes, ^a line contains a few susceptible off types.

OAT

NEW OAT VARIETIES

The following information is for oat varieties released during 2019 and since the *2020 Western Australian Crop Sowing Guide* was published.

Variety	Breeding company	End Point Royalty* (\$)	Comments supplied by breeding company
Bilby [Ⓢ]	National Oat Breeding Program	2.50	High grain yield potentials and high β -glucan content with bright plump grain and high groat per cent leading to higher milling yield for processing.
Koorabup [Ⓢ]	National Oat Breeding Program	2.00	Has the best Septoria resistance of any current hay or milling variety. It has excellent colour and good stem diameter for hay production.

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

Refer to *2020 Western Australian Crop Sowing Guide* for further information at grdc.com.au/NVT-WA-Sowing-Guide

WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FIELD PEA

LUPIN

OAT VARIETY YIELD PERFORMANCE – KWINANA EAST

The following table contains yield results from the top-performing varieties within each NVT location in Kwinana East for the past five seasons. Data is 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.

TABLE 1 Merredin oat.					
Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.19	3.72	3.43	2.06	1.11
Wandering ^{db}	106	119	122	119	123
Bannister ^{db}	112	115	121	116	112
Bilby ^{db}	113	107	110	116	112
Williams ^{db}	104	110	104	115	118
Kowari ^{db}	109	100	101	110	105
Mitika ^{db}	106	96	98	102	96
Kojonup ^{db}	98	97	104	88	83
Carrolup	95	96	87	99	105
Yallara ^{db}	88	98	84	98	110
Koorabup ^{db}	87	98	84	97	110
Sowing date	26 May	18 May	9 May	25 May	7 Jun
Rainfall J–M (mm)	94	129	106	58	14
Rainfall A–O (mm)	230	253	195	230	208

For more information click this [LINK](#)

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

The performance of varieties not listed within this table can be found by further interrogation of the NVT website via the link below the table.

Error bars, normally used to compare data, can be viewed within the graph option also found via the website link below the table.

Rainfall is provided for January to March (J–M) and April to October (A–O).

pathologists and were released in March 2020. Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and susceptibility ratings.

TABLE 2 Oat disease guide for Western Australia.					
Variety	Septoria blotch	Leaf rust	Stem rust	Barley yellow dwarf virus (BYDV)	Bacterial blight
Bannister ^{db}	MSS	R	MRMS	MRMS	S
Bilby ^{db}	SVS	MR	SVS	MRMS _p	S
Carrolup	MSS	VS	S	MSS _p	MSS
Durack ^{db}	S	MR	SVS	MSS	S
Kojonup ^{db}	S	SVS	MS	MS _p	SVS
Koorabup ^{db}	MRMS-SVSp	MRMS	MS	MSS _p	MSS
Kowari ^{db}	S	R	S	MSS	MSS
Mitika ^{db}	SVS	MR	S	S	MSS _p
Wandering ^{db}	S	VS	SVS	MS _p	MS _p
Williams ^{db}	MS	MR	MSS	MRMS	MSS
Yallara ^{db}	MR-Sp	R	MS	MSS	MSS

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, _p = provisional rating,

- hyphen indicates a range of reactions.

CANOLA

NEW CANOLA VARIETIES

The following information is for canola varieties released during 2019 and since the *2020 Western Australian Crop Sowing Guide* was published.

Variety	Breeding company	End Point Royalty* (\$)	Comments supplied by breeding company
HyITec® Trident	Nuseed Pty Ltd	10.00	Early maturity hybrid canola with medium-tall plant height. Suited to low-medium rainfall areas.
InVigor® R 4022P	BASF Australia	n/a	Not supplied
Xseed™ Raptor	Nuseed Pty Ltd	n/a	An early-mid maturing hybrid. Suited to medium-high rainfall areas. Medium plant height.

n/a not available, * EPR amount is ex-GST, ^{dh} denotes Plant Breeder's Rights apply.

