



NVT HARVEST REPORT



REVISED MAY 2024



Central South Australia
Southern Region



Title:

NVT Harvest Report – Central South Australia

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Authors:

Katherine Hollaway, Astute Ag and
Dr Sue Knights, SE Knights Consulting

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GRDC contact details:

PO Box 5367
KINGSTON ACT 2604

Phone: 02 6166 4500

Email: comms@grdc.com.au

Design and production:

Coretext, www.coretext.com.au

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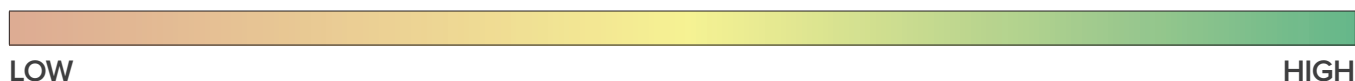
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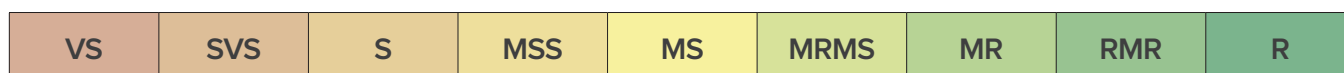
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LEGEND: MEAN VARIETY YIELD PERFORMANCE



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)

The disease ratings in the report are current at the time of publication.

Regularly visit nvt.grdc.com.au/nvt-disease-ratings to find the latest NVT disease ratings.

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

INTRODUCTION

The NVT Harvest Report - Central South Australia provides information to support growers and advisers with decisions on variety selection for **Central South Australia**. 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 2023 and long-term yield performance of varieties of crop species suitable for production in **Central South Australia** together with their quality and disease responses.

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

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

GRDC recognises that sustaining a project of this nature hinges on the collaboration of growers who willingly provide sites and often lend a hand in trial management on their properties. Equally significant is the partnership with seed companies who supply seed of commercial varieties and experimental lines to the program.

Interpreting long-term yield results

A factor analytic (FA) mixed model approach is used in the multi-environment trial (MET) analysis conducted by GRDC, supported by the Analytics for the Australian Grains Industry (AAGI).

This approach generates long-term MET values for varieties at an individual trial level.

This format provides more detailed results to better understand a variety's performance over several years at the individual trial/environment level, rather than just a single averaged value.

In the *NVT Harvest Report - Central South Australia*, results are presented in year groupings for yield for the past five years and quality for the past two years. Further detailed interrogation of the NVT Online results using the Long Term Yield Reporter will provide more specific performance results on all varieties of each crop species in each NVT location throughout **Central South Australia**.

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

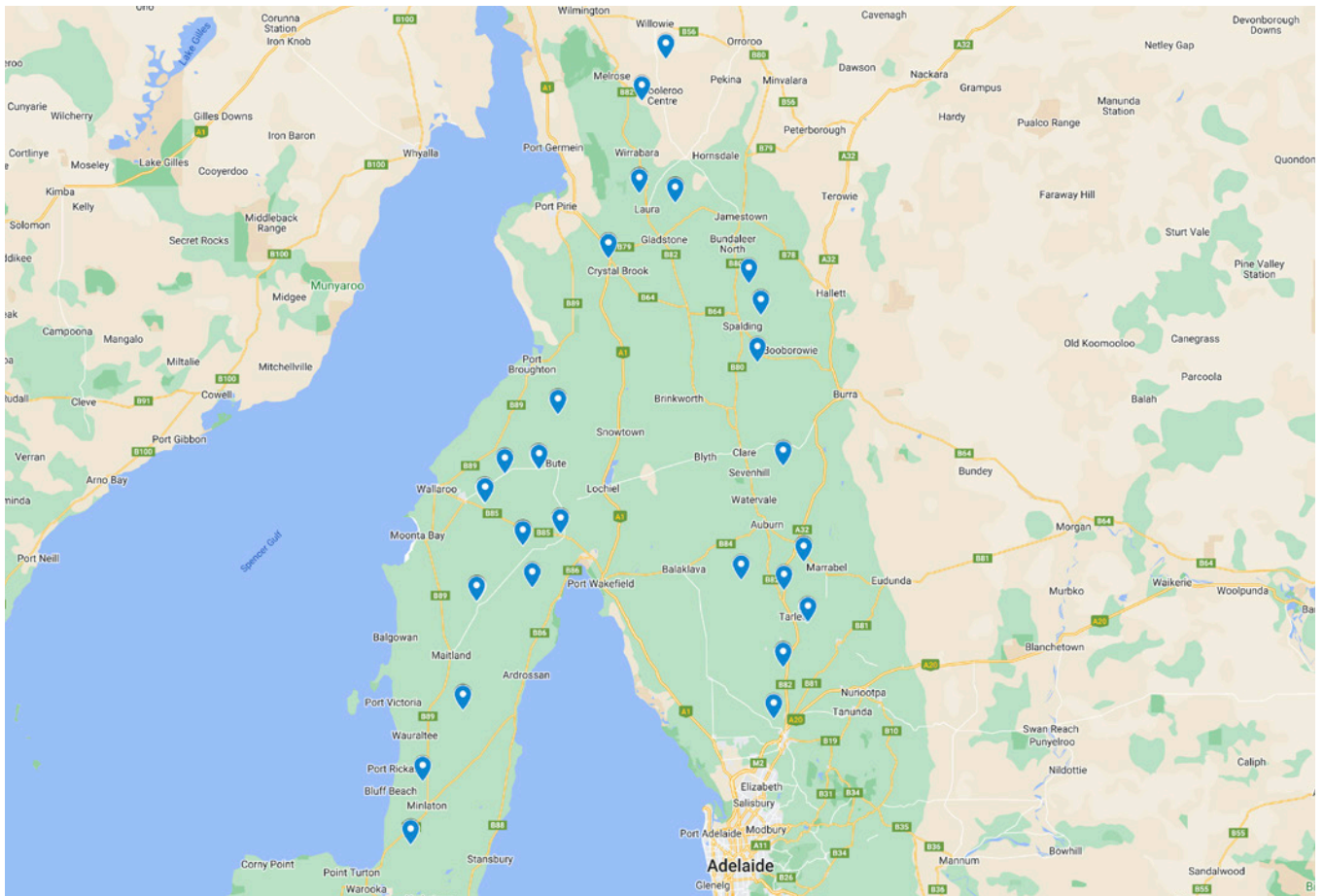
Trials listed as compromised are not suitable for making variety decisions. Results can be found in the [Quarantined trial reports](#).

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

NVT SITE LOCATIONS – Central South Australia

Figure 1: Locality of NVT trial sites in Central South Australia from 2019 to 2023.

SOURCE: NVT Online



See all NVT trial locations and view trial results at nvt.grdc.com.au/trial-results.

WHEAT

New wheat varieties

The following information is for wheat varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	Grain classification	End point royalty* (\$)	Comments supplied by breeding company ¹
Dozer [®] CL Plus	InterGrain	TBC	3.90	Dozer [®] CL Plus is a quick-mid maturing APW Clearfield [®] Plus wheat. Dozer [®] CL Plus pushes mid and quick-mid imidazolinone wheat yields and is an excellent alternative to Chief CL Plus. It is best suited to low-medium rainfall areas in Western Australia and South Australia. Dozer [®] CL Plus has strong lodging resistance, moderate early vigour, medium plant height and medium coleoptile length. Dozer [®] CL Plus offers good grain size and test weight. Proactive disease management of stripe rust and CCN in South Australia is recommended with Dozer [®] CL Plus to maximise yield and quality potential.
Genie [®]	InterGrain	AH	3.50	Genie [®] is a mid-slow maturing wheat and is an excellent alternative to RockStar [®] in greater than three-tonne-per-hectare yield environments. In these environments, the variety offers medium-high rainfall growers a yield improvement compared with RockStar [®] . Genie [®] , with its slightly later maturity than RockStar [®] and long coleoptile, enables earlier sowing opportunities to be maximised. Genie [®] has an excellent disease resistance package including useful stem rust and stripe rust resistances. It offers good test weight, moderate grain size and has a medium plant height. Preliminary internal data indicates Genie [®] has good sprouting tolerance. Genie [®] has an AH classification in the western and southern zones and an AH classification is expected for the south-eastern and northern zones in 2024.
LRPB Major [®]	LongReach Plant Breeders	AH	4.00	Mid-slow maturing spring wheat (similar to Beckom [®] and RockStar [®]) suitable for early to mid May seeding opportunities throughout southern NSW. Good disease package for southern NSW and Victorian production systems with improved Septoria resistance over its Beckom [®] parent. Strong yield performance in both acidic and sodic soil yield trials. AH classification southern NSW, Victoria and South Australia. Marketed by Pacific Seeds.
LRPB Matador [®]	LongReach Plant Breeders	AH	3.50	Mid-maturity AH wheat that has consistently outperformed Scepter [®] with an improved shorter canopy and better lodging tolerance. Improved powdery mildew (MS) and stripe rust resistance (MS) over Scepter [®] , adding some minor genes for both diseases. AH quality in SA and Victoria and commercialised by Pacific Seeds.
Soaker [®]	LongReach Plant Breeders	APW	3.50	Mid-maturity derived from Scepter [®] with agronomy traits being very similar. Addition of one imidazolinone resistance gene so it can be grown as a 'soaker' crop to break the imidazolinone cycle and cover off residual imidazolinone carryover into the wheat year. Quality APW in South Australia and Victoria and available from AG Schilling & Co.
Tomahawk CL Plus [®]	Australian Grain Technologies	APW	4.15	Scepter [®] -type Clearfield [®] variety with increased yield over Scepter [®] . The highest-yielding Clearfield [®] wheat variety in Western Australia, South Australia and Victoria. Tolerant to Clearfield [®] Intervix [®] herbicide. Similar disease resistance profile to Scepter [®] . Similar grain size and test weight as Scepter [®] . Mid-season maturity, similar to Scepter [®] . APW quality classification in SA, Victoria, southern NSW, classification for WA pending.

* EPR amount is ex-GST, [®] denotes Plant Breeder's Rights apply. ¹ All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

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

Wheat variety yield performance – Central South Australia

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

Table 1: Booleroo Centre main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	0.49	3.19	2.19	3.04	1.11
Calibre ^{db}		107	115	104	124
Ballista ^{db}	127	111	108	102	117
RockStar ^{db}	110	110	107	106	107
LRPB Matador ^{db}				99	119
Dozer ^{db} CL Plus*					111
Reilly ^{db}		110	103	100	110
Brumby ^{db}			108	104	109
LRPB Major ^{db}				106	101
Genie ^{db}					96
Vixen ^{db}	131	109	103	92	120
Boree ^{db}		105	105	100	109
Denison ^{db}		100	108	107	102
Sunblade CL Plus ^{db*}	105	103	103	105	105
Tomahawk CL Plus ^{db*}				98	121
Catapult ^{db}	105	100	105	102	104
Sowing date	15 May	11 May	26 May	1 Jun	30 May
Rainfall J–M (mm)	20	96	29	62	25
Rainfall A–O (mm)	123	344	213	251	163

Special thanks to 2023 trial cooperator, Wayne Rookce.
* herbicide-tolerant variety. Learn more via the [NVT Long Term Yield Reporter](#)

Table 3: Maitland main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.98	4.72	5.20	5.92	4.75
Tomahawk CL Plus ^{db*}				99	120
RockStar ^{db}	110	110	111	110	111
LRPB Matador ^{db}				101	114
Brumby ^{db}			110	107	114
Calibre ^{db}		106	112	102	115
Denison ^{db}		105	108	109	113
Ballista ^{db}	111	109	111	103	109
Kingston ^{db}		112	106	106	106
Vixen ^{db}	112	112	111	95	110
Scepter ^{db}	110	106	107	100	112
Boree ^{db}		107	108	102	109
Dozer ^{db} CL Plus*					106
Catapult ^{db}	105	104	106	104	110
Soaker ^{db}					110
Sunblade CL Plus ^{db*}	107	105	105	107	104
Sowing date	10 May	11 May	14 May	19 May	12 May
Rainfall J–M (mm)	0	47	71	97	58
Rainfall A–O (mm)	190	344	219	417	278

Special thanks to 2023 trial cooperator, Klopp Farming.
* herbicide-tolerant variety. Learn more via the [NVT Long Term Yield Reporter](#)

