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NVT HARVEST REPORT



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ALBANY

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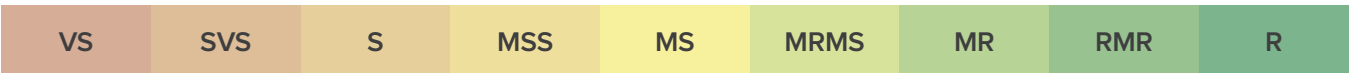
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LEGEND: MEAN VARIETY YIELD PERFORMANCE



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

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 Albany. 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 Albany 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

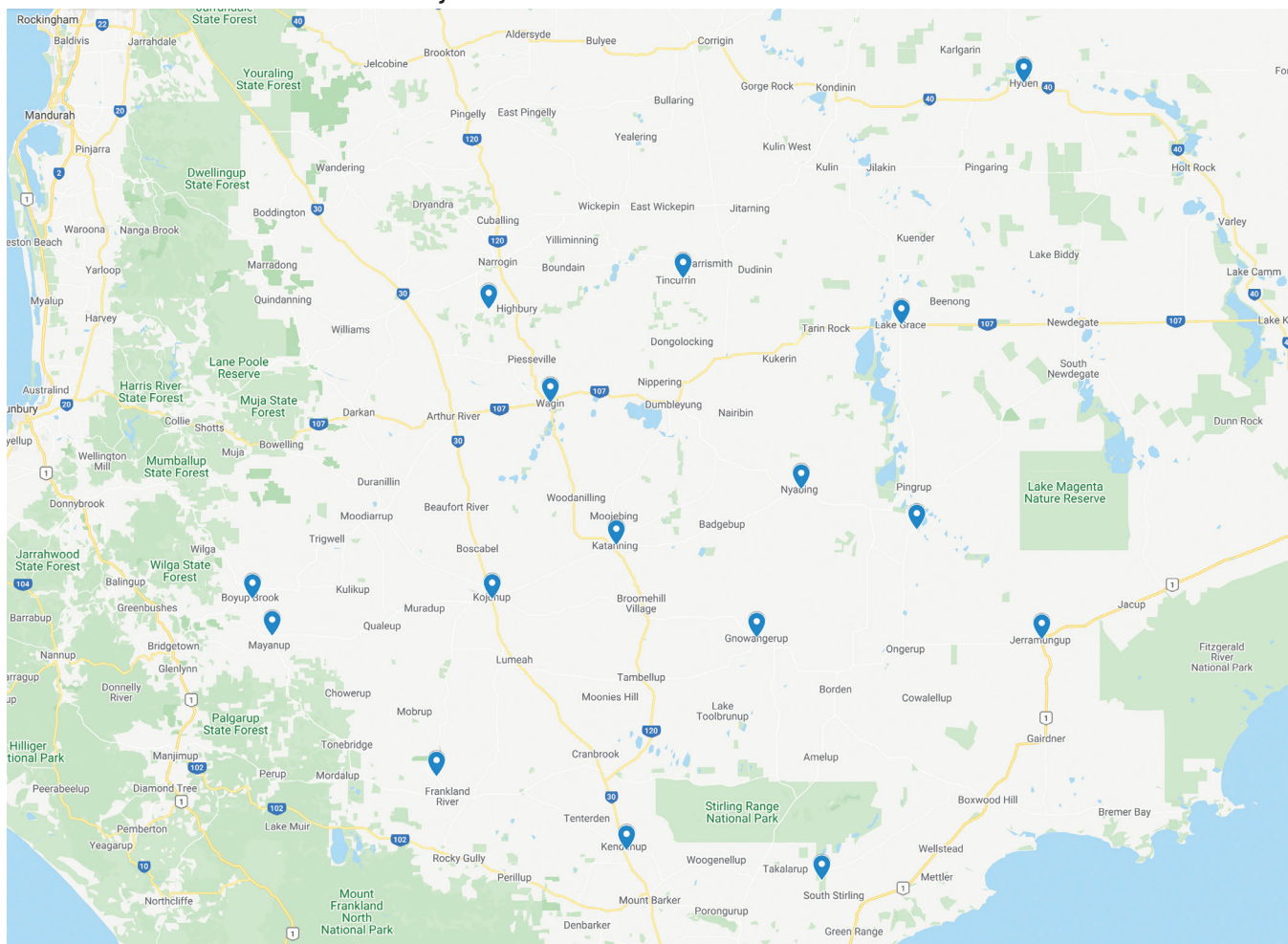
A factor analytic (FA) mixed model approach is used in the multi-environment trial (MET) analysis conducted by GRDC, supported by the Statistics for the Australian Grains Industry (SAGI) program. This approach generates long-term MET values for varieties at an individual trial level.

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 Albany 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 Albany.

NVT SITE LOCATIONS – ALBANY 2015–2019

FIGURE 1 Location of NVT trial sites in Albany 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 Nighthawk [Ⓢ]	LongReach Plant Breeders Pty Ltd	4.25	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

FIELD PEA

LUPIN

WHEAT VARIETY YIELD PERFORMANCE – ALBANY

The following tables contain yield results from the top-performing varieties within each NVT location in Albany 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 Gnowangerup main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.98	3.14	3.15		3.50
Vixen ^{db}				Trial failed	114
RockStar ^{db}					105
Devil ^{db}			118		108
Scepter ^{db}	109	109	119		107
LRPB Havoc ^{db}		101	105		110
Ninja ^{db}	102	107	114		101
Corack ^{db}	112	101	100		109
Kinsei ^{db}			112		101
Mace ^{db}	108	102	103		107
Zen ^{db}	106	101	104		103
CLEARFIELD® PLUS					
Razor CL Plus ^{db}			100		107
Chief CL Plus ^{db}		95	104		103
Sheriff CL Plus ^{db}		100	103		101
Sowing date	28 May	18 May	25 May	30 May	19 Jun
Rainfall J–M (mm)	32	215	190	49	65
Rainfall A–O (mm)	271	275	249	232	246

For more information click this [LINK](#)

TABLE 3 Jerramungup main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	3.76	2.87			2.73
RockStar ^{db}			Trial failed	Trial failed	112
Devil ^{db}					111
Scepter ^{db}	115	109			110
Vixen ^{db}					109
Ninja ^{db}	108	109			105
Kinsei ^{db}					105
Catapult ^{db}					105
LRPB Havoc ^{db}		91			107
Mace ^{db}	106	99			104
Hydra ^{db}	104	103			102
CLEARFIELD® PLUS					
Razor CL Plus ^{db}					100
Sheriff CL Plus ^{db}		99			103
Chief CL Plus ^{db}		91			105
Sowing date	11 May	9 May	11 May	2 May	21 May
Rainfall J–M (mm)	57	171	134	49	49
Rainfall A–O (mm)	224	327	260	180	236