Refer to *2020 Western Australian Crop Sowing Guide* for further information at grdc.com.au/NVT-WA-Sowing-Guide

WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FIELD PEA

LUPIN

CANOLA VARIETY YIELD PERFORMANCE – KWINANA EAST

The following tables contain yield results from the top-performing varieties within each NVT location in Kwinana East for the past five seasons. Data is 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.

TABLE 1 Merredin early season CL canola.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)				1.92	0.63
Pioneer® 43Y92 CL	No trial	No trial	Trial failed	116	97
Pioneer® 44Y90 CL				112	100
VICTORY® V7002CL				104	101
Hyola® 575CL				96	92
Sowing date			26 Apr	25 May	7 Jun
Rainfall J–M (mm)			106	58	14
Rainfall A–O (mm)			195	230	208

For more information click this [LINK](#)

TABLE 3 Kellerberrin early season TT canola.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)		2.25	2.22	1.66	
HyTTec® Trident	Trial failed		122	123	Trial failed
Hyola® 350TT			111	112	
InVigor® T 4510		110	113	106	
Pioneer® 44T02 TT		113	109	107	
Hyola® 559TT		110		106	
HyTTec® Trophy			112	106	
InVigor® T 3510				103	
BASF 3000 TR		111	100	106	
ATR Bonito ^{db}		90	98	97	
ATR Stingray ^{db}				92	
Sowing date	18 May	23 Apr	28 Apr	25 May	7 Jun
Rainfall J–M (mm)	66	149	164	39	7
Rainfall A–O (mm)	159	240	258	245	216

For more information click this [LINK](#)

The performance of varieties not listed within these tables can be found by further interrogation of the NVT website via the links below each table.

Error bars, normally used to compare data, can be viewed within the graph option also found via the website links below each table.

Rainfall is provided for January to March (J–M) and April to October (A–O).

TABLE 2 Merredin early season RR canola.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)				1.92	0.63
Xseed™ Raptor	No trial	No trial	Trial failed		100
Hyola® 410XX					100
Pioneer® 44Y27 RR				111	106
InVigor® R 4022P					108
Pioneer® 43Y23 RR				102	107
Pioneer® 43Y29 RR					95
InVigor® R 3520				98	110
Hyola® 404RR				101	99
Sowing date			26 Apr	25 May	7 Jun
Rainfall J–M (mm)			106	58	14
Rainfall A–O (mm)			195	230	208

For more information click this [LINK](#)

TABLE 4 Merredin early season TT canola.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)				1.92	0.63
HyTTec® Trident	No trial	No trial	Trial failed	124	113
Hyola® 550TT					110
InVigor® T 4510				115	104
HyTTec® Trophy				113	104
Hyola® 350TT					109
Pioneer® 44T02 TT				108	107
InVigor® T 3510				109	103
SF Spark TT					103
BASF 3000 TR				98	107
ATR Bonito ^{db}				101	92
Sowing date			26 Apr	25 May	7 Jun
Rainfall J–M (mm)			106	58	14
Rainfall A–O (mm)			195	230	208

For more information click this [LINK](#)

CANOLA VARIETY DISEASE RATINGS – WESTERN AUSTRALIA

The following table contains varietal ratings for the predominant diseases of canola in Western Australia.

These ratings are updated annually by crop pathologists and were released in March 2020. Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and susceptibility ratings.

TABLE 5 Canola disease guide for Western Australia.