Table 2: Brentwood main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.40	3.38	4.84	5.89	4.11
Vixen ^{db}	114	115	115	109	101
Tomahawk CL Plus ^{db*}				110	104
LRPB Matador ^{db}				109	105
Ballista ^{db}	113	110	110	108	103
Calibre ^{db}		109	110	109	104
RockStar ^{db}	110	108	106	108	108
Kingston ^{db}		109	106	106	107
Brumby ^{db}			106	108	107
Dozer ^{db} CL Plus*					104
Boree ^{db}		107	107	106	105
Scepter ^{db}	104	108	107	106	103
Denison ^{db}		103	103	106	108
Soaker ^{db}					103
Sunblade CL Plus ^{db*}	109	105	102	105	101
Catapult ^{db}	101	104	104	104	106
Sowing date	7 May	12 May	25 May	9 Jun	9 May
Rainfall J–M (mm)	5	51	51	92	35
Rainfall A–O (mm)	243	285	291	286	234

Special thanks to 2023 trial cooperator, Litster Trading.
* herbicide-tolerant variety. Learn more via the [NVT Long Term Yield Reporter](#)

Table 4: Mintaro main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	4.14	6.59	6.41	7.12	
Ballista ^{db}	108	108	111	108	
RockStar ^{db}	107	108	111	107	
Tomahawk CL Plus ^{db*}				107	
Calibre ^{db}		106	112	104	
LRPB Matador ^{db}				102	
RGT Zanzibar	94	101	105	123	
Sunblade CL Plus ^{db*}	103	103	107	113	
Vixen ^{db}	109	110	106	103	
Brumby ^{db}			109	105	
Sunmaster ^{db}			104	118	
Devil ^{db}	107	106	107	102	
Denison ^{db}		103	108	102	
Kingston ^{db}		108	102	103	
Boree ^{db}		106	106	100	
Scepter ^{db}	107	103	105	103	
Sowing date	3 Jun	11 May	31 May	3 Jun	22 May
Rainfall J–M (mm)	20	82	34	71	40
Rainfall A–O (mm)	311	436	429	563	263

Compromised trial

Special thanks to 2023 trial cooperator, David Mitchell.
* herbicide-tolerant variety. Learn more via the [NVT Long Term Yield Reporter](#)

WHEAT
BARLEY
OAT
CANOLA
CHICKPEA
FABA BEAN
FIELD PEA
LENTIL
LUPIN

Table 5: Paskeville main season wheat.

Year	2019	2020	2021	2022	2023	
Mean yield (t/ha)	2.14		2.38		3.39	
Vixen ^{db}	115	Compromised trial	119	Compromised trial	116	
Tomahawk CL Plus ^{db*}						117
LRPB Matador ^{db}						113
Calibre ^{db}					102	110
Ballista ^{db}	115				105	109
Dozer ^{db} CL Plus*						108
Razor CL Plus ^{db*}	107				109	107
Kingston ^{db}					113	111
Scepter ^{db}	104				105	110
Boree ^{db}					105	108
Brumby ^{db}					101	109
RockStar ^{db}	107				100	108
LRPB Anvil ^{db} CL Plus*					108	103
Soaker ^{db}						108
Emu Rock ^{db}	104				110	101
Sowing date	18 May	7 May	12 May	14 Jun	16 May	
Rainfall J–M (mm)	7	39	33	113	47	
Rainfall A–O (mm)	184	268	229	285	201	

Special thanks to 2023 trial cooperator, Sam Holman.

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

Table 6: Spalding main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.48	5.49	4.02	8.39	4.89
Tomahawk CL Plus ^{db*}				114	113
Vixen ^{db}	115	114	111	113	109
Ballista ^{db}	112	111	107	112	105
LRPB Matador ^{db}				108	106
Calibre ^{db}		110	109	107	105
Scepter ^{db}	110	105	106	107	107
RockStar ^{db}	109	107	106	109	102
Brumby ^{db}			106	107	105
Sunblade CL Plus ^{db*}	103	104	102	113	104
Kingston ^{db}		105	105	110	104
Dozer ^{db} CL Plus*					102
Soaker ^{db}					107
Sunmaster ^{db}			98	117	106
Boree ^{db}		106	106	103	103
Razor CL Plus ^{db*}	107	103	104	102	107
Sowing date	14 May	8 May	31 May	2 Jun	11 May
Rainfall J–M (mm)	17	67	31	52	38
Rainfall A–O (mm)	229	425	318	396	239

Special thanks to 2023 trial cooperator, Ben Sommerville.

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

Table 7: Turretfield main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.08	5.21	5.67	7.50	4.31
Tomahawk CL Plus ^{db*}				104	114
LRPB Matador ^{db}				103	106
RockStar ^{db}	109	109	110	110	103
Calibre ^{db}		109	110	104	107
Vixen ^{db}	122	112	107	101	107
Brumby ^{db}			109	107	106
Ballista ^{db}	114	109	107	106	105
Denison ^{db}		105	109	107	104
Scepter ^{db}	114	107	106	102	108
Kingston ^{db}		108	107	107	101
Soaker ^{db}					107
Boree ^{db}		107	107	103	103
Dozer ^{db} CL Plus*					101
Sunblade CL Plus ^{db*}	104	105	103	108	104
Catapult ^{db}	107	104	107	103	103
Sowing date	22 May	15 May	26 May	23 May	23 May
Rainfall J–M (mm)	11	32	43	82	9
Rainfall A–O (mm)	209	285	298	370	224

Special thanks to 2023 trial cooperator, Josh Krieg.

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

Table 8: Wokurna main season wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.21	2.48	4.15	6.86	4.15
Tomahawk CL Plus ^{db*}				109	120
LRPB Matador ^{db}				106	110
Calibre ^{db}		111	112	106	108
Vixen ^{db}	115	102	112	106	114
Brumby ^{db}			110	108	108
RockStar ^{db}	112	113	110	110	105
Ballista ^{db}	113	108	109	108	108
Scepter ^{db}	114	106	109	105	111
Denison ^{db}		112	109	107	104
Soaker ^{db}					111
Kingston ^{db}		104	109	109	108
Boree ^{db}		107	109	104	105
Sunblade CL Plus ^{db*}	105	106	102	109	106
Dozer ^{db} CL Plus*					104
Sunmaster ^{db}			98	112	108
Sowing date	17 May	7 May	26 May	13 May	19 May
Rainfall J–M (mm)	0	66	36	47	31
Rainfall A–O (mm)	181	250	234	283	255

Special thanks to 2023 trial cooperator, Daniel Harris.

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

WHEAT
BARLEY
OAT
CANOLA
CHICKPEA
FABA BEAN
FIELD PEA
LENTIL
LUPIN

Table 9: Maitland durum wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.23	5.35	4.45	5.70	3.33
Patron ^{db}			115	119	94
Bitalli ^{db}	110	103	106	105	101
Westcourt ^{db}	106	102	98	110	102
DBA Mataroi ^{db}			104	99	109
DBA-Artemis ^{db}	92	104	101	106	89
DBA-Aurora ^{db}	95	102	106	98	91
Hyperno ^{db}	90	102	100	102	90
DBA Spes	91	102	103	97	90
Saintly ^{db}	99	96	96	91	107
DBA Vittaroi ^{db}	95	98	102	89	99
Sowing date	10 May	11 May	14 May	19 May	12 May
Rainfall J–M (mm)	0	47	71	97	58
Rainfall A–O (mm)	190	344	219	417	278

Special thanks to 2023 trial cooperator, Klopp Farming.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 10: Mintaro durum wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.78	5.71	6.64	7.04	
Patron ^{db}			116	119	
DBA-Aurora ^{db}	96	108	110	108	
Bitalli ^{db}	102	106	105	106	
DBA Spes	96	105	107	106	
DBA-Artemis ^{db}	100	100	106	105	
DBA Mataroi ^{db}			101	102	
WID802	99	103	103	102	
DBA Vittaroi ^{db}	95	106	103	101	
Hyperno ^{db}	99	99	104	103	
Tjilkuri	97	99	103	101	
Sowing date	3 Jun	11 May	31 May	3 Jun	22 May
Rainfall J–M (mm)	20	82	34	71	40
Rainfall A–O (mm)	311	436	429	563	263

Special thanks to 2023 trial cooperator, David Mitchell.
Learn more via the [NVT Long Term Yield Reporter](#)

Compromised trial

Table 11: Paskeville durum wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.13		1.85		2.91
DBA Mataroi ^{db}		Compromised trial	113	Compromised trial	106
DBA Vittaroi ^{db}	102		112		104
Patron ^{db}			97		100
Bitalli ^{db}	110		105		102
Saintly ^{db}	98		109		104
DBA-Aurora ^{db}	103		102		99
DBA Spes	99		98		98
DBA Bindaroi ^{db}	91		101		99
Westcourt ^{db}	100		90		97
Caparoi ^{db}	86		95		96
Sowing date	18 May	7 May	13 May	14 Jun	16 May
Rainfall J–M (mm)	7	39	33	113	47
Rainfall A–O (mm)	184	268	229	285	201

Special thanks to 2023 trial cooperator, Sam Holman.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 12: Spalding durum wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.29	4.95	3.01	8.36	3.75
Patron ^{db}			101	122	107
Bitalli ^{db}	104	104	101	108	103
DBA-Aurora ^{db}	100	109	108	102	100
DBA Mataroi ^{db}			100	106	103
DBA-Artemis ^{db}	99	103	101	101	99
Westcourt ^{db}	102	95	93	104	101
Hyperno ^{db}	98	102	102	98	98
Saintly ^{db}	98	97	100	94	99
DBA Bindaroi ^{db}	95	99	102	90	96
Caparoi ^{db}	93	99	103	87	95
Sowing date	14 May	8 May	31 May	2 Jun	11 May
Rainfall J–M (mm)	17	67	31	52	38
Rainfall A–O (mm)	229	425	318	396	239

Special thanks to 2023 trial cooperator, Ben Sommerville.
Learn more via the [NVT Long Term Yield Reporter](#)

WHEAT

BARLEY

OAT

CANOLA

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FABA BEAN

FIELD PEA

LENTIL

LUPIN

Table 13: Turretfield durum wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.26	4.57	5.49	6.83	4.43
Patron ^{db}			105	125	100
Bitalli ^{db}	113	103	101	107	101
Westcourt ^{db}	103	99	102	106	103
DBA-Artemis ^{db}	89	103	103	108	97
DBA Mataroi ^{db}			99	100	102
DBA-Aurora ^{db}	96	104	101	104	96
Hyperno ^{db}	86	102	102	104	97
Saintly ^{db}	101	97	97	89	101
DBA Bindaroi ^{db}	85	98	98	90	98
Caparoi ^{db}	77	98	99	90	97
Sowing date	22 May	15 May	26 May	23 May	23 May
Rainfall J–M (mm)	11	32	43	82	9
Rainfall A–O (mm)	209	285	298	370	224

Special thanks to 2023 trial cooperator, Josh Krieg.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 14: Wokurna durum wheat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.90	2.13	2.87	6.15	2.94
Patron ^{db}			108	109	107
Bitalli ^{db}	104	105	104	103	104
DBA Mataroi ^{db}			103	100	106
DBA-Aurora ^{db}	102	108	101	100	106
DBA Spes	100	106	100	99	103
DBA Vittaroi ^{db}	104	102	100	96	107
Westcourt ^{db}	97	98	101	104	94
DBA-Artemis ^{db}	95	105	99	102	97
Hyperno ^{db}	95	103	98	101	97
Saintly ^{db}	102	94	98	96	101
Sowing date	17 May	7 May	26 May	13 May	19 May
Rainfall J–M (mm)	0	66	36	47	31
Rainfall A–O (mm)	181	250	234	283	255

Special thanks to 2023 trial cooperator, Daniel Harris.
Learn more via the [NVT Long Term Yield Reporter](#)

Wheat variety quality – Central South 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 high protein percentage, high test weight or low grain screenings under a wider range of environments.

The following figures show the grain quality trends as histograms from 2022 and 2023 NVT averaged for trials in the Central South Australia region. Only the varieties evaluated at every site are included. These are plotted in order of performance, up to a maximum of 20.

Protein and yield comparisons

Figure 1: Protein (%) and yield (t/ha) comparisons for main season wheat varieties from seven NVT sites in Central SA in 2022.