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 Hyden main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.49		3.87	2.20	2.33
Vixen ^{db}		Trial failed	111	120	120
RockStar ^{db}				123	116
Scepter ^{db}	113		115	125	117
Devil ^{db}			116	122	116
Ninja ^{db}	106		110	112	109
LRPB Havoc ^{db}			106	100	109
Catapult ^{db}				119	106
Cutlass ^{db}	95		109	119	100
Hydra ^{db}	102		103	109	105
Mace ^{db}	104		101	108	107
CLEARFIELD® PLUS					
Chief CL Plus ^{db}			104	103	101
Razor CL Plus ^{db}			96	100	108
Sheriff CL Plus ^{db}			104		100
Sowing date	6 May	10 May	18 May	1 Jun	22 May
Rainfall J–M (mm)	40	207	209	61	7
Rainfall A–O (mm)	206	193	235	207	192

For more information click this [LINK](#)

TABLE 4 Kendenup main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	5.73	2.35	4.93	2.09	
RockStar ^{db}				122	Trial failed
Devil ^{db}			111	118	
Scepter ^{db}	108	109	111	114	
Kinsei ^{db}			114	113	
Ninja ^{db}	105	107	112	107	
Zen ^{db}	105	95	106	113	
LRPB Havoc ^{db}		87	101	121	
Vixen ^{db}				112	
Catapult ^{db}				105	
Hydra ^{db}	102	106	105	101	
CLEARFIELD® PLUS					
Chief CL Plus ^{db}		97	102	118	
Razor CL Plus ^{db}			98	94	
Grenade CL Plus ^{db}	93	100	87	81	
Sowing date	14 May	27 May	19 May	12 Jun	7 May
Rainfall J–M (mm)	47	62	96	48	53
Rainfall A–O (mm)	397	457	377	329	329

For more information click this [LINK](#)

TABLE 5 Kojonup main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	5.53		4.64		3.33
RockStar ^{db}		Trial failed		Trial failed	118
Devil ^{db}			111		117
Scepter ^{db}	112		110		114
Ninja ^{db}	109		108		105
Kinsei ^{db}			107		108
Vixen ^{db}					110
Catapult ^{db}					109
Hydra ^{db}	105		103		101
Zen ^{db}	102		102		107
Mace ^{db}	104	101	105		
CLEARFIELD® PLUS					
Chief CL Plus ^{db}			98		113
Sheriff CL Plus ^{db}			101		106
Razor CL Plus ^{db}			103		91
Sowing date	7 May	17 May	26 May	28 May	4 Jun
Rainfall J–M (mm)	51	148	104	65	64
Rainfall A–O (mm)	335	397	368	387	316

For more information click this [LINK](#)

TABLE 6 Lake Grace main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	3.38		3.13		2.07
Vixen ^{db}		Trial failed	116	Trial failed	123
LRPB Havoc ^{db}			108		111
Devil ^{db}			112		114
Corack ^{db}	119		107		113
Scepter ^{db}	113		111		114
RockStar ^{db}					107
Mace ^{db}	111		104		111
Emu Rock ^{db}	109		100		102
Zen ^{db}	108		102		100
Ninja ^{db}	102		105		101
CLEARFIELD® PLUS					
Razor CL Plus ^{db}			105		110
Chief CL Plus ^{db}			101		103
Sheriff CL Plus ^{db}			101		99
Sowing date	13 May	25 May	28 May	11 Jun	25 May
Rainfall J–M (mm)	54	124	147	54	7
Rainfall A–O (mm)	223	214	219	88	182

For more information click this [LINK](#)

TABLE 7 Tincurrin main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)					2.79
RockStar ^{db}	No trial	No trial	No trial	No trial	117
Devil ^{db}					113
Scepter ^{db}					113
Ninja ^{db}					112
Kinsei ^{db}					110
Vixen ^{db}					108
Catapult ^{db}					107
Hydra ^{db}					105
Zen ^{db}					103
Mace ^{db}					103
CLEARFIELD® PLUS					
Razor CL Plus ^{db}					105
Chief CL Plus ^{db}					105
Sheriff CL Plus ^{db}					102
Sowing date					7 Jun
Rainfall J–M (mm)					26
Rainfall A–O (mm)					281

For more information click this [LINK](#)

TABLE 8 Wagin main season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.76	2.88	4.47	4.04	3.28
RockStar ^{db}				121	106
Devil ^{db}			110	116	109
Scepter ^{db}	111	111	110	114	108
Vixen ^{db}			116	104	113
Ninja ^{db}	105	110	104	111	102
Kinsei ^{db}			100	112	103
Catapult ^{db}				108	102
Mace ^{db}	105	102	105	102	106
Corack ^{db}	106	98	104	101	109
LRPB Havoc ^{db}		92	104	101	108
CLEARFIELD® PLUS					
Razor CL Plus ^{db}			110	97	108
Sheriff CL Plus ^{db}		99	98		101
Chief CL Plus ^{db}		93	97	103	101
Sowing date	21 May	25 May	5 Jun	25 May	7 Jun
Rainfall J–M (mm)	34	121	225	60	27
Rainfall A–O (mm)	215	260	280	311	302

For more information click this [LINK](#)

TABLE 9 Hyden early season wheat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)					2.44
RockStar [®]	No trial	No trial	No trial	Trial failed	132
Scepter [®]					130
Catapult [®]					125
Cutlass [®]					120
LRPB Trojan [®]					119
Kinsei [®]					117
Magenta [®]					109
Yitpi [®]					106
Bremer [®]					100
EG Jet [®]					99
CLEARFIELD® PLUS					
Sheriff CL Plus					120
Sowing date				19 Apr	16 Apr
Rainfall J–M (mm)				61	7
Rainfall A–O (mm)				207	192

For more information click this [LINK](#)**TABLE 11 Tincurrin early season wheat.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)					3.18
Catapult [Ⓢ]	No trial	No trial	No trial	No trial	120
Scepter [Ⓢ]					119
Kinsei [Ⓢ]					118
RockStar [Ⓢ]					117
Cutlass [Ⓢ]					112
LRPB Trojan [Ⓢ]					108
Longsword [Ⓢ]					108
Bremer [Ⓢ]					106
Magenta [Ⓢ]					105
EG Jet [Ⓢ]					100
CLEARFIELD® PLUS					
Sheriff CL Plus					108
Sowing date					18 Apr
Rainfall J–M (mm)					26
Rainfall A–O (mm)					281

For more information click this [LINK](#)**TABLE 10 Jerramungup early season wheat.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)				1.18	
Cutlass [®]	No trial	No trial	Trial failed	112	No trial
Catapult [®]				112	
Scepter [®]				111	
LRPB Trojan [®]				109	
Kinsei [®]				107	
Magenta [®]				103	
Yitpi [®]				103	
Beckom [®]				102	
DS Pascal [®]				102	
Coolah [®]				100	
Sowing date			20 Apr	19 Apr	
Rainfall J–M (mm)			134	49	
Rainfall A–O (mm)			260	236	

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.