Variety	2020 autumn Blackleg rating				Type
	Bare	Jockey®	ILeVO®	Saltro®	
TRIAZINE-TOLERANT VARIETIES					
ATR Bonito ^{db}	MS	R-MR	R	R	Open pollinated
ATR Mako ^{db}	MR	R-MR	R	R	Open pollinated
ATR Stingray ^{db}	MR	R	R	R	Open pollinated
ATR Wahoo ^{db}	MS				Open pollinated
DG 670TT	MR		R	R	Hybrid
Hyola® 350TT	R	R	R	R	Hybrid
Hyola® 550TT	R			R	Hybrid
Hyola® 559TT	R			R	Hybrid
Hyola® 650TT	R	R	R	R	Hybrid
HyITec® Trident	R				Hybrid
HyITec® Trifecta	R				Hybrid
HyITec® Trophy	R				Hybrid
InVigor® T 3510	MR-MS	MR	R		Hybrid
InVigor® T 4510	MR	R	R	R	Hybrid
Pioneer® 44T02 TT	R		R		Hybrid
Pioneer® 45T03 TT	R		R		Hybrid
SF Ignite TT	MR	R	R	R	Hybrid
SF Spark TT	R	R	R	R	Hybrid
SF Turbine TT	MR-MS	R	R	R	Hybrid
CLEARFIELD® SYSTEM VARIETIES					
Banker CL	MR	R		R	Hybrid
Hyola® 575CL	R	R	R	R	Hybrid
Pioneer® 43Y92 CL	R		R		Hybrid
Pioneer® 44Y90 CL	R	R	R	R	Hybrid
Pioneer® 45Y91 CL	R-MR	R	R	R	Hybrid
Pioneer® 45Y93 CL	R		R	R	Hybrid
Saintly CL	MR	R		R	Hybrid
CLEARFIELD® AND TRIAZINE-TOLERANT VARIETIES					
Hyola® 580CT	R	R	R	R	Hybrid
ROUNDUP READY® VARIETIES					
DG 408RR	MR-MS		R	R	Hybrid
Hyola® 404RR	R-MR			R	Hybrid
InVigor® R 3520	R-MR	R	R		Hybrid
InVigor® R 5520P	MR	R	R		Hybrid
Nuseed® GT-53	R				Hybrid
Pioneer® 43Y23 RR	R-MR				Hybrid
Pioneer® 43Y29 RR	R-MR		R	R	Hybrid
Pioneer® 44Y27 RR	R-MR		R		Hybrid
ROUNDUP READY® AND TRIAZINE-TOLERANT VARIETIES					
BASF 3000 TR	MS-S	MR	R	R	Hybrid

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, - hyphen indicates a range of reactions.

Note: Cultivars with higher Blackleg ratings may be a result of screening cultivars in recent years that have been less conducive to fungal pathogens, such as Blackleg. If sowing crops in May/June into cold and wet conditions, Blackleg severity may be higher than observed in recent times.

TABLE 5 Canola disease guide for Western Australia (continued).

Variety	2020 autumn Blackleg rating				Type
	Bare	Jockey®	ILeVO®	Saltro®	
TRUFLEX® HYBRID VARIETIES					
Hyola® 410XX	R-MR			R	Hybrid
InVigor® R 4022P	MR		R		Hybrid
Xseed™ Raptor	R				Hybrid
TRUFLEX® AND CLEARFIELD® VARIETIES					
Hyola® 540XC	R				Hybrid
TRUFLEX®AND TRIAZINE-TOLERANT VARIETIES					
Hyola® 530XT	MR				Hybrid

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, - hyphen indicates a range of reactions.

Note: Cultivars with higher Blackleg ratings may be a result of screening cultivars in recent years that have been less conducive to fungal pathogens, such as Blackleg.

If sowing crops in May/June into cold and wet conditions, Blackleg severity may be higher than observed in recent times.

CHICKPEA

CHICKPEA VARIETY YIELD PERFORMANCE – KWINANA EAST

The following table contains yield results from the top-performing varieties within each NVT location in Kwinana East for the past five seasons. Data is 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.