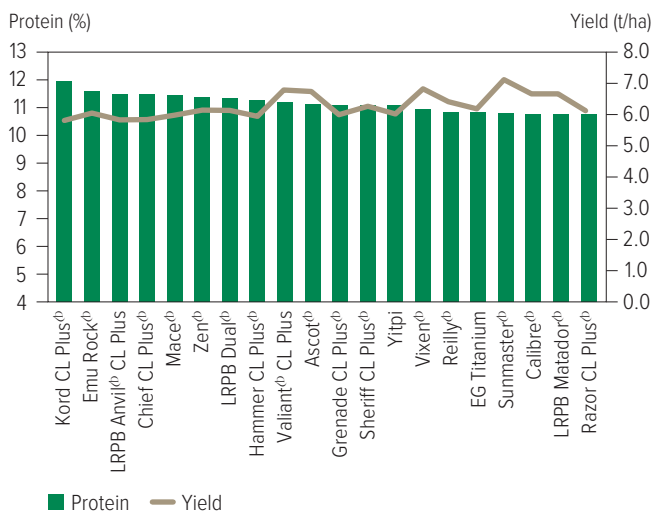


Figure 2: Protein (%) and yield (t/ha) comparisons for main season wheat varieties from seven NVT sites in Central SA in 2023.

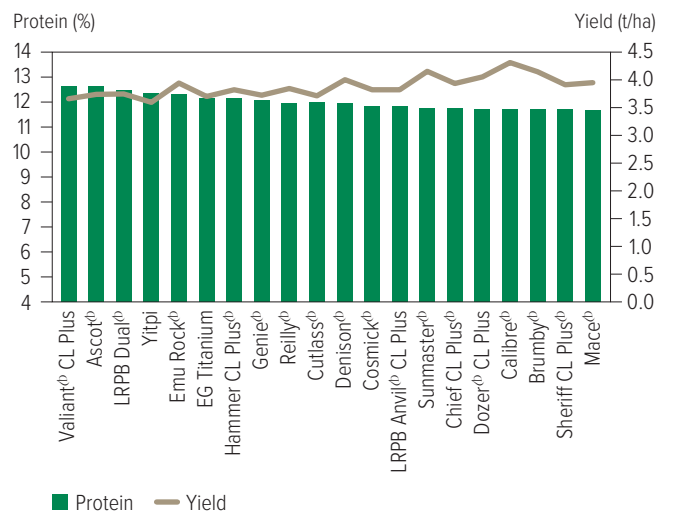


Figure 3: Protein (%) and yield (t/ha) comparisons for durum wheat varieties from five NVT sites in Central SA in 2022.

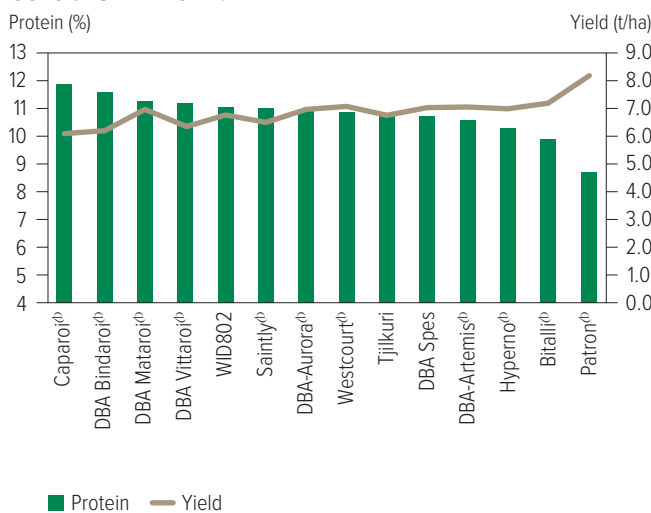
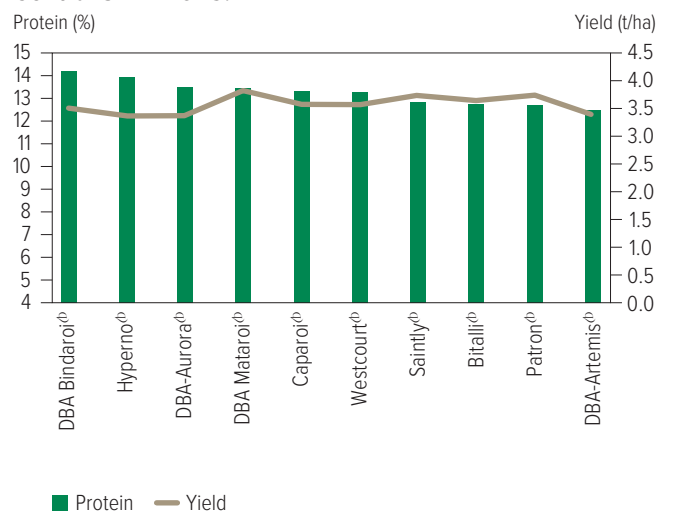


Figure 4: Protein (%) and yield (t/ha) comparisons for durum wheat varieties from four NVT sites in Central SA in 2023.



WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FABA BEAN

FIELD PEA

LENTIL

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Test weight comparisons

Figure 5: Test weight (kg/hL) comparisons for main season wheat varieties from seven NVT sites in Central SA in 2022.

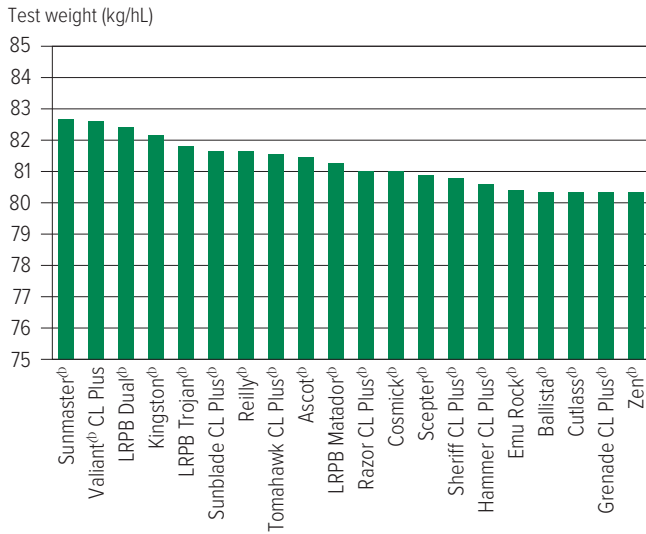


Figure 6: Test weight (kg/hL) comparisons for main season wheat varieties from seven NVT sites in Central SA in 2023.

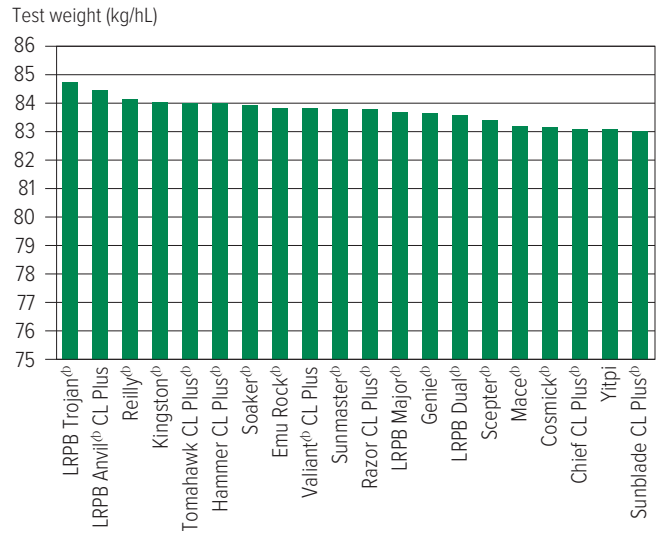
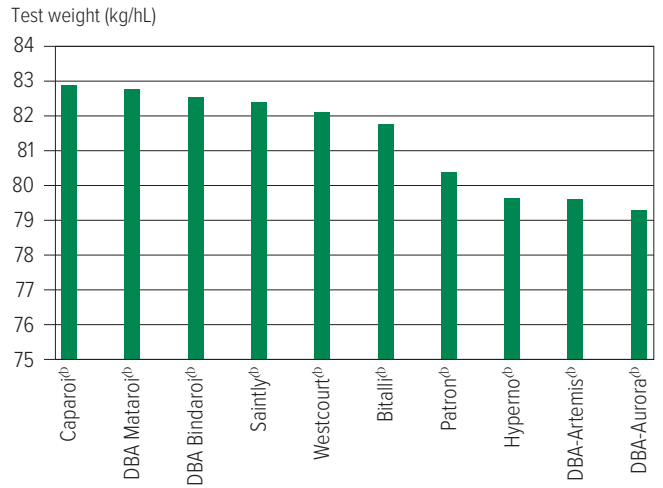


Figure 7: Test weight (kg/hL) comparisons for durum wheat varieties from five NVT sites in Central SA in 2022.



Figure 8: Test weight (kg/hL) comparisons for durum wheat varieties from four NVT sites in Central SA in 2023.



WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FABA BEAN

FIELD PEA

LENTIL

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Screenings comparisons

Figure 9: Screenings (<2.0mm) comparisons for main season wheat varieties from seven NVT sites in Central SA in 2022.

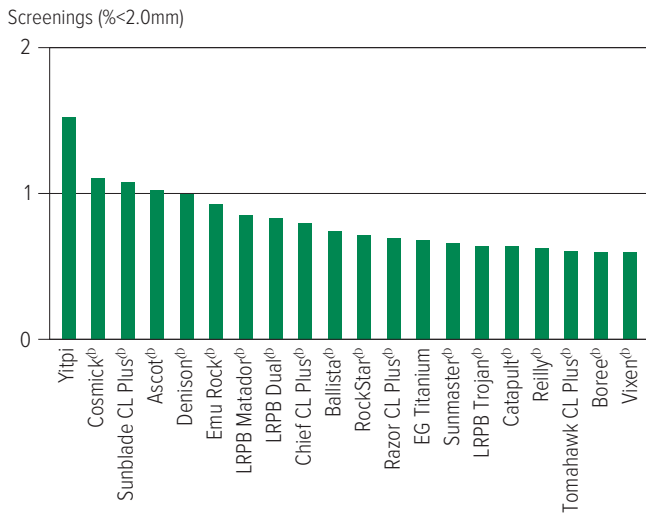


Figure 10: Screenings (<2.0mm) comparisons for main season wheat varieties from seven NVT sites in Central SA in 2023.

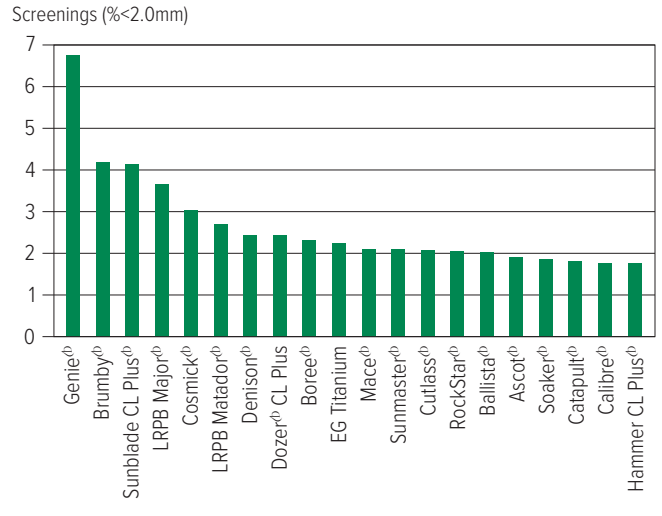


Figure 11: Screenings (<2.0mm) comparisons for durum wheat varieties from five NVT sites in Central SA in 2022.