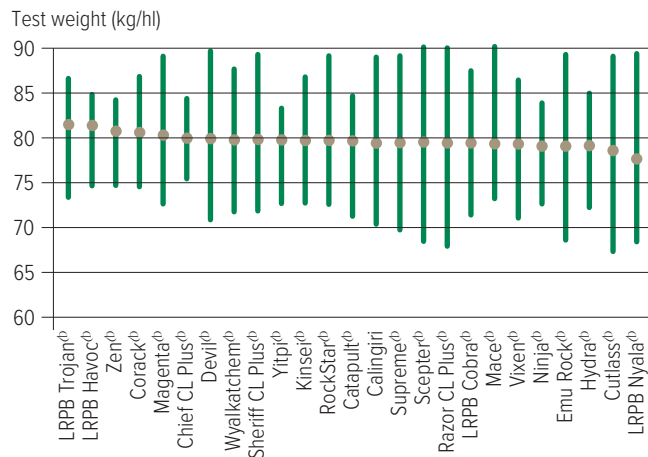


FIGURE 2 Test weight (kg/hl) comparisons for main season wheat varieties from 38 NVT sites in WA 2018.

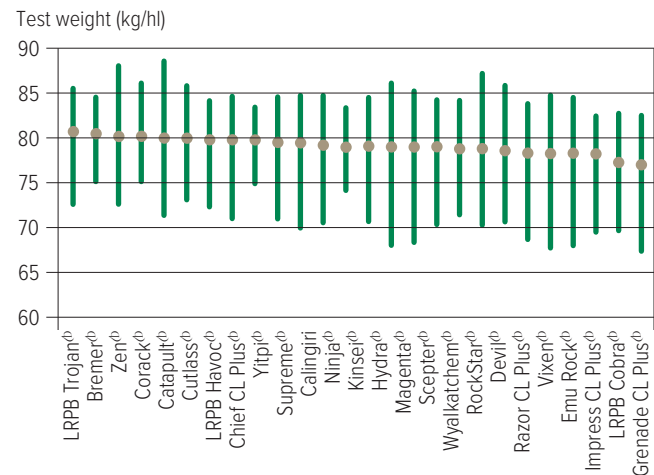


FIGURE 3 Test weight (kg/hl) comparisons for early season wheat varieties from six NVT sites in WA 2019.

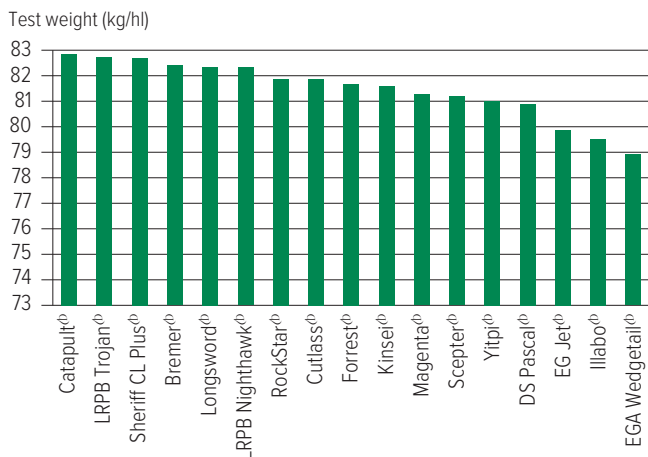


FIGURE 4 Test weight (kg/hl) comparisons for early season wheat varieties from four NVT sites in WA 2018.

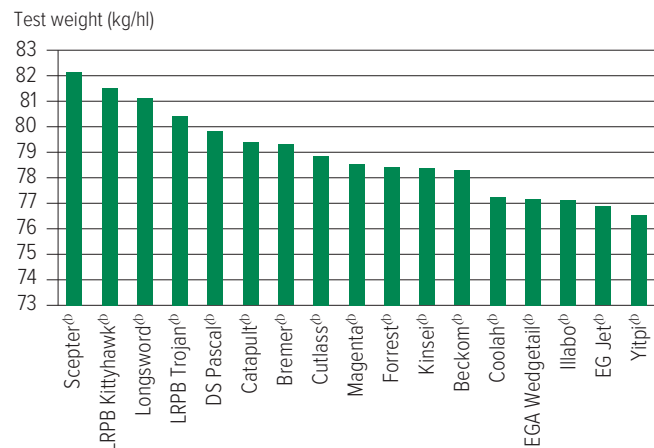


FIGURE 5 Screenings (<2.0mm) comparisons for main season wheat varieties from 38 NVT sites in WA 2019.

Screenings (% <2.0mm)

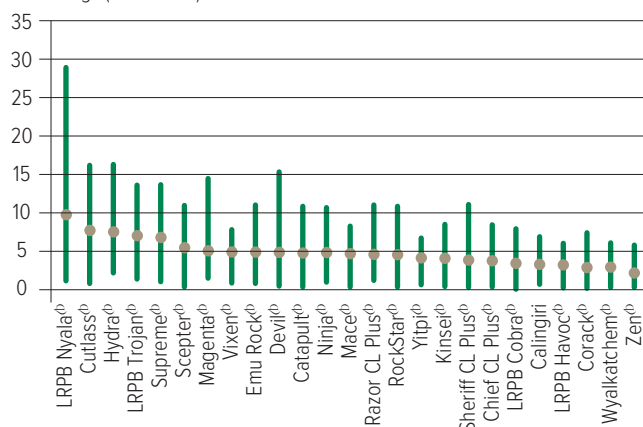


FIGURE 6 Screenings (<2.0mm) comparisons for main season wheat varieties from 38 NVT sites in WA 2018.

Screenings (% <2.0mm)

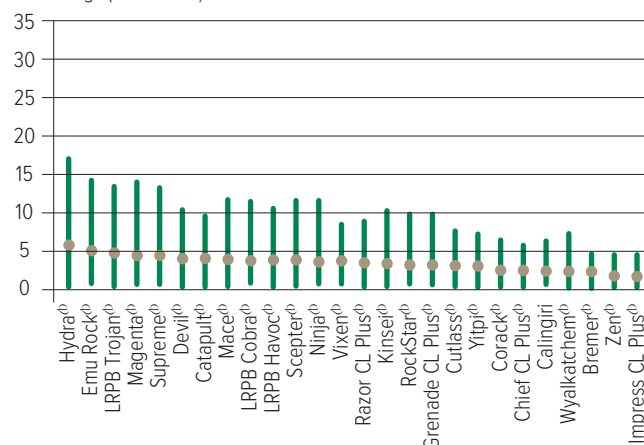


FIGURE 7 Screenings (<2.0mm) comparisons for early season wheat varieties from six NVT sites in WA 2019.