TABLE 1 Merredin desi chickpea.					
Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	0.94		0.46	1.86	0.90
Neelam [Ⓛ]	95	Trial failed	98	105	96
PBA Maiden [Ⓛ]	89		90	106	104
PBA Slasher [Ⓛ]	96		87	103	104
PBA Striker [Ⓛ]	96		87	99	110
Genesis™ 836	99		97	97	89
Genesis™ 090	105		73	94	98
Sowing date	27 May	27 May	1 Jun	25 May	7 Jun
Rainfall J–M (mm)	94	129	106	58	14
Rainfall A–O (mm)	230	253	195	230	208

For more information click this [LINK](#)

The performance of varieties not listed within this table can be found by further interrogation of the NVT website via the link below the table.

Error bars, normally used to compare data, can be viewed within the graph option also found via the website link below the table.

Rainfall is provided for January to March (J–M) and April to October (A–O).

Refer to *2020 Western Australian Crop Sowing Guide* for further information at grdc.com.au/NVT-WA-Sowing-Guide.

WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FIELD PEA

LUPIN

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 2020. Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and susceptibility ratings.

TABLE 2 Chickpea disease guide for Western Australia.

Variety	Ascochyta blight (Pathogen group 1)	Ascochyta blight (Pathogen group 2)	Botrytis grey mould	RLN (<i>Pratylenchus neglectus</i>)	RLN (<i>Pratylenchus thornei</i>)	RLN (<i>Pratylenchus thornei</i>)
				Resistance	Resistance	Tolerance
DESI CHICKPEA						
Ambar ^{db}	S		S	MRMS	MS	
Genesis™ 836	S	MS	S	MRMS _p	MS _p	
Neelam ^{db}	S	S	S	MRMS	MS	MI
PBA Maiden ^{db}	S	MS	S	MRMS	MRMS	IVI
PBA Slasher ^{db}	S	MS	S	MRMS	MRMS	MTMI
PBA Striker ^{db}	S	S	S	MRMS	MRMS	
KABULI CHICKPEA						
Genesis™ 090	MS	R/MR	S	MRMS	MS	MI

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, T = tolerant, MT = moderately tolerant, MI = moderately intolerant, I = intolerant, VI = very intolerant, *p* = provisional rating, / indicates pathotype differences.

FIELD PEA

FIELD PEA VARIETY YIELD PERFORMANCE – KWINANA EAST

The following table contains yield results from the top-performing varieties within each NVT location in Kwinana East for the past five seasons. Data is 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 performance of varieties not listed within this table can be found by further interrogation of the NVT website via the link below the table.

Error bars, normally used to compare data, can be viewed within the graph option also found via the website link below the table.

Rainfall is provided for January to March (J–M) and April to October (A–O).

Refer to *2020 Western Australian Crop Sowing Guide* for further information at grdc.com.au/NVT-WA-Sowing-Guide.

TABLE 1 Merredin field pea.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)		1.91	1.07	1.92	0.63
PBA Wharton ^{db}	Trial failed	104	102	104	106
PBA Butler ^{db}		97	99	103	114
PBA Gonyah ^{db}		81	102	107	94
PBA Pearl ^{db}		97	81	101	97
PBA Twilight ^{db}		77	99	107	89
PBA Ora ^{db}		92	89	95	71
Kaspa ^{db}		63	99	107	92
PBA Percy ^{db}		92	103	90	21
Sowing date	27 May	27 May	1 Jun	25 May	7 Jun
Rainfall J–M (mm)	94	129	106	58	14
Rainfall A–O (mm)	230	253	195	230	208

For more information click this [LINK](#)

WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FIELD PEA

LUPIN

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 2020. Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and susceptibility ratings.

TABLE 2 Field pea disease guide for Western Australia.