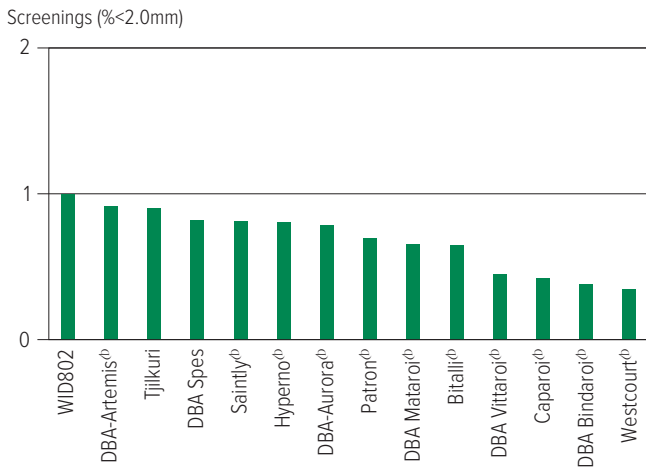
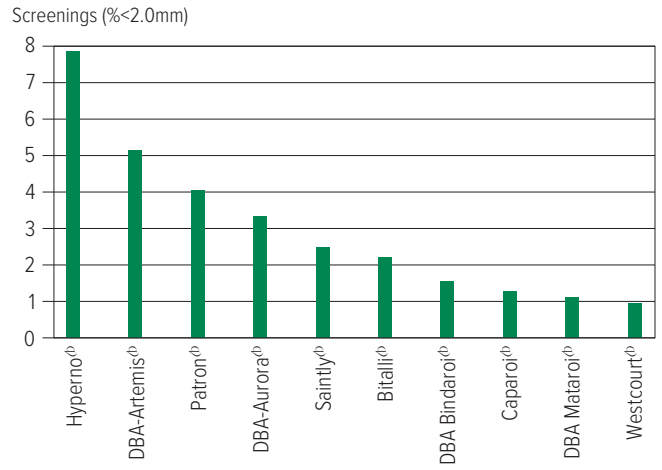


Figure 12: Screenings (<2.0mm) comparisons for durum wheat varieties from four NVT sites in Central SA in 2023.



WHEAT

BARLEY

OAT

CANOLA

CHICKPEA

FABA BEAN

FIELD PEA

LENTIL

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Wheat variety disease ratings – South Australia

The following tables contain varietal ratings for the predominant diseases of wheat in South Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

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

Table 15: Wheat disease guide for South Australia.

Variety	Stem rust	Stripe rust (east coast resistance)	Leaf rust	Septoria tritici blotch	Yellow leaf spot	Powdery mildew	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)	CCN	Eyespot	Crown rot	Black point
Anapurna	MSS	RMR	MS	MRMS	MRMS	RMR	MS	S (P)	MRMS		SVS	MSS
Ascot ^{db}	MRMS	MSS	RMR	S	MRMS	S	S	S	MR	S	S	S
Ballista ^{db}	MR	MSS	S	SVS	MS	SVS	S	MRMS	MRMS	S	S	MS
Beckom ^{db}	MRMS	MRMS	MSS	S	MSS	MSS	S	MSS	R		S	MRMS
BigRed ^{db}	S	RMR	MRMS	MR	MR	RMR	MS	MS	S		MSS	MR
Boree ^{db}	MR	SVS	S	SVS	MRMS	SVS	S	MSS	MSS		S	S
Borlaug 100 ^{db}	MR	SVS	MR	MSS	MRMS	S	S	MS	MS	MSS (P)	MSS	MSS
Brumby ^{db}	MR	MS	SVS	S	MRMS	MR/S	MRMS	MS (P)	MRMS	S	S	MSS
Calibre ^{db}	MR	S	S	S	MRMS	MSS	S	MSS	MRMS	S	S	MSS
Catapult ^{db}	MR	S	S	MSS	MRMS	S	S	MS	R	S	MSS	S
Chief CL Plus ^{db}	MR	SVS	MR	S	MRMS	SVS	MRMS	MSS	MS	MSS	MSS	MS
Coolah ^{db}	MR	MSS	RMR	MSS	MSS	S	S	MS	S		MSS	S
Coota ^{db}	RMR	S	MR	S	MSS	S	MR	MS	MR	S	MSS	MS
Cosmick ^{db}	MS	MSS	SVS	SVS	MRMS	MSS	MSS	MSS	S		S	MRMS
Cutlass ^{db}	R	MSS	RMR	MSS	MSS	MSS	MSS	MSS	MR		S	MS
Denison ^{db}	MS	S	S	MSS	MRMS	S	S	S	MS	S	MSS	MS
Devil ^{db}	S	SVS	SVS	SVS	MRMS	S	MSS	S	MSS	S	MSS	MSS
Dozer ^{db} CL Plus	MS	S	MSS	S (P)	MS	S	MRMS	S	MS (P)	SVS (P)	S	MRMS (P)
DS Bennett ^{db}	MS	S	SVS	MSS	MRMS	R	S	S	S		VS	MSS
DS Pascal ^{db}	MSS	MRMS	MRMS#	MSS	MS	RMR	S	S	S		S	MS
EG Jet ^{db}	S	MRMS	S	MSS	MRMS	SVS	S	S	MRMS		S	MS
EG Titanium	MS	MR	MS	MSS	MSS	S	MSS	MSS	R	S	MSS	MSS
EGA Wedgetail ^{db}	MRMS	MS	MSS	MSS	MSS	MSS	S	VS	S		S	MS
Einstein	S	RMR	S	MSS	MR		MRMS	S	S		S (P)	R
Emu Rock ^{db}	MS	SVS	SVS	S	MS	MSS	MSS	S	S		MSS	MSS
Genie ^{db}	MS (P)	MRMS (P)	S (P)	S (P)	MRMS (P)	SVS (P)						
Hammer CL Plus ^{db}	MR	MS	S	MSS	MRMS	S	MSS	S	MRMS	S	MSS	MRMS
Hypeno ^{db}	RMR	MR	RMR	MSS	MRMS	MS	MS	RMR	MS		SVS	MS
IGW6755	MRMS	MSS	MS	MSS	MRMS	S	MSS	MR	MSS	MSS (P)	S	MR
Illabo ^{db}	MRMS	MRMS	S	MSS	MS	R	MSS	MSS	MRMS	S	S	MRMS
Jillaroo ^{db}	MS	MSS	S	S	MS	SVS	S	MS (P)	MS	S	S	MS
Kingston ^{db}	S	MSS	S	S	MSS	S	S	MRMS	R	S	S	MSS
Longford	RMR	RMR	RMR	MRMS/S	MRMS	RMR	S	S	MS	MSS (P)	MSS	MRMS
Longsword ^{db}	MR	MRMS/MS	MS	MS	MRMS	S	MRMS	MRMS	MRMS	S	MSS	MS

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Table 15: Wheat disease guide for South Australia (continued).

Variety	Stem rust	Stripe rust (east coast resistance)	Leaf rust	Septoria tritici blotch	Yellow leaf spot	Powdery mildew	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)	CCN	Eyespot	Crown rot	Black point
LRPB Anvil ^{db} CL Plus	MR	S	SVS	VS	MSS	SVS	MSS	S	MS	S	MSS	S
LRPB Avenger ^{db}	MS	S	S	S	MS	SVS	MSS	MRMS	MRMS	S	S	MRMS
LRPB Bale ^{db}	MRMS	MRMS	MSS	MSS	SVS	MS	S	S	R	S	S	MS
LRPB Beaufort ^{db}	SVS	RMR	MSS	S	MRMS	RMR	MS	MSS	MS		S	MRMS
LRPB Dual ^{db}	MRMS	MS	MSS	MSS	S	S	MSS	MSS	R	S	S	S
LRPB Havoc ^{db}	S	MSS	S	MSS	MRMS	S	S	MSS	S		MSS	MS
LRPB Impala ^{db}	MR	MRMS	SVS	SVS	MSS	R	SVS	S	MSS		MSS	MS
LRPB Kittyhawk ^{db}	MRMS (S)	MR	MR	MRMS	MRMS	MS	S	S	S	S	SVS	MRMS
LRPB Major ^{db}	MRMS	MRMS	MR#	MSS	MS	MS	MSS	MSS	MRMS (P)	S (P)	S	MRMS (P)
LRPB Matador ^{db}	MS	MS	MSS	S (P)	MRMS	MS	S	MRMS	MS (P)	S (P)	S	MRMS (P)
LRPB Nighthawk ^{db}	RMR	MR	MSS	MS	MS	SVS	MSS	MS	MS		MSS	MS
LRPB Oryx ^{db}	MR	MS	RMR#	SVS	MSS	MR	MSS	MSS	S	S	MSS	MS
LRPB Raider ^{db}	RMR	MR	RMR	S	MSS	S	MSS	MS	S		S	MSS
LRPB Scotch ^{db}	MSS	MRMS	MR#	S	MRMS	MR	MS	S	MS	S	S	MS
LRPB Scout ^{db}	MRMS	MS	MS	S	SVS	MRMS	S	MSS	R		S	S
LRPB Trojan ^{db}	MRMS	S	MR#	S	MSS	S	MSS	MSS	MS	MS	MS	MS
Mace ^{db}	MRMS	SVS	S	SVS	MRMS	MSS	MS	MS	MRMS	S	S	MRMS
Manning ^{db}	MR	RMR	MSS	MRMS/S	MRMS	MS	MSS	S	S	MS (P)	VS	S
Naparoo ^{db}	MRMS	MRMS	MS	S	MRMS	R	SVS	S			S	
Razor CL Plus ^{db}	MRMS	MRMS	S	SVS	MSS	MSS	S	MS	MR	S	S	MS
Reilly ^{db}	MRMS	MS	MSS	S	S	MSS	MS	MSS	R	S	S	MSS
RGT Accroc ^{db}	MS	RMR	SVS	MS	MRMS	MSS	MS	MSS	S	MSS (P)	SVS	MRMS
RGT Calabro	MS	RMR	MSS	MRMS	MR	RMR	S	MS	S		SVS	MS
RGT Cesario ^{db}	RMR	RMR	RMR	MRMS	MR	RMR	MRMS	MSS	MSS (P)		VS	
RGT Waugh ^{db}	MS	RMR	S	MRMS#	MRMS	R	MSS	MSS	MS		S	MRMS
RGT Zanzibar	VS	MR	SVS	MSS	MS	RMR	S	MS (P)	MSS		S	MRMS
RockStar ^{db}	MRMS	S	S	S	MRMS	SVS	MRMS	MS	MSS	S	S	MSS
Saintly ^{db}	MS	MRMS	RMR	MRMS/S	MRMS	S	MS	RMR	MS		VS (P)	MS
Scepter ^{db}	MRMS	MSS	MSS	S	MRMS	SVS	S	MSS	MRMS	S	MSS	MS
Severn ^{db}	MS	RMR	MRMS	MSS	MRMS	RMR	S	MRMS	MSS (P)		S	MR
Sheriff CL Plus ^{db}	MS	SVS	SVS	S	MRMS	SVS	MRMS	MRMS	MS	S	S	MS
Soaker ^{db}	MR (P)	MS (P)	S (P)	S (P)	MS (P)	S (P)						
SQP Revenue ^{db}	RMR	MR	VS	MSS	MRMS	R	S	S	S	S	S	MS
Sting ^{db}	MRMS	S	SVS	SVS	MRMS	SVS	MS	MS	MS		MSS	S
Stockade ^{db}	MS	MR	MR	MS	MRMS	SVS	S	MSS	MRMS		S	MRMS
Sunblade CL Plus ^{db}	MS	MRMS	MSS	S	MSS	S	MSS	MRMS	MSS		S	MRMS
Sunflex ^{db}	MR	MRMS	RMR#	SVS	MS	S	S	MSS	MS		MSS	MSS
Sunmaster ^{db}	MS	MRMS	RMR	S	MSS	MSS	MRMS	MS	MSS		MSS	MR
Sunprime ^{db}	MS	MS	MR#	S	MSS	MSS	S	S	MS		MSS	MSS
Tomahawk CL Plus ^{db}	MR	MSS	S	S (P)	MRMS	SVS	S	MS	MRMS (P)	S (P)	S	S (P)
Valiant ^{db} CL Plus	MR	S	S	MSS	MRMS	VS	S	S (P)	MSS (P)	MSS	MSS	MS (P)
Vixen ^{db}	MRMS	SVS	SVS	S	MRMS	SVS	MRMS	MS	MSS	S	S	MSS
Willaura ^{db}	MR	S	MRMS	S	MS	SVS	MSS	MRMS	MS		S	MRMS
Yitpi	S	MS	S	S	SVS	MS	MSS	S	MR		S	MS
Zen ^{db}	S	S	S	S	MRMS	MS	MRMS	S	S		S	MRMS

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Table 15: Wheat disease guide for South Australia (continued).