Screenings (% <2.0mm sieve)

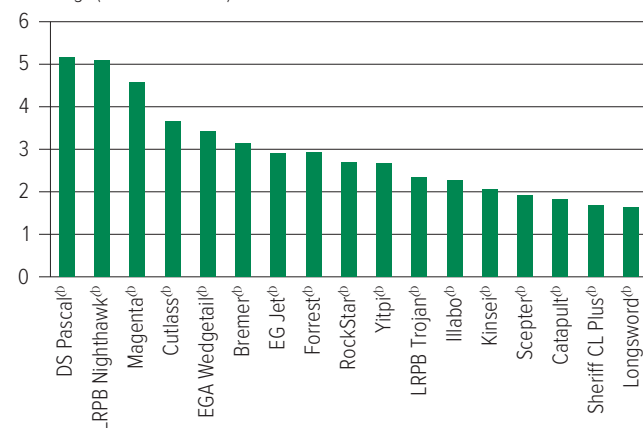
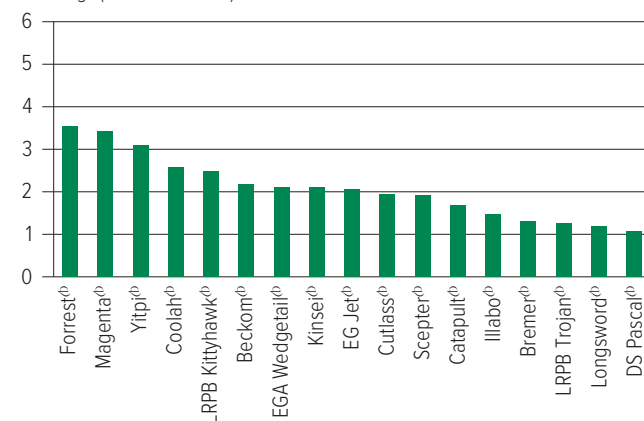


FIGURE 8 Screenings (<2.0mm) comparisons for early season wheat varieties from four NVT sites in WA 2018.

Screenings (% <2.0mm sieve)



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 12 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 ^a	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,

^a 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

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CANOLA

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LUPIN

BARLEY VARIETY YIELD PERFORMANCE – ALBANY

The following tables contain yield results from the top-performing varieties within each NVT location in Albany 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 Frankland main season barley.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	4.07	3.59	3.95	3.79	5.08
RGT Planet ^{db}		111	113	104	107
Rosalind ^{db}	119	111	107	104	107
Buff ^{db}				110	104
Granger ^{db}	108	103	104	101	105
Leabrook ^{db}	112	105	104	101	100
Bottler ^{db}		104	105	103	104
Banks ^{db}	108	104	103	101	103
La Trobe ^{db}	105	102	99	99	101
Lockyer ^{db}	102		101		99
LG Alestar ^{db}	99	100			101
CLEARFIELD®					
Maximus CL ^{db}				101	104
Spartacus CL ^{db}	104	101	96	97	101
Scope CL ^{db}	83	95	93	100	95
Sowing date	15 May	24 May	26 May	29 May	27 May
Rainfall J–M (mm)	46	128	106	29	60
Rainfall A–O (mm)	363	494	332	346	341

For more information click this [LINK](#)

TABLE 3 Jerramungup main season barley.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	3.97	2.61	2.58		2.74
Rosalind ^{db}	121	103	107	Trial failed	121
RGT Planet ^{db}		117	111		107
Leabrook ^{db}	116	97	115		107
La Trobe ^{db}	112	96	108		111
Compass ^{db}	115	90	110		108
Banks ^{db}	108	102	103		109
Granger ^{db}	98	111	99		105
Buff ^{db}		104	93		99
Lockyer ^{db}	101	100	103		98
Flinders ^{db}	96		99		102
CLEARFIELD®					
Maximus CL ^{db}					117
Spartacus CL ^{db}	113	95	107		116
Sowing date	11 May	9 May	12 May	2 May	21 May
Rainfall J–M (mm)	57	171	134	49	49
Rainfall A–O (mm)	224	327	260	180	236

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 Hyden main season barley.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.68		4.75	3.11	2.05
Rosalind ^{db}	118	Trial failed	102	116	152
RGT Planet ^{db}			113	111	108
Leabrook ^{db}	118		104	107	124
Buff ^{db}			109	115	126
Compass ^{db}	116		97	103	126
La Trobe ^{db}	116		97	104	123
Banks ^{db}	108		101	106	119
Granger ^{db}	103		103	103	100
Fathom ^{db}	96		99	101	113
Lockyer ^{db}	101		102	100	99
CLEARFIELD®					
Maximus CL ^{db}				110	138
Spartacus CL ^{db}	120		94	103	129
Sowing date	6 May	10 May	18 May	2 Jun	22 May
Rainfall J–M (mm)	40	207	209	61	7
Rainfall A–O (mm)	206	193	235	207	192

For more information click this [LINK](#)

TABLE 4 Kendenup main season barley.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	6.01				4.50
RGT Planet ^{db}		Trial failed	Trial failed	Trial failed	116
Rosalind ^{db}	114				109
Leabrook ^{db}	108				107
Granger ^{db}	106				106
Buff ^{db}					103
Banks ^{db}	106				104
La Trobe ^{db}	105				103
Bottler ^{db}					102
Compass ^{db}	103				101
Lockyer ^{db}	101				101
CLEARFIELD®					
Maximus CL ^{db}					106
Spartacus CL ^{db}	105				102
Scope CL ^{db}	88				88
Sowing date	14 May	28 May	19 May	12 Jun	7 May
Rainfall J–M (mm)	132	62	96	48	53
Rainfall A–O (mm)	309	457	377	329	289

For more information click this [LINK](#)

TABLE 5 Kojonup main season barley.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.57		4.84	4.60	3.75
RGT Planet ^{db}		Trial failed	111	112	112
Rosalind ^{db}	91		110	105	122
Buff ^{db}				103	101
Leabrook ^{db}	107		106	104	114
Granger ^{db}	109		103	104	103
Banks ^{db}	98		104	102	109
Bottler ^{db}			103	102	96
Lockyer ^{db}	106		101	101	100
La Trobe ^{db}	85		102	101	113
Oxford	113			97	102
CLEARFIELD®					
Maximus CL ^{db}				103	118
Spartacus CL ^{db}	73		100	99	116
Scope CL ^{db}	77		94	92	90
Sowing date	7 May	18 May	26 May	28 May	4 Jun
Rainfall J–M (mm)	n/a	148	104	65	64
Rainfall A–O (mm)	n/a	397	368	387	316

n/a = Not available

For more information click this [LINK](#)**TABLE 7 Stirlings South main season barley.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	3.84	4.61	2.96		4.27
RGT Planet ^{db}		119	124	Trial failed	114
Granger ^{db}	109	110	120		107
Oxford	106	105	122		104
Bottler ^{db}		109	118		103
Rosalind ^{db}	111	106	88		107
Flinders ^{db}	104	102	110		102
LG Alestar ^{db}	99	104			101
Banks ^{db}	106	103	97		104
Buff ^{db}					101
Lockyer ^{db}	100	100	98		100
CLEARFIELD®					
Maximus CL ^{db}					105
Spartacus CL ^{db}	108	96	85		102
Sowing date	28 May	27 May	20 May	13 Jun	20 May
Rainfall J–M (mm)	60	190	149	39	97
Rainfall A–O (mm)	433	522	561	321	291