Variety	Common diseases				Diseases rarely found	
	Blackspot (<i>Ascochyta blight</i>)	Downy mildew	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)	Powdery mildew	Bacterial blight
Kaspa ^{db}	MS	S	MR	MRMS	S	S
PBA Butler ^{db}	MS	S	MR	MRMS	S	MS
PBA Gunyah ^{db}	MS	S	MR	MRMS	S	S
PBA Oura ^{db}	MS	S	MR	MRMS	S	MS
PBA Pearl ^{db}	MS	S	MR	MRMS	S	MS
PBA Percy ^{db}	MS	S	MR	RMR	S	MRMS
PBA Twilight ^{db}	MS	S	MR	MRMS	S	S
PBA Wharton ^{db}	MS	S	MR	MRMS	R	S
Sturt	MS	S	MR	MR	S	S

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

LUPIN

NEW LUPIN VARIETIES

The following information is for lupin varieties released during 2019 and since the 2020 *Western Australian Crop Sowing Guide* was published.

Variety	Breeding company	End Point Royalty* (\$)	Comments supplied by breeding company
Coyote ^ϕ	National Lupin Initiative	3.00	A very widely adapted variety with a maturity similar to Jurien ^ϕ offering high and stable yields in all lupin growing areas, particularly WA.

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

Refer to 2020 *Western Australian Crop Sowing Guide* for further information at grdc.com.au/NVT-WA-Sowing-Guide

WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FIELD PEA

LUPIN

LUPIN VARIETY YIELD PERFORMANCE – KWINANA EAST

The following tables contain yield results from the top-performing varieties within each NVT location in Kwinana East for the past five seasons. Data is 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.

TABLE 1 Kalannie narrow-leaf lupin.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)				2.82	
PBA Leeman ^{db}	No trial	No trial	No trial	94	No trial
Coyote ^{db}				92	
Coromup ^{db}				91	
Jenabillup ^{db}				81	
PBA Bateman ^{db}				78	
Sowing date				25 May	
Rainfall J–M (mm)				95	
Rainfall A–O (mm)				226	

For more information click this [LINK](#)

TABLE 2 Merredin narrow-leaf lupin.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.11	1.83	0.33	1.80	0.30
PBA Jurien ^{db}	114	119	70		123
PBA Barlock ^{db}	110	114	74		107
Coyote ^{db}	123	112	52	109	120
Mandelup ^{db}	110	110	72		100
PBA Bateman ^{db}	120	105		105	127
PBA Gunyidi ^{db}	112	103	84		122
Wonga					80
Coromup ^{db}	91	93	128	98	107
PBA Leeman ^{db}	94	95		93	94
Sowing date	25 May	27 May	26 Apr	25 May	7 Jun
Rainfall J–M (mm)	94	129	106	58	14
Rainfall A–O (mm)	230	253	195	230	208

For more information click this [LINK](#)

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 2020. Selected varieties of most relevance to Western Australian growers are listed in alphabetical order and disease ratings are colour-coded to match resistance and susceptibility ratings.

TABLE 3 Lupin disease guide for Western Australia.

Variety	Brown leaf spot	Phomopsis stem infection	Anthraxnose resistance
Coyote ^{db}	MS _p	MR _p	MRMS _p
Jenabillup ^{db}	MRMS	MS	MS
Mandelup ^{db}	MS	RMR	MR
PBA Barlock ^{db}	MS	MR	RMR
PBA Bateman ^{db}	MS	RMR	MRMS
PBA Gunyidi ^{db}	MS	RMR	MR
PBA Jurien ^{db}	MS	RMR	RMR

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, *p* = provisional rating.

USEFUL LINKS AND FURTHER INFORMATION

NVT Harvest Reports for all regions

grdc.com.au/harvestreports

Variety Central

varietycentral.com.au

NVT Overview Podcast (1 November 2018)

grdc.com.au/news-and-media/audio/podcast/nvt-overview

NVT Overview Video (29 October 2019)

youtu.be/ThGjxFXR_ug

NVT Western Region (29 October 2019)

youtu.be/B2q5nJGvx80

How to navigate NVT's website (10 February 2019)

youtu.be/GbasB-xUIQA

How to interpret NVT data (long term yield results) using the NVT website (10 February 2019)

youtu.be/eS4UbszsEAg