Variety	Stem rust	Stripe rust (east coast resistance)	Leaf rust	Septoria tritici blotch	Yellow leaf spot	Powdery mildew	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)	CCN	Eyespot	Crown rot	Black point
DURUM												
Caparoi ^{db}	MR	MS	RMR	MRMS/S	MR	S	MS	MR	MRMS (P)		VS	MSS
DBA Bindaroi ^{db}	MR	MS	MR	MS	MS	MSS	MRMS	MR	MS		SVS	MRMS
DBA Lillaroi ^{db}	RMR	MS	RMR	S	MRMS	MS	MRMS	RMR	S		SVS	MS
DBA Mataroi ^{db}	MRMS	MS	MR	MSS	MRMS	S	MS	RMR	MRMS		SVS	MS
DBA Spes	R	MS	RMR	S	MRMS	S	MRMS	RMR	MS		VS	MS
DBA Vittaroi ^{db}	MR	MS	RMR	MSS	MRMS	MS	MS	MR	S		SVS	MSS
DBA-Artemis ^{db}	MR	MRMS	RMR	MRMS/S	MRMS	SVS	MS	MR	MS		SVS	MS
DBA-Aurora ^{db}	RMR	MRMS	RMR	MRMS/S	MRMS	MSS	MRMS	RMR	MSS		SVS	MS
Jandaroi ^{db}	MRMS	MRMS	MR	MSS	MRMS	S	MS	MRMS	MS		VS	MS
Patron ^{db}	RMR	MRMS	MR#	MRMS	MRMS	MSS	MRMS	MR	S		SVS	MSS
Westcourt ^{db}	RMR	MR	RMR	S	MRMS	S	MS	MR	MSS		VS	MSS

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

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

(P) = provisional rating, / indicates pathotype differences, # warning, may be more susceptible to alternate pathotypes, () show outlier.

- WHEAT
- BARLEY
- OAT
- CANOLA
- CHICKPEA
- FABA BEAN
- FIELD PEA
- LENTIL
- LUPIN

BARLEY

New barley varieties

The following information is for barley varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	Grain classification	End point royalty* (\$)	Comments supplied by breeding company ¹
Neo ^{db} CL	InterGrain	Under malt evaluation	4.25	Neo ^{db} CL is a mid-maturing, imidazolinone-tolerant spring barley, ideally suited to medium-high rainfall environments. Neo ^{db} CL provides an outstanding disease resistance profile with excellent resistance to cereal cyst nematode, powdery mildew and the spot form of net blotch, and useful resistance to the net form of net blotch and leaf scald. Neo ^{db} CL has a semi-prostrate early growth habit, medium plant height, good tolerance to lodging, good grain retention and tolerance to head loss, and very good levels of grain plumpness. Neo ^{db} CL has been accepted into Grains Australia's malting accreditation program with earliest potential final accreditation in March 2025.
Spinnaker ^{db}	Secobra Recherches		TBC	Released under code name SCA21-Y003.

* EPR amount is ex-GST, ^{db} denotes Plant Breeder's Rights apply. ¹ All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

WHEAT

BARLEY

OAT

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

Barley variety yield performance – Central South Australia

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

Table 1: Brentwood main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	4.37	3.19	5.26	5.88	3.96
Neo ^{db} CL*					110
Combat ^{db}			119	112	104
Cyclops ^{db}		118	114	109	105
Minotaur ^{db}		117	108	109	105
Rosalind ^{db}	104	104	104	108	110
Yeti ^{db}	95	114	104	106	110
Leabrook ^{db}	104	105	109	103	105
Spinnaker ^{db}			104	107	103
Beast ^{db}	101	104	107	103	108
Titan AX ^{db*}				101	99
Laperouse ^{db}	92	117	106	104	104
Maximus ^{db} CL*	92	109	102	104	109
RGT Planet ^{db}	109	98	99	105	101
Fandaga ^{db}			101	103	96
Fathom ^{db}	102	96	105	100	104
Sowing date	7 May	12 May	25 May	9 Jun	9 May
Rainfall J–M (mm)	5	51	51	92	35
Rainfall A–O (mm)	243	285	291	286	234

Special thanks to 2023 trial cooperator, Litster Trading.
 * herbicide-tolerant variety. Learn more via the [NVT Long Term Yield Reporter](#)

Table 2: Bute main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	4.41	3.27	4.12	4.19	3.84
Neo ^{db} CL*					109
Cyclops ^{db}		108	108	112	108
Yeti ^{db}	101	108	105	117	107
Combat ^{db}			107	108	109
Minotaur ^{db}		110	103	115	106
Laperouse ^{db}	101	106	107	111	105
Rosalind ^{db}	105	108	98	113	105
Maximus ^{db} CL*	103	106	102	112	105
Beast ^{db}	101	101	108	107	106
Leabrook ^{db}	100	100	109	105	106
Spinnaker ^{db}			96	107	102
Titan AX ^{db*}				99	105
Spartacus CL ^{db*}	103	101	100	103	103
Compass ^{db}	98	96	109	100	104
Fathom ^{db}	102	98	104	98	103
Sowing date	17 May	15 May	27 May	1 Jun	18 May
Rainfall J–M (mm)	6	63	36	70	43
Rainfall A–O (mm)	213	250	234	336	225

Special thanks to 2023 trial cooperator, James Venning.
 * herbicide-tolerant variety. Learn more via the [NVT Long Term Yield Reporter](#)

Table 3: Crystal Brook main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.94	4.42	4.44	6.67	5.21
Neo ^{db} CL*					111
Combat ^{db}			111	105	114
Rosalind ^{db}	114	106	103	109	105
Cyclops ^{db}		111	112	102	107
Minotaur ^{db}		112	108	107	105
Spinnaker ^{db}			99	112	106
Yeti ^{db}	111	106	108	102	102
Leabrook ^{db}	116	101	108	97	109
RGT Planet ^{db}	99	106	96	113	103
Beast ^{db}	120	100	107	97	107
Zena ^{db} CL*			95	111	101
Laperouse ^{db}	100	107	110	98	101
Maximus ^{db} CL*	110	103	106	100	99
Titan AX ^{db*}				92	108
Fandaga ^{db}			98	108	102
Sowing date	15 May	8 May	1 Jun	8 Jun	12 May
Rainfall J–M (mm)	16	89	27	47	24
Rainfall A–O (mm)	172	335	221	302	237

Special thanks to 2023 trial cooperator, Andrew Greig.
 * herbicide-tolerant variety. Learn more via the [NVT Long Term Yield Reporter](#)

Table 4: Maitland main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		5.75	6.25	6.21	5.38
Neo ^{db} CL*					118
Combat ^{db}			115	111	112
Spinnaker ^{db}			108	116	109
RGT Planet ^{db}		117	106	117	106
Fandaga ^{db}			106	117	99
Zena ^{db} CL*			104	114	105
Minotaur ^{db}		110	108	108	110
Rosalind ^{db}		104	105	105	114
Cyclops ^{db}		103	110	101	111
Bottler ^{db}		108	98	108	97
Yeti ^{db}		94	100	95	108
Laperouse ^{db}		96	102	94	104
Alestar ^{db}		103	95	101	93
Leabrook ^{db}		92	101	98	101
Maximus ^{db} CL*		91	100	89	110
Sowing date	21 May	11 May	14 May	19 May	12 May
Rainfall J–M (mm)	9	47	71	97	58
Rainfall A–O (mm)	290	344	219	417	278

Special thanks to 2023 trial cooperator, Klopp Farming.
 * herbicide-tolerant variety. Learn more via the [NVT Long Term Yield Reporter](#)

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 BARLEY
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 CANOLA
 CHICKPEA
 FABIA BEAN
 FIELD PEA
 LENTIL
 LUPIN

Table 5: Port Clinton main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.67	3.39	3.67	6.23	3.38
Combat ^{db}			121	110	123
Neo ^{db} CL*					114
Leabrook ^{db}	119	108	121	102	116
Titan AX ^{db*}				99	113
Beast ^{db}	122	105	118	98	113
Compass ^{db}	120	104	119	98	112
Cyclops ^{db}		113	116	101	110
Spinnaker ^{db}			98	112	110
Commodus ^{db} CL*		103	116	96	109
Rosalind ^{db}	113	102	101	105	109
Minotaur ^{db}		110	107	104	105
Fathom ^{db}	115	101	109	99	109
Yeti ^{db}	112	105	109	97	103
RGT Planet ^{db}	97	100	91	112	105
Fandaga ^{db}			97	110	102
Sowing date	10 May	15 May	25 May	2 Jun	8 May
Rainfall J–M (mm)	1	9	42	115	53
Rainfall A–O (mm)	174	273	217	291	170

Special thanks to 2023 trial cooperator, Bronte Westbrook.

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

Table 6: Salter Springs main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	4.67	5.27		6.38	6.12
Neo ^{db} CL*			Compromised trial		113
Combat ^{db}				110	111
Spinnaker ^{db}				122	109
RGT Planet ^{db}	100	109		125	108
Zena ^{db} CL*				122	106
Fandaga ^{db}				120	108
Rosalind ^{db}	113	104		107	102
Minotaur ^{db}		106		105	103
Cyclops ^{db}		106		95	102
Leabrook ^{db}	109	99		95	102
Fathom ^{db}	108	99		93	100
Buff ^{db}	103	101		94	101
Titan AX ^{db*}				90	102
La Trobe ^{db}	110	99		90	98
Beast ^{db}	112	96		89	99
Sowing date	22 May	16 May	21 May	14 Jun	6 Jun
Rainfall J–M (mm)	17	44	42	75	51
Rainfall A–O (mm)	271	370	346	446	275

Special thanks to 2023 trial cooperator, Andrew Chapman.

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

Table 7: Spalding main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		5.65	4.61	9.05	5.83
Neo ^{db} CL*	No trial				112
Combat ^{db}			117	108	112
Spinnaker ^{db}			106	111	103
RGT Planet ^{db}		116	102	112	100
Fandaga ^{db}			101	112	98
Minotaur ^{db}		105	110	107	107
Zena ^{db} CL*			100	109	99
Cyclops ^{db}		100	114	101	110
Rosalind ^{db}		101	107	104	108
Leabrook ^{db}		94	106	105	108
Titan AX ^{db*}				101	106
Yeti ^{db}		90	106	100	108
Beast ^{db}		88	106	99	108
Laperouse ^{db}		92	107	97	106
Compass ^{db}		88	101	100	105
Sowing date		16 May	31 May	2 Jun	11 May
Rainfall J–M (mm)		67	31	52	38
Rainfall A–O (mm)		425	318	396	239

Special thanks to 2023 trial cooperator, Ben Sommerville.

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

Table 8: Turretfield main season barley.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.59	5.45	6.81	7.47	3.27
Neo ^{db} CL*					108
Combat ^{db}			108	111	113
Spinnaker ^{db}			107	110	101
Cyclops ^{db}		108	105	104	107
Minotaur ^{db}		109	108	106	103
RGT Planet ^{db}	96	109	106	110	98
Leabrook ^{db}	118	100	103	101	115
Fandaga ^{db}			107	111	100
Rosalind ^{db}	112	106	103	102	102
Titan AX ^{db*}				101	115
Zena ^{db} CL*			104	107	96
Beast ^{db}	121	98	100	97	112
Yeti ^{db}	111	101	103	97	104
Compass ^{db}	118	95	99	96	114
Laperouse ^{db}	104	101	102	98	103
Sowing date	22 May	15 May	26 May	23 May	20 Jun
Rainfall J–M (mm)	11	32	43	82	9
Rainfall A–O (mm)	209	285	298	370	224

Special thanks to 2023 trial cooperator, Josh Krieg.

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

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Barley variety quality – Central South 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 high protein percentage, high test weight or low grain screenings under a wider range of environments.

The following figures show the grain quality trends as histograms from 2022 and 2023 NVT averaged for trials in the Central South Australia region. Only the varieties evaluated at every site are included. These are plotted in order of performance, up to a maximum of 20.

Protein and yield comparisons

Figure 1: Protein (%) and yield (t/ha) comparisons for main season barley varieties from six NVT sites in Central SA in 2022.