For more information click this [LINK](#)**TABLE 6 Lake Grace main season barley.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	3.69		3.28		1.91
Rosalind [Ⓓ]	132	Trial failed	114	Trial failed	136
Compass [Ⓓ]	121		108		123
La Trobe [Ⓓ]	119		108		119
Leabrook [Ⓓ]	118		109		115
Banks [Ⓓ]	112		106		113
Fathom [Ⓓ]	107		100		113
Buff [Ⓓ]			101		115
Mundah	105		97		117
RGT Planet [Ⓓ]			107		94
Lockyer [Ⓓ]	100		100		98
CLEARFIELD®					
Maximus CL [Ⓓ]					128
Spartacus CL [Ⓓ]	124		110		125
Sowing date	13 May	25 May	27 May	11 Jun	25 May
Rainfall J–M (mm)	54	124	147	54	7
Rainfall A–O (mm)	223	214	219	88	182

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, low grain screenings or high 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 and test weights 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.

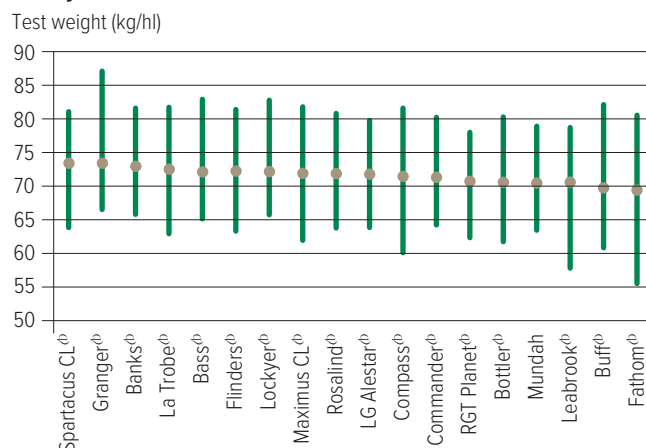


FIGURE 2 Test weight (kg/hl) comparisons for main season barley varieties from 20 NVT sites in WA 2018.

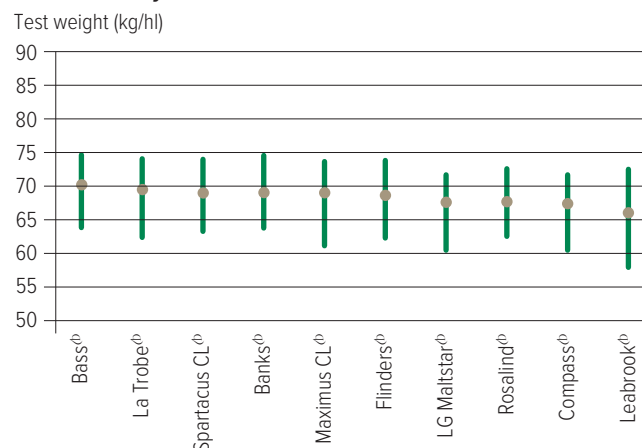


FIGURE 3 Screenings (<2.5mm) comparisons for main season barley varieties from 20 NVT sites in WA 2019.

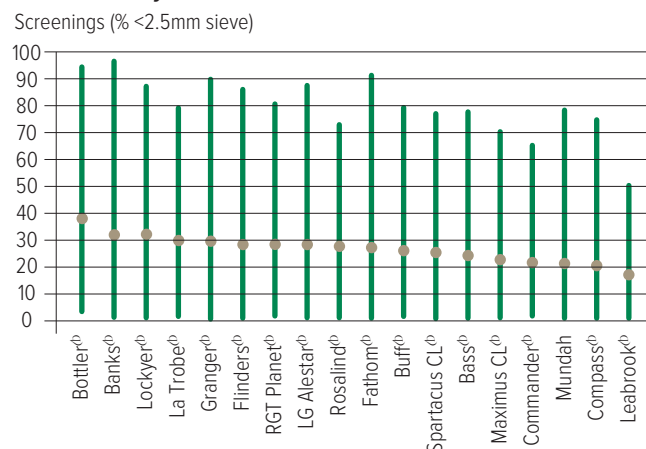


FIGURE 4 Screenings (<2.5mm) comparisons for main season barley varieties from 20 NVT sites in WA 2018.

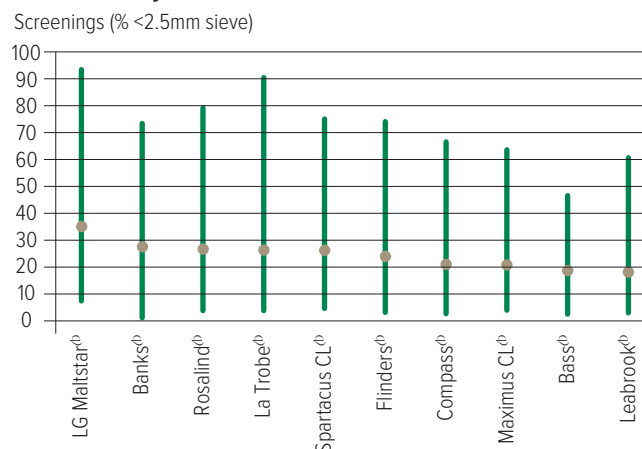


FIGURE 5 Retention (>2.5mm) comparisons for main season barley varieties from 20 NVT sites in WA 2019.

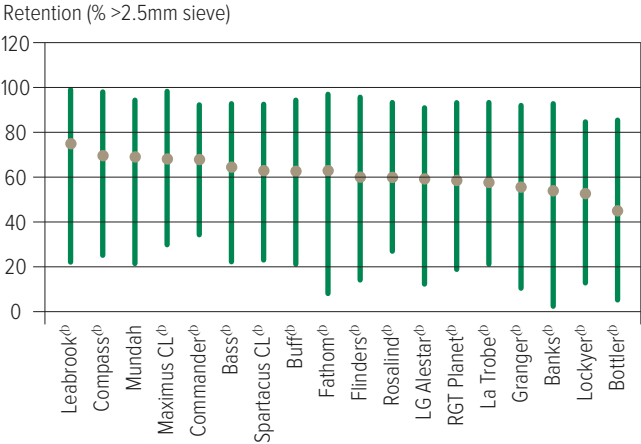
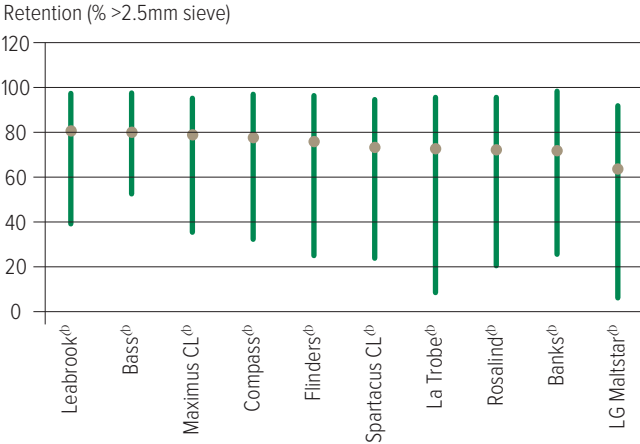


FIGURE 6 Retention (>2.5mm) comparisons for main season barley varieties from 20 NVT sites in WA 2018.



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 8 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	Sp	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	Sp	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, ^ 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 ^{db}	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 ^{db}	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, ^{db} 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

FIELD PEA

LUPIN

OAT VARIETY YIELD PERFORMANCE – ALBANY

The following tables contain yield results from the top-performing varieties within each NVT location in Albany 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 Pingrup oat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.79		2.03		2.73
Bannister ^{db}	116	No trial	121	Trial failed	109
Wandering ^{db}	118		111		110
Williams ^{db}	112		104		115
Bilby ^{db}	106		105		106
Kojonup ^{db}	102		117		96
Kowari ^{db}	98		97		100
Mitika ^{db}	94		98		95
Yallara ^{db}	94		79		102
Koorabup ^{db}	93		80		99
Carrolup	92		86		95
Sowing date	19 May		12 May	2 May	21 May
Rainfall J–M (mm)	29		152	41	24
Rainfall A–O (mm)	184		157	169	188

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 Wagin oat.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)		3.69	3.45	4.72	3.28
Wandering ^{db}	No trial	122	123	114	114
Bannister ^{db}		114	123	117	105
Williams ^{db}		104	120	115	100
Bilby ^{db}		104	110	105	102
Kojonup ^{db}		103	102	106	95
Kowari ^{db}		96	99	97	99
Yallara ^{db}		91	93	95	101
Mitika ^{db}		92	93	94	96
Koorabup ^{db}		87	91	95	100
Carrolup		83	89	96	96
Sowing date		25 May	5 Jun	25 May	7 Jun
Rainfall J–M (mm)		121	225	60	27
Rainfall A–O (mm)		260	280	311	302

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

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 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-SVS _p	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-S _p	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
Hyola® 540XC	Pacific Seeds	n/a	Mid to mid-early maturing GM dual herbicide tolerant hybrid. World-first TruFlex® + Clearfield® tolerant hybrid in a new Australian canola market segment to cater for imidazoline soil residues and the use of glyphosate in-crop. Adapted growing zones are from 1.5t/ha to 3.5t/ha, medium-tall plant height, excellent early vigour, moderate oil content and yields similar to Hyola® 404RR.
InVigor® R 4022P	BASF Australia	n/a	Not supplied
VICTORY® V75-03CL	Cargill	n/a	Mid-maturing specialty hybrid.
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, [Ⓛ] 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

FIELD PEA

LUPIN

CANOLA VARIETY YIELD PERFORMANCE – ALBANY

The following tables contain yield results from the top-performing varieties within each NVT location in Albany 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 Katanning mid-season CL canola.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.71		2.22	1.51	
Pioneer® 43Y92 (CL)		Trial failed	107	107	No trial
Pioneer® 44Y90 (CL)	111		111	106	
Saintly CL	114			105	
Banker CL	106		111	100	
VICTORY® V7002CL			96	95	
Hyola® 575CL	90		91	92	
Sowing date	5 May	6 May	10 May	2 May	
Rainfall J–M (mm)	n/a	150	212	52	
Rainfall A–O (mm)	n/a	306	275	263	

n/a = Not available

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 Kendenup mid-season CL canola.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)			2.34	2.47	3.14
Pioneer® 45Y93 CL	Trial failed	Trial failed	117		120
Pioneer® 44Y90 (CL)			112	108	111
Banker CL			112		114
Pioneer® 45Y91 (CL)			107	102	109
Saintly CL				101	100
VICTORY® V75-03CL					101
VICTORY® V7002CL					97
Hyola® 575CL			91	90	92
Sowing date	30 Apr	29 Apr	2 May	21 May	24 Apr
Rainfall J–M (mm)	47	62	96	48	53
Rainfall A–O (mm)	379	457	377	329	329

For more information click this [LINK](#)

TABLE 3 Kojonup mid-season CL canola.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.62		2.18	2.46	2.68
Saintly CL	124	Trial failed		108	103
Pioneer® 44Y90 (CL)	114			108	106
Pioneer® 45Y93 CL					108
Banker CL	110		109		105
Pioneer® 45Y91 (CL)				101	103
VICTORY® V75-03CL					99
VICTORY® V7002CL			94		97
Hyola® 575CL	90		88	92	94
Sowing date	29 Apr	27 Apr	18 May	15 May	23 Apr
Rainfall J–M (mm)	3	148	104	65	64
Rainfall A–O (mm)	447	397	368	387	316

For more information click this [LINK](#)

TABLE 4 Stirlings South mid-season CL canola.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.79		1.93		2.89
Pioneer® 45Y93 CL		Trial failed	115	Trial failed	119
Banker CL	107		109		115
Pioneer® 45Y91 (CL)			106		109
VICTORY® V75-03CL					100
Saintly CL	96				103
Hyola® 575CL	93		93		94
Sowing date	29 Apr	30 Apr	22 Apr	4 May	24 Apr
Rainfall J–M (mm)	60	190	149	39	97
Rainfall A–O (mm)	433	522	561	321	291

For more information click this [LINK](#)

TABLE 5 Jerramungup early season CL canola.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)		1.67	2.66		
Banker CL	Trial failed		109	Trial failed	Trial failed
Pioneer® 44Y90 (CL)		109	107		
Pioneer® 43Y92 (CL)		108	105		
VICTORY® V7002CL			93		
Hyola® 575CL		89	91		
Sowing date	27 Apr	28 Apr	21 Apr	1 May	16 Apr
Rainfall J–M (mm)	48	164	134	49	49
Rainfall A–O (mm)	332	309	260	180	236