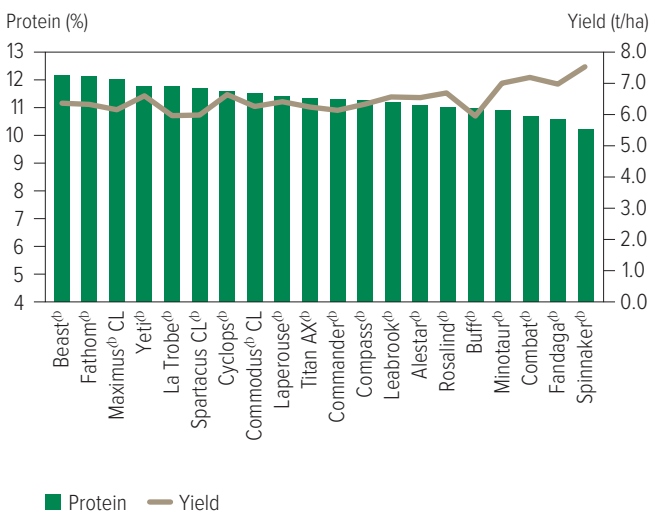
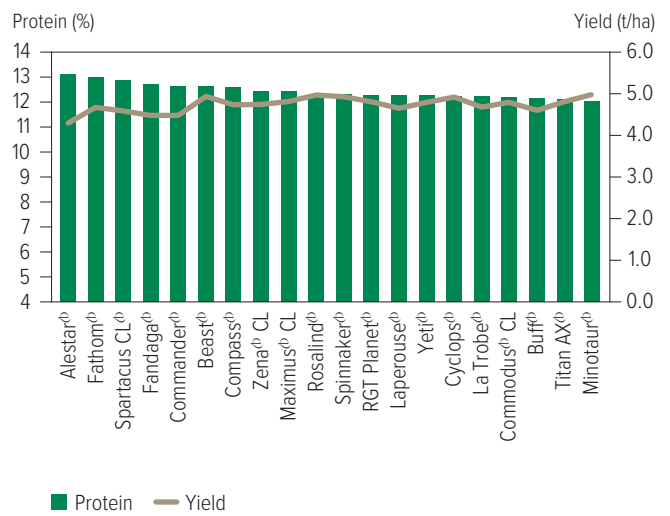


Figure 2: Protein (%) and yield (t/ha) comparisons for main season barley varieties from seven NVT sites in Central SA in 2023.



Test weight comparisons

Figure 3: Test weight (kg/hL) comparisons for main season barley varieties from six NVT sites in Central SA in 2022.

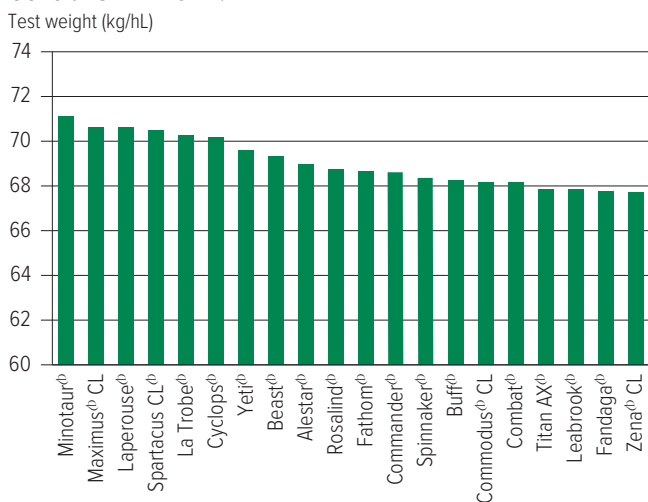
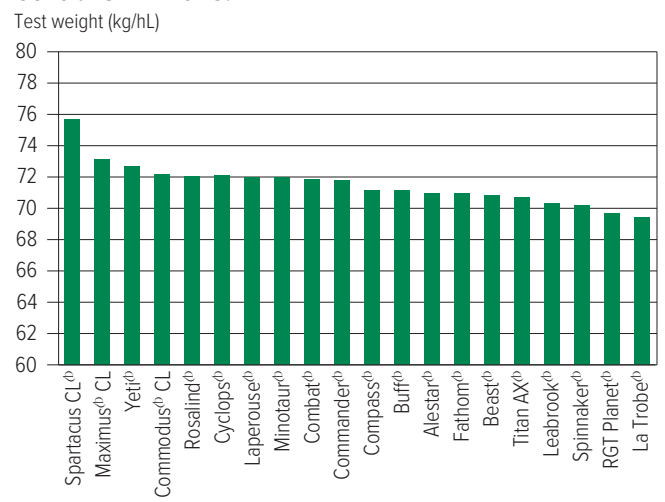


Figure 4: Test weight (kg/hL) comparisons for main season barley varieties from seven NVT sites in Central SA in 2023.



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Screenings comparisons

Figure 5: Screenings (<2.2mm) comparisons for main season barley varieties from six NVT sites in Central SA in 2022.

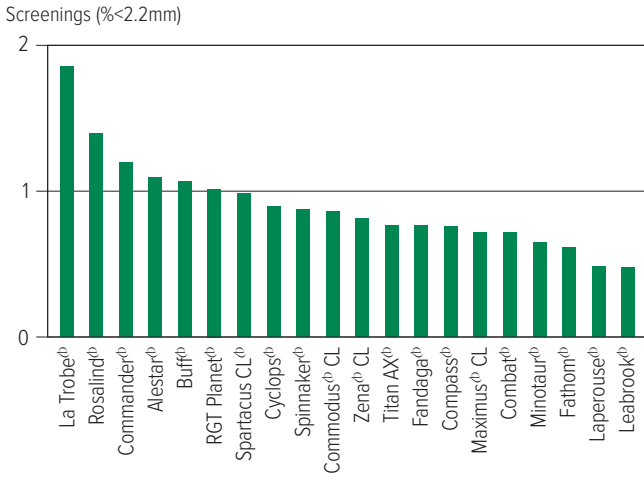
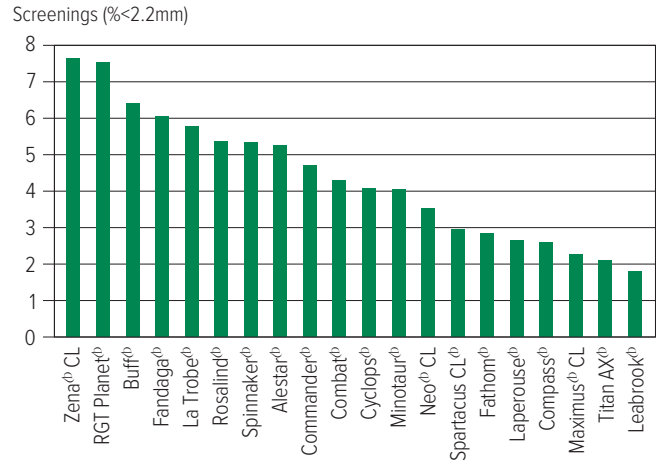


Figure 6: Screenings (<2.2mm) comparisons for main season barley varieties from seven NVT sites in Central SA in 2023.



Retention comparisons

Figure 7: Retention (>2.5mm) comparisons for main season barley varieties from six NVT sites in Central SA in 2022.

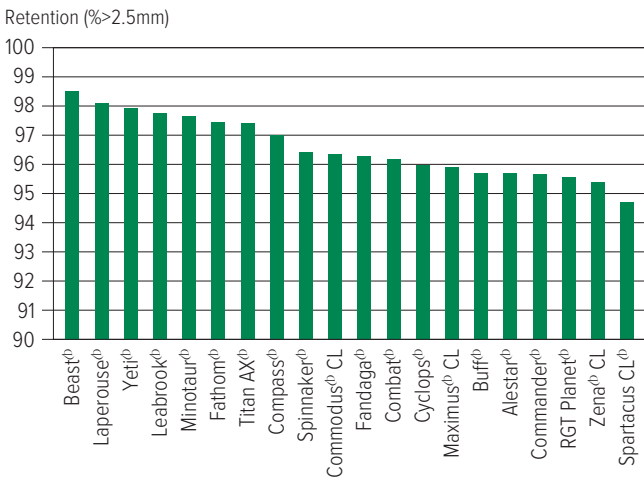
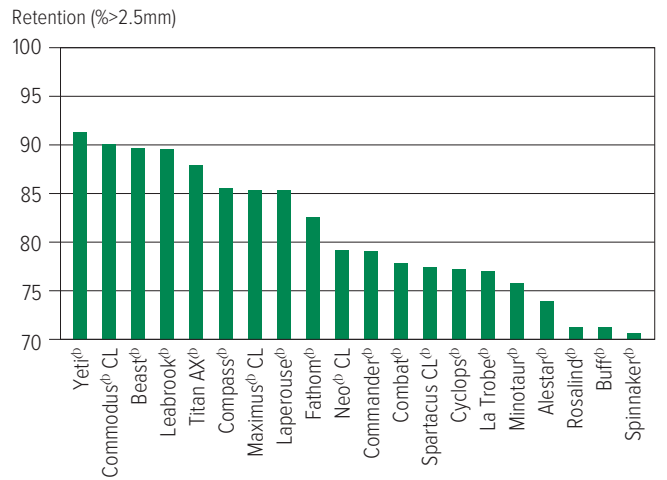


Figure 8: Retention (>2.5mm) comparisons for main season barley varieties from seven NVT sites in Central SA in 2023.



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Barley variety disease ratings – South Australia

The following tables contain varietal ratings for the predominant diseases of barley in South Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

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

Table 9: Barley disease guide for South Australia.

Variety	Leaf rust	Net form net blotch	Spot form net blotch	Leaf scald	Ramularia	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)	CCN	Crown rot	Black point	Powdery mildew
Alestar ^{db}	MSS	MRMS-S	S	SVS	SVS	MR	MR	R [^] (P)	S	MRMS	MR
Banks ^{db}	MRMS	MR	S	MS-SVS	VS	MS	MR	S	MSS	MS	MS
Bass ^{db}	S	MS-SVS	MSS	MSS	VS	MS	MRMS	S	MSS	MRMS	S
Beast ^{db}	MS	MRMS-S	MS	SVS	SVS	MRMS	MRMS	MR	S	MSS	S
Bottler ^{db}	MSS	R-MS	MSS	SVS	SVS	MS	RMR		SVS	MRMS	RMR
Buff ^{db}	SVS	MR-MS	MSS	MS-VS	SVS	MRMS	MS		S	MS	S
Combat ^{db}	SVS	MRMS-S	RMR	MS-S	SVS	MRMS	MS	MR	S	MSS	MS
Commander ^{db}	MSS	S-VS	MSS	SVS	SVS	MRMS	MRMS	R	S	MSS	MSS
Commodus ^{db} CL	S	MRMS-MSS	MSS	MSS-SVS	SVS	MRMS	MRMS	R	S	MS	MSS
Compass ^{db}	S	MRMS-S	MS	MSS-SVS	SVS	MRMS	MR	R	MSS	MSS	S
Cyclops ^{db}	S	MR-MS	MSS	S	SVS	MRMS	MRMS	S	MSS	MSS	SVS
Fairview ^{db}	S	SVS	S	SVS	SVS	MR	MR		MSS	MS	R
Fandaga ^{db}	MSS	MRMS#	S	SVS	VS	MR	MR	R	MSS	MRMS	R
Fathom ^{db}	MSS	MSS-SVS	RMR	R-S	SVS	MRMS	MR	R	SVS	MSS	MRMS
Flinders ^{db}	S	MSS	S	MSS-SVS	SVS	MRMS	MR	S	MSS	MRMS	RMR
Keel	S	MS-SVS	MR	MS-SVS	SVS	MS	MRMS	R	S	MSS	S
Kiwi	MSS	MRMS	MSS	SVS	VS	MRMS	RMR	S	MSS	MS	RMR
La Trobe ^{db}	S	MS-S	S	R-SVS	SVS	MRMS	MRMS	R	S	MSS	MSS
Laperouse ^{db}	S	MRMS	MRMS	SVS	VS	MRMS	MR	S	S	MSS	MSS
Leabrook ^{db}	S	MR-MSS	MS	MRMS-SVS	VS	MRMS	RMR	RMR	S	MS	S
Litmus ^{db}	S	S-VS	S	VS	VS	MS	MRMS	MS	S	MS	MS
Maximus ^{db} CL	S	MR-MS	MS	R-SVS	VS	MRMS	MRMS	R	S	MSS	S
Minotaur ^{db}	SVS	MR-MS	S	VS	SVS	MRMS	MRMS	R	MSS	MRMS	S
Neo ^{db} CL	MSS (P)	MS (P)	MR (P)	S (P)	SVS (P)	RMR (P)	MR (P)	R		MRMS (P)	RMR (P)
RGT Planet ^{db}	S	MRMS-SVS	SVS	R-SVS	SVS	MRMS	MR	R (P)	MSS	MRMS	RMR
Rosalind ^{db}	MSS	MRMS	S	MR-S	VS	MRMS	MRMS	R	S	MS	MSS
SakuraStar	MSS	S	MS	MS-SVS	SVS	MR	MR	R	S	MS	MSS
Scope CL ^{db}	S	R-MR	MSS	MRMS-SVS	SVS	MRMS	MRMS	S	S	MS	MRMS
Spartacus CL ^{db}	MSS	MS-VS	S	R-SVS	VS	MRMS	MRMS	R	S	MSS	MSS
Spinnaker ^{db}	S	SVS	SVS	S	VS	MR	MS	S	S	MRMS	RMR
Titan AX ^{db}	SVS	MRMS-S	MS	VS	VS	MR	MR	MR (P)	S	MSS	MSS
Topstart	S	MRMS-SVS	S	S	SVS	RMR	RMR	S	MSS	MRMS	RMR
Urambie	S	R-MR	S	R-S	VS	MRMS	MR		MSS	MRMS	MS
Westminster ^{db}	MS	MRMS	S	R-S	SVS	MRMS	MS		MSS	MRMS	RMR
Yeti ^{db}	SVS	MR-MS	MS	VS	VS	MR	MR	RMR	S	MSS	S
Zena ^{db} CL	S	MR-S	S	R-S	VS	MRMS	MR	R	S	MRMS (P)	RMR

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

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

MI = moderately intolerant, I = intolerant, VI = very intolerant, (P) = provisional rating, - hyphen indicates a range, # warning, may be more susceptible to alternate pathotypes,

[^] line contains a few susceptible off types.

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New oat varieties

The following information is for oat varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	End point royalty* (\$)	Comments supplied by breeding company ¹
Archer [®]	InterGrain	3.65	Archer [®] is a mid-maturing, single-gene imidazolinone-tolerant oat hay variety. Sentry [®] is registered for pre-planting incorporation by seeding (IBS) for hay, forage, seed and grain (domestic feed market only) production for Archer [®] . Excess grain, seed and screenings produced from single-gene imidazolinone oat hay varieties Kingbale [®] and Archer [®] can be used for the domestic oat grain feed markets and/or consumed on-farm. Grain of these varieties cannot be delivered into bulk handling systems.
Kingbale [®]	InterGrain	3.65	Kingbale [®] is a mid-slow maturing, single-gene imidazolinone-tolerant oat hay variety. Sentry [®] is registered for pre-planting incorporation by seeding (IBS) for hay, forage, seed and grain (domestic feed market only) production for Kingbale [®] . Excess grain, seed and screenings produced from Kingbale [®] and Archer [®] can be used for the domestic oat grain feed markets and/or consumed on-farm. Grain of these varieties cannot be delivered into bulk handling systems.
Kultarr [®]	InterGrain	3.00	Kultarr [®] is a quick-mid maturing oat hay suitable for low-medium production areas. Kultarr [®] has a tall plant height and a suitable hay quality profile for export hay.
Wallaby [®]	InterGrain	3.00	Wallaby [®] is a mid-maturing oat hay well suited to medium and high production areas. Wallaby [®] has excellent hay yields.

* EPR amount is ex-GST, [®] denotes Plant Breeder's Rights apply. ¹ All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

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

Oat variety yield performance – Central South Australia

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

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

Table 1: Crystal Brook oat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.06	3.39	3.34	6.28	3.78
13008-18			112	107	108
Koala [†]	78	113	112	122	100
Bannister [†]	100	114	109	111	103
Williams [†]	94	102	104	104	102
Bilby [†]	118	104	99	95	102
Archer ^{†*}					99
Yallara [†]	95	97	101	96	99
Kowari [†]	115	97	95	91	100
Mitika [†]	107	92	93	90	99
Durack [†]	108	87	91	84	98
Sowing date	15 May	8 May	1 Jun	8 Jun	12 May
Rainfall J–M (mm)	16	89	27	47	24
Rainfall A–O (mm)	172	335	221	302	237

Special thanks to 2023 trial cooperator, Andrew Greig.

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

Table 2: Paskeville oat.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.14	0.81	1.58		2.39
13008-18			136	Compromised trial	125
Bilby [†]	116	114	121		107
Williams [†]	103	99	108		118
Bannister [†]	105	111	100		114
Archer ^{†*}					128
Kowari [†]	110	106	116		97
Mitika [†]	102	96	108		91
Durack [†]	98	87	111		82
Koala [†]	86	101	68		109
Yallara [†]	89	81	104		89
Sowing date	18 May	7 May	12 May	14 Jun	17 May
Rainfall J–M (mm)	7	39	33	113	47
Rainfall A–O (mm)	184	268	229	285	201

Special thanks to 2023 trial cooperator, Sam Holman.

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

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Oat variety disease ratings – South Australia

The following tables contain varietal ratings for the predominant diseases of oat in South Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

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

Table 3: Oat disease guide for South Australia.

Variety	Stem rust (east)	Leaf rust (crown rust)	Barley yellow dwarf virus (BYDV)	CCN	Stem nematode resistance	Stem nematode tolerance	Septoria	Bacterial blight	Red leather leaf
Archer ^{db}	MSS	R/S (P)	MSS (P)		VS (P)	I (P)	MRMS (P)	MSS (P)	SVS (P)
Bannister ^{db}	S	MSS	MS	MR	MRMS	MT	MSS	S	MSS-SVS
Bilby ^{db}	S	MSS	S	S	S	MI	S	SVS	MS
Brusher ^{db}	SVS	MR	S	MR	S	MT	MSS	SVS	MS
Carrolup	S	S	SVS	VS	S	I	MSS	MSS	SVS
Durack ^{db}	S	S	S	MRMS	S	MT	S	S	SVS
Echidna	S	SVS	MSS	MS	MRMS	MT	SVS	S	MSS
Goldie ^{db}	SVS	SVS	MS	MR	S	I	MS	S	SVS
Kingbale ^{db}	MSS	S	MS	R	MR	MT	MSS	MSS (P)	S (P)
Koala ^{db}	MS	MSS	MSS	R	MS	MT	MSS	S	S
Kojonup ^{db}	S	S	MS	VS	MS	MT	MSS	SVS	S
Kowari ^{db}	S	SVS	S	S	S	I	S	S	S
Kultarr ^{db}	SVS (P)	MR (P)	MSS (P)		S (P)	MI (P)	MS (P)	MS (P)	S (P)
Mitika ^{db}	S	S	SVS	VS	S	MT	SVS	S	SVS
Mulgara ^{db}	S	MR	MSS	R	MR	MT	S/MS	MSS	SVS
Tungoo ^{db}	S	MR	MSS	MR	R	MT	MRMS#	S	MRMS
Wallaby ^{db}	SVS (P)	MR (P)	MS (P)		S (P)	MI (P)	MS (P)	MSS (P)	SVS (P)
Wandering	SVS	SVS	MSS	VS	S	MT	MSS	S	S
Williams ^{db}	S	MRMS	MSS	S	S	MI	MSS	MSS	MS
Wintaroo	S	S	MS	R	MR	MT	MS#	S	S
Yallara ^{db}	S	S	S	R	MS	MI	MSS	S	SVS

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

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

T = tolerant, MT = moderately tolerant, MI = moderately intolerant, I = intolerant, VI = very intolerant,

(P) = provisional rating, - hyphen indicates a range, / indicates pathotype differences, # warning, may be more susceptible to alternate pathotypes.

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New canola varieties

The following information is for canola varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	End point royalty* (\$)	Comments supplied by breeding company ¹
DG Drummond TF	Nutrien Ag Solutions Ltd	N/A	DG Drummond TF is a tall, mid-late maturing, glyphosate-tolerant hybrid with group H blackleg resistance. DG Drummond TF is suited to medium to high-rainfall areas.
Hyola® Continuum CL	Advanta Seeds	N/A	An early-mid maturity Clearfield® hybrid, Continuum CL provides wide environmental adaptability with excellent grain oil potential. It exhibits strong yields in target environments and demonstrates excellent adaptability to growing regions with a range of 1.5 to 5.5t/ha. Continuum CL showcases an exceptionally high level of early plant vigour, high lodging resistance, and an outstanding blackleg rating of 'R' due to its distinctive tri-group resistance, ADF.
Hyola® Defender CT	Advanta Seeds	N/A	A mid-season maturity CT hybrid, Defender CT delivers remarkable grain yield, robust plant vigour and a very high grain oil content. Defender CT performance is closely aligned with the renowned Hyola® Blazer TT variety. Defender CT offers uniform flowering, manageable height for direct harvesting and an exceptional blackleg rating of 'R-MR' due to its distinctive tri-group resistance, ADF.
InVigor® LR 4540P	BASF Australia Ltd	N/A	New LibertyLink® hybrid with tolerance to both Liberty® and TruFlex®. Combines two herbicide tolerances with the flexibility of PodGuard® for shatter tolerance. Early-mid maturing variety suited to low and medium-rainfall zones. Marketed by BASF.
Monola® H524TT	Nuseed	N/A	Monola® H524TT is an early-mid maturing TT hybrid with excellent early vigour. It is Nuseed's second Monola TT hybrid with improved yield and oil profile. It has demonstrated competitive yield and oil content to commercial canola TT hybrids during trials and exhibits strong early vigour and good early biomass. Suited to medium to slow canola growing regions, Monola® H524TT demonstrates strong blackleg resistance and good harvestability. Limited commercial release in 2024.
Nuseed® Ceres IMI	Nuseed	N/A	Nuseed® Ceres IMI is Nuseed®'s first release in this popular herbicide technology. It has demonstrated competitive yield and excellent oil during trials, and exhibits strong early vigour and good early biomass. Suited to quick canola growing regions, Nuseed® Ceres IMI comes with good blackleg resistance and harvestability.
PY323G	Pioneer Hi-Bred Aust	N/A	Pioneer® PY323G is an early maturing Optimum GLY® hybrid variety. Suited to early-mid and mid-season growing regions. Mid-fast phenology. Medium height. Blackleg resistance rating NA, resistance group NA. Tested in NVT trials 2023. Marketed by Pioneer Seeds.
PY421C	Pioneer Hi-Bred Aust	N/A	Pioneer® PY421C is an early to mid-maturing hybrid with exceptional yield for maturity and widely adapted. Blackleg rating of 'R-MR', resistance group A. Marketed by Pioneer Seeds.

Continued on next page

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

Variety	Breeding company	End point royalty* (\$)	Comments supplied by breeding company ¹
PY422G	Pioneer Hi-Bred Aust	N/A	Pioneer® PY422G is an early-mid maturing Optimum GLY® hybrid variety. Suited to early-mid and mid-season growing regions. Mid-fast phenology. Medium height. Blackleg resistance rating NA, resistance group NA. Tested in NVT trials 2023. Marketed by Pioneer Seeds.
PY424GC	Pioneer Hi-Bred Aust	N/A	Variety description not supplied.
PY525G	Pioneer Hi-Bred Aust	N/A	Pioneer® PY525G is a mid-maturing Optimum GLY® hybrid variety. Suited to mid-season growing regions. Mid-phenology. Medium-tall height. Blackleg resistance rating NA, resistance group NA. Tested in NVT trials 2023. Marketed by Pioneer Seeds.

* EPR amount is ex-GST, ^o denotes Plant Breeder's Rights apply. ¹ All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

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Canola variety yield performance – Central South Australia

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

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

Table 1: Arthurton med-high rainfall GLY.

Year	2019	2020	2021	2022	2023		
Mean yield (t/ha)			2.90	3.40	2.61		
InVigor® LR 4540P	No trial	No trial		105	104		
InVigor® R 4520P			109	109	103		
Nuseed® Hunter TF			110	105	104		
Pioneer® 44Y30 RR			108	105	103		
Pioneer® 45Y28 RR			103	107	102		
PY323G					103		
Pioneer® 44Y27 (RR)			107	98	102		
Nuseed® Raptor TF			104	100	102		
PY424GC					101		
Hyola® Regiment XC			102	100	102		
Sowing date					25 May	26 May	6 May
Rainfall J–M (mm)					96	130	58
Rainfall A–O (mm)			219	321	241		

Special thanks to 2023 trial cooperator, Chris Maloney.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 2: Riverton med-high rainfall GLY.

Year	2019	2020	2021	2022	2023		
Mean yield (t/ha)			3.24	3.89	3.10		
Hyola® Regiment XC	No trial	No trial	109	103	109		
Pioneer® 45Y28 RR			109	106	105		
Nuseed® Hunter TF				104	109		
Nuseed® Eagle TF				106	104		
Nuseed® Raptor TF			108	101	106		
InVigor® R 4520P			101	106	105		
Pioneer® 44Y30 RR			103	103	105		
InVigor® LR 4540P				102	108		
PY323G					105		
Pioneer® 44Y27 (RR)			104	99	105		
Sowing date					27 May	30 May	4 May
Rainfall J–M (mm)					44	46	42
Rainfall A–O (mm)			378	449	295		

Special thanks to 2023 trial cooperator, Daryl Behn.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 3: Arthurton med-high rainfall IMI.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.30	1.14	2.74	3.45	2.00
PY421C					108
Pioneer® 44Y94 CL	111	120	114	114	107
Pioneer® 45Y95 (CL)	113		111	115	106
Hyola® Solstice CL			111	102	107
Hyola® Continuum CL				107	104
Pioneer® 45Y93 CL	104	95	102	114	102
Nuseed® Ceres IMI			108	93	104
Pioneer® 43Y92 (CL)		109			102
PY520TC					95
VICTORY® V75-03CL	87	86			95
Sowing date	6 May	28 Apr	25 May	26 May	6 May
Rainfall J–M (mm)	4	63	96	130	58
Rainfall A–O (mm)	196	313	219	321	241

Special thanks to 2023 trial cooperator, Chris Maloney.
Yield performance of 'stacked' varieties with tolerances to multiple herbicide systems should not be compared to varieties in trials where the variety has not specifically been tested, even for the same location. The following varieties have not been included in this trial, but have been tested in other herbicide trials at this location: Hyola® Battalion XC, Hyola® Defender CT, Hyola® Enforcer CT, Hyola® Garrison XC and Hyola® Regiment XC.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 4: Riverton med-high rainfall IMI.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.73	2.83	3.16	3.62	2.49
PY421C				115	114
Pioneer® 45Y95 (CL)	108		114	113	113
Hyola® Solstice CL			113	105	120
Pioneer® 44Y94 CL	105	109	112	111	112
Pioneer® 45Y93 CL	102	108	106	112	100
Hyola® Continuum CL				106	106
Pioneer® 43Y92 (CL)		101	103	101	104
Nuseed® Ceres IMI			102	95	111
PY520TC					90
VICTORY® V75-03CL	87	90			90
Sowing date	13 May	28 Apr	27 May	30 May	4 May
Rainfall J–M (mm)	19	42	44	46	42
Rainfall A–O (mm)	267	388	378	449	295

Special thanks to 2023 trial cooperator, Daryl Behn.
Yield performance of 'stacked' varieties with tolerances to multiple herbicide systems should not be compared to varieties in trials where the variety has not specifically been tested, even for the same location. The following varieties have not been included in this trial, but have been tested in other herbicide trials at this location: Hyola® Battalion XC, Hyola® Defender CT, Hyola® Enforcer CT, Hyola® Garrison XC and Hyola® Regiment XC.
Learn more via the [NVT Long Term Yield Reporter](#)

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CHICKPEA

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Table 5: Spalding med-high rainfall IMI.

Year	2019	2020	2021	2022	2023	
Mean yield (t/ha)	1.72		3.06	3.48	2.08	
PY421C		Compromised trial		114	111	
Pioneer® 45Y95 (CL)			111	111	110	
Hyola® Solstice CL			102	110	114	
Pioneer® 44Y94 CL	110		112	109	111	
Hyola® Continuum CL				104	107	
Pioneer® 45Y93 CL	100		106	106	101	
Nuseed® Ceres IMI				100	109	
Pioneer® 43Y92 (CL)			103	101	104	
PY520TC					91	
VICTORY® V75-03CL	87			97		92
Sowing date	14 May		27 Apr	28 May	30 May	22 May
Rainfall J–M (mm)	22	78	31	46	38	
Rainfall A–O (mm)	252	383	325	405	239	

Special thanks to 2023 trial cooperator, Andrew Cootes.

Yield performance of 'stacked' varieties with tolerances to multiple herbicide systems should not be compared to varieties in trials where the variety has not specifically been tested, even for the same location. The following varieties have not been included in this trial, but have been tested in other herbicide trials at this location: Hyola® Defender CT and Hyola® Enforcer CT. Learn more via the [NVT Long Term Yield Reporter](#)

Table 6: Wasleys med-high rainfall IMI.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.76	2.41	2.32	3.20	3.08
PY421C				118	112
Pioneer® 44Y94 CL	108	115	112	118	109
Pioneer® 45Y95 (CL)	111		118	113	108
Pioneer® 45Y93 CL	99	105	116	117	101
Hyola® Continuum CL				111	104
Hyola® Solstice CL			105	86	110
Pioneer® 43Y92 (CL)		104	100	102	103
Nuseed® Ceres IMI				91	107
PY520TC					91
VICTORY® V75-03CL	88	90	95		93
Sowing date	13 May	25 Apr	27 May	6 May	2 May
Rainfall J–M (mm)	9	46	35	82	9
Rainfall A–O (mm)	224	360	297	370	224

Special thanks to 2023 trial cooperator, Josh Krieg.

Yield performance of 'stacked' varieties with tolerances to multiple herbicide systems should not be compared to varieties in trials where the variety has not specifically been tested, even for the same location. The following varieties have not been included in this trial, but have been tested in other herbicide trials at this location: Hyola® Defender CT and Hyola® Enforcer CT. Learn more via the [NVT Long Term Yield Reporter](#)

Table 7: Arthurton med-high rainfall TT.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.22	1.22	2.26	3.14	2.11
HyITec® Trifecta	117	110	114	115	106
Hyola® Blazer TT		111	113	116	106
HyITec® Trophy	112	117	115	110	106
HyITec® Trident	110	126	119	102	107
SF Dynatron TT	110	115	112	112	105
Hyola® Defender CT				115	104
InVigor® T 4510	110	119	112	105	105
PY520TC			109		104
InVigor® T 4511			110	106	104
RGT Capacity TT	109	107	106	108	102
Sowing date	6 May	28 Apr	25 May	26 May	6 May
Rainfall J–M (mm)	4	63	96	130	58
Rainfall A–O (mm)	196	313	219	321	241

Special thanks to 2023 trial cooperator, Chris Maloney.

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

Table 8: Riverton med-high rainfall TT.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.50	2.70	2.91	3.50	2.10
HyITec® Trifecta	112	111	116	113	118
Hyola® Blazer TT		110	114	113	114
HyITec® Trophy	106	107	113	108	117
SF Dynatron TT	107	109	108	109	110
PY520TC			112	111	109
Hyola® Defender CT				112	107
HyITec® Trident	100	99	115	103	123
RGT Baseline® TT			107	112	102
HyITec® Velocity				101	116
InVigor® T 4511			107	105	111
Sowing date	13 May	28 Apr	27 May	30 May	4 May
Rainfall J–M (mm)	19	42	44	46	42
Rainfall A–O (mm)	267	388	378	449	295

Special thanks to 2023 trial cooperator, Daryl Behn.

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

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Table 9: Spalding med-high rainfall TT.

Year	2019	2020	2021	2022	2023	
Mean yield (t/ha)	1.51		2.59	3.15	1.72	
HyTTec® Trifecta		Compromised trial	112	113	114	
HyTTec® Trident	115		116	106	120	
Hyola® Blazer TT			113	111	112	
HyTTec® Trophy	114		112	109	115	
PY520TC				108	109	
HyTTec® Velocity				106	114	
SF Dynatron TT	109		109	108	109	
Hyola® Defender CT				107	107	
InVigor® T 4510	112			105	106	110
InVigor® T 4511				105	106	109
Sowing date	14 May		27 Apr	28 May	30 May	22 May
Rainfall J–M (mm)	22		78	31	46	38
Rainfall A–O (mm)	252	383	325	405	239	

Special thanks to 2023 trial cooperator, Andrew Cootes.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 10: Wasleys med-high rainfall TT.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.42	2.39	2.15	2.91	2.45
Hyola® Blazer TT		112	118	116	109
HyTTec® Trifecta	117	112	118	109	111
Hyola® Defender CT				120	105
SF Dynatron TT	109	112	109	116	109
HyTTec® Trophy	114	112	111	108	111
PY520TC			117	115	106
RGT Baseline® TT			117	114	101
HyTTec® Velocity				103	113
InVigor® T 4510	112	111	101	106	110
HyTTec® Trident	115	111	104	99	113
Sowing date	13 May	25 Apr	27 May	6 May	2 May
Rainfall J–M (mm)	9	46	35	82	9
Rainfall A–O (mm)	224	360	297	370	224

Special thanks to 2023 trial cooperator, Josh Krieg.
Learn more via the [NVT Long Term Yield Reporter](#)

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Australian canola variety disease ratings

The following table contains varietal ratings for blackleg disease of canola.

These ratings are updated twice a year by crop pathologists and were released in autumn 2024.

Varieties are listed in alphabetical order and disease ratings are colour-coded to match resistance and susceptibility ratings.

Table 11: Canola disease guide – 2024 autumn blackleg ratings and resistance groups.

Variety	2024 Blackleg rating Bare	2024 Blackleg rating ILeVo®	2024 Blackleg rating Saltro®	Type	Section A – resistance group of cultivar	Section B – resistance group of previous year’s cultivar (stubble)																					
						A	B	C	AB	AC	AD	ABC	ABD	ABF	ABS	ABDF	ABDS	ADF	BF	BC	H	AH	ACH	ABH	ADFH		
CONVENTIONAL VARIETIES																											
Outlaw [Ⓟ]	RMR			Open pollinated	A																						
Nuseed® Quartz	RMR			Hybrid	ABD																						
Nuseed® Diamond	RMR	R	R	Hybrid	ABF																						
TRIAZINE-TOLERANT VARIETIES																											
HyTTec® Trifecta	R			Hybrid	ABD																						
HyTTec® Trident	R			Hybrid	AD																						
Monola® H524TT	R			High stability oil, hybrid	AD																						
DG Bidgee TT [Ⓟ]	R	R	R	Open pollinated	H																						
HyTTec® Trophy	R	R	R	Hybrid	AD																						
DG Torrens TT [Ⓟ]	RMR			Open pollinated	H																						
Hyola® Blazer TT	RMR		R	Hybrid	ADF																						
InVigor® T 4511	RMR	R		Hybrid	Different blackleg resistance pattern, further testing required. Effective rotation with existing groups currently unknown																						
Monola® H421TT	RMR			High stability oil, hybrid	BC																						
ATR-Bluefin [Ⓟ]	RMR			Open pollinated	AB																						
DG Avon TT [Ⓟ]	MR	R	R	Open pollinated	AC																						
SF Spark™ TT	MR	R	R	Hybrid	ABDS																						
InVigor® T 4510	MR	R	R	Hybrid	BF																						
Renegade TT [Ⓟ]	MR			Open pollinated	A																						
HyTTec® Velocity	MR			Hybrid	AB																						
Monola® 422TT	MRMS			Open pollinated	BC																						
ATR-Swordfish [Ⓟ]	MRMS			Open pollinated	AB																						
SF Dynatron™ TT	MRMS	R	R	Hybrid	BC																						
RGT Baseline™ TT	MRMS	R	R	Hybrid	B																						
Bandit TT [Ⓟ]	MRMS	R	R	Open pollinated	A																						
RGT Capacity™ TT	MRMS	RMR	R	Hybrid	B																						
AFP Cutubury [Ⓟ]	MS	MR	RMR	Open pollinated	AB																						
ATR-Bonito [Ⓟ]	MS	RMR	R	Open pollinated	A																						

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Table 11: Canola disease guide – 2024 autumn blackleg ratings and resistance groups (continued).

Variety	2024 Blackleg rating Bare	2024 Blackleg rating iLeVo®	2024 Blackleg rating Saltro®	Type	Section A – resistance group of cultivar	Section B – resistance group of previous year’s cultivar (stubble)																			
						A	B	C	AB	AC	AD	ABC	ABD	ABF	ABS	ABDF	ABDS	ADF	BF	BC	H	AH	ACH	ABH	ADFH
IMIDAZOLINONE-TOLERANT VARIETIES																									
Hyola® Continuum CL	R		R	Hybrid