For more information click this [LINK](#)**TABLE 6 Katanning mid-season RR canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.71	2.68	2.22	1.51	1.82
InVigor® R 4022P					110
Pioneer® 43Y29 RR					108
Pioneer® 44Y27 (RR)		106	107	108	109
Xseed™ Raptor					108
Nuseed GT-53	105	101	107	109	105
Hyola® 410XX					105
DG 408RR		101	102	105	104
InVigor® R 5520P		105	103	98	102
Hyola® 506RR			99	103	102
InVigor® R 3520		99		104	102
Sowing date	5 May	6 May	10 May	2 May	24 May
Rainfall J–M (mm)	n/a	150	212	52	44
Rainfall A–O (mm)	n/a	306	275	263	271

n/a = Not available

For more information click this [LINK](#)**TABLE 7 Kendenup mid-season RR canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)			2.34	2.47	3.14
Pioneer® 45Y25 (RR)	Trial failed	Trial failed	112	109	118
Xseed™ Raptor					107
Pioneer® 43Y29 RR			112		111
Nuseed GT-53			106	114	108
InVigor® R 4022P					107
Pioneer® 44Y27 (RR)			106	108	103
Hyola® 410XX					98
InVigor® R 5520P			104	96	103
Hyola® 540XC					99
VICTORY® V5003RR			94	95	98
Sowing date	30 Apr	29 Apr	2 May	21 May	24 Apr
Rainfall J–M (mm)	47	62	96	48	53
Rainfall A–O (mm)	379	457	377	329	329

For more information click this [LINK](#)**TABLE 8 Kojonup mid-season RR canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.62	3.19	2.18	2.46	2.68
InVigor® R 4022P					104
Pioneer® 43Y29 RR					105
Xseed™ Raptor			113		107
Pioneer® 44Y27 (RR)		110		109	105
Nuseed GT-53	98	111	111	107	106
Pioneer® 45Y25 (RR)	96	110		101	106
Hyola® 410XX			105		103
InVigor® R 5520P	110	101	101	100	100
Hyola® 404RR	100		89		94
Hyola® 540XC			95		97
Sowing date	29 Apr	28 Apr	18 May	15 May	23 Apr
Rainfall J–M (mm)	3	148	104	65	64
Rainfall A–O (mm)	447	397	368	387	316

For more information click this [LINK](#)**TABLE 9 Stirlings South mid-season RR canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.79		1.93		2.89
Pioneer® 45Y25 (RR)	114	Trial failed	116	Trial failed	116
Nuseed GT-53	110		110		103
Xseed™ Raptor					104
InVigor® R 4022P					112
InVigor® R 5520P	98		99		105
Hyola® 540XC					97
Hyola® 410XX					96
VICTORY® V5003RR	100		99		97
Hyola® 506RR			98		96
Sowing date	29 Apr	30 Apr	22 Apr	4 May	24 Apr
Rainfall J–M (mm)	60	190	149	39	97
Rainfall A–O (mm)	433	522	561	321	291

For more information click this [LINK](#)**TABLE 10 Jerramungup early season RR canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)		1.67	2.66		
Pioneer® 45Y28 RR	Trial failed		111	Trial failed	Trial failed
Pioneer® 43Y29 RR			112		
Pioneer® 44Y27 (RR)		112	109		
DG 408RR		106	103		
InVigor® R 3520		104	103		
Nuseed GT-53		102	101		
Pioneer® 43Y23 (RR)		102	100		
Monola® G11			98		
DG 460RR		93	97		
Hyola® 404RR		95	94		
Sowing date	27 Apr	28 Apr	21 Apr	1 May	16 Apr
Rainfall J–M (mm)	48	164	134	49	49
Rainfall A–O (mm)	332	309	260	180	236

For more information click this [LINK](#)

TABLE 11 Nyabing early season RR canola.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.33	1.68	1.51		1.06
InVigor® R 4022P				Trial failed	116
Pioneer® 43Y29 RR			107		116
Pioneer® 44Y27 (RR)		110	111		110
InVigor® R 3520		109	103		106
DG 408RR		101	107		102
Xseed™ Raptor					97
Pioneer® 43Y23 (RR)	100	101	102		99
Nuseed GT-53	103	94	103		98
Hyola® 506RR					98
Hyola® 410XX					95
Sowing date	1 May	27 Apr	22 May	27 Apr	30 Apr
Rainfall J–M (mm)	19	93	172	59	34
Rainfall A–O (mm)	209	267	191	196	198

For more information click this [LINK](#)**TABLE 13 Kendenup mid-season TT canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)			2.34	2.47	3.14
HyTTec® Trifecta	Trial failed	Trial failed		125	124
HyTTec® Trophy					117
SF Ignite TT			117	112	124
DG 670TT			115	109	119
InVigor® T 4510			116	114	113
SF Turbine TT			107	107	105
Hyola® 550TT					98
Hyola® 580CT			101	103	104
Pioneer® 45T03 TT				98	104
SF Spark TT					100
Sowing date	30 Apr	29 Apr	2 May	21 May	24 Apr
Rainfall J–M (mm)	47	62	96	48	53
Rainfall A–O (mm)	379	457	377	329	329

For more information click this [LINK](#)**TABLE 15 Stirlings South mid-season TT canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.79		1.81		2.89
HyTTec® Trifecta	Listed varieties not tested	Trial failed		Trial failed	121
SF Ignite TT			116		122
HyTTec® Trophy					114
HyTTec® Trident					107
DG 670TT			111		117
InVigor® T 4510			109		112
Hyola® 580CT			105		102
Pioneer® 45T03 TT					105
Hyola® 550TT					97
Hyola® 350TT			100		100
Sowing date	29 Apr	30 Apr	20 May	4 May	24 Apr
Rainfall J–M (mm)	60	190	149	39	97
Rainfall A–O (mm)	433	522	561	321	291

For more information click this [LINK](#)**TABLE 12 Katanning mid-season TT canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.71	2.68	2.22	1.51	1.82
HyTTec® Trifecta				116	120
HyTTec® Trident				123	120
HyTTec® Trophy			119	115	116
InVigor® T 4510		113	116	111	114
Hyola® 550TT				111	110
Hyola® 350TT				108	110
DG 670TT		109		102	107
SF Ignite TT		108	116	102	105
SF Turbine TT	109	106	107	106	107
Hyola® 559TT	109	101	103	111	107
Sowing date	5 May	6 May	10 May	2 May	24 May
Rainfall J–M (mm)	n/a	150	212	52	44
Rainfall A–O (mm)	n/a	306	275	263	271

n/a = Not available

For more information click this [LINK](#)**TABLE 14 Kojonup mid-season TT canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	2.62	3.19	2.18	2.46	2.68
HyTTec® Trifecta				119	116
HyTTec® Trophy			124	116	113
InVigor® T 4510		120	118	113	110
Hyola® 550TT				111	105
SF Ignite TT		116	117	104	109
DG 670TT		114	114	105	107
SF Turbine TT	110	109	108	107	105
SF Spark TT					101
Hyola® 530XT			101		101
Pioneer® 45T03 TT				99	100
Sowing date	29 Apr	27 Apr	18 May	15 May	23 Apr
Rainfall J–M (mm)	3	148	104	65	64
Rainfall A–O (mm)	447	397	368	387	316

For more information click this [LINK](#)**TABLE 16 Wagin mid-season TT canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)		2.30	2.56	1.90	1.23
HyTTec® Trifecta	Trial failed			122	114
HyTTec® Trident				122	113
HyTTec® Trophy			109	118	111
InVigor® T 4510		109	106	115	111
SF Ignite TT		106	108	107	101
Hyola® 550TT					109
DG 670TT		106		108	103
Hyola® 350TT			101	110	109
SF Turbine TT		104	103	108	106
Hyola® 559TT		104	103	107	105
Sowing date	5 May	27 Apr	4 May	25 May	16 May
Rainfall J–M (mm)	34	121	225	60	27
Rainfall A–O (mm)	215	260	280	311	302

For more information click this [LINK](#)

TABLE 17 Hyden early season TT canola.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.31	1.40	0.56	0.65	1.35
HyTTec® Trident					132
InVigor® T 4510		105	133	158	122
HyTTec® Trophy			128	150	120
Hyola® 550TT				111	124
InVigor® T 3510				143	114
Hyola® 350TT			100	110	115
Pioneer® 44T02 TT	108	113	107		112
SF Spark TT					104
ATR Bonito	99	83	94	96	99
ATR Stingray	91			84	87
Sowing date	29 Apr	9 May	26 Apr	4 May	1 May
Rainfall J–M (mm)	40	207	209	61	7
Rainfall A–O (mm)	206	193	235	207	192

For more information click this [LINK](#)**TABLE 19 Nyabing early season TT canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.33	1.68	1.51	1.30	
HyTTec® Trident			119	127	
InVigor® T 4510		111	114	117	
HyTTec® Trophy			112	116	
InVigor® T 3510				112	
Hyola® 559TT	109	107	110	113	
Hyola® 350TT			111	115	
Pioneer® 44T02 TT	107	107	109	112	
SF Turbine TT	106	110	105	105	
BASF 3000 TR	97	98	100	101	
ATR Bonito ^{db}	96	89	95	95	
Sowing date	1 May	27 Apr	22 May	27 Apr	30 Apr
Rainfall J–M (mm)	19	93	172	59	34
Rainfall A–O (mm)	209	267	191	196	198

For more information click this [LINK](#)**TABLE 18 Jerramungup early season TT canola.**

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)		1.67	2.66		
InVigor® T 4510		115	112		
HyTTec® Trophy			110		
Hyola® 350TT			106		
Pioneer® 44T02 TT		109	106		
SF Turbine TT		107	106		
ATR Mako ^{db}			101		
BASF 3000 TR		98	97		
ATR Bonito		94	95		
Sowing date	27 Apr	28 Apr	21 Apr	1 May	16 Apr
Rainfall J–M (mm)	48	164	134	49	49
Rainfall A–O (mm)	332	309	260	180	236

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 20 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
HyTTec® Trident	R				Hybrid
HyTTec® Trifecta	R				Hybrid
HyTTec® 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 20 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.

FIELD PEA

FIELD PEA VARIETY YIELD PERFORMANCE – ALBANY

The following tables contain yield results from the top-performing varieties within each NVT location in Albany 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 Katanning field pea.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	0.38	0.46	1.65	1.10	2.14
PBA Butler ^{db}	83	109	129	100	105
PBA Pearl ^{db}	105	128	96	112	102
PBA Wharton ^{db}	133	107	74	92	94
PBA Oura ^{db}	97	87	72	107	98
PBA Gunyah ^{db}	91	70	91	86	98
PBA Percy ^{db}	80	31	61	129	107
Kaspa ^{db}	64	48	97	73	95
PBA Twilight ^{db}	100	66	72	81	94
Parafield ^{db}		37	71	90	82
Sowing date	4 Jun	1 Jun	30 May	14 Jun	13 Jun
Rainfall J–M (mm)	n/a	159	212	52	44
Rainfall A–O (mm)	n/a	262	275	263	271

n/a = Not available

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).

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

TABLE 2 Pingrup field pea.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	1.86		1.73	0.61	0.75
PBA Percy ^{db}	114	No trial	95	177	130
PBA Pearl ^{db}	103		94	133	127
PBA Oura ^{db}	102		90	141	119
PBA Butler ^{db}	99		110	86	99
PBA Gunyah ^{db}	100		97	109	104
PBA Twilight ^{db}	98		90	119	107
Kaspa ^{db}	94		100	105	101
PBA Wharton ^{db}	99		88	102	98
Parafield ^{db}	75		94	135	100
Sowing date	19 May		1 Jun	15 Jun	13 Jun
Rainfall J–M (mm)	29		152	41	24
Rainfall A–O (mm)	184		157	169	188

For more information click this [LINK](#)

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 3 Field pea disease guide for Western Australia.

Variety	Common diseases				Diseases rarely found	
	Blackspot (<i>Ascochyta</i> blight)	Downy mildew	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)	Powdery mildew	Bacterial blight
Kaspa [Ⓛ]	MS	S	MR	MRMS	S	S
PBA Butler [Ⓛ]	MS	S	MR	MRMS	S	MS
PBA Gunyah [Ⓛ]	MS	S	MR	MRMS	S	S
PBA Oura [Ⓛ]	MS	S	MR	MRMS	S	MS
PBA Pearl [Ⓛ]	MS	S	MR	MRMS	S	MS
PBA Percy [Ⓛ]	MS	S	MR	RMR	S	MRMS
PBA Twilight [Ⓛ]	MS	S	MR	MRMS	S	S
PBA Wharton [Ⓛ]	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 [Ⓛ]	National Lupin Initiative	3.00	A very widely adapted variety with a maturity similar to Jurien [Ⓛ] offering high and stable yields in all lupin growing areas, particularly WA.

* 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

FIELD PEA

LUPIN

LUPIN VARIETY YIELD PERFORMANCE – ALBANY

The following table contains yield results from the top-performing varieties within each NVT location in Albany 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 Katanning narrow-leaf lupin.

Year	2015	2016	2017	2018	2019
Mean yield (t/ha)	0.37				2.43
PBA Jurien ^{db}	108	Trial failed	Trial failed	Trial failed	104
Coyote ^{db}	135				99
PBA Bateman ^{db}	136				96
PBA Barlock ^{db}	104				100
Coromup ^{db}	89				102
PBA Gunyidi ^{db}	120				97
PBA Leeman ^{db}	93				101
Mandelup ^{db}	109				98
Wonga					90
Sowing date	4 Jun	10 May	10 May	2 May	18 May
Rainfall J–M (mm)	22	132	212	52	44
Rainfall A–O (mm)	238	269	275	263	271

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).

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 2 Lupin disease guide for Western Australia.

Variety	Brown leaf spot	Phomopsis stem infection	Anthraco nose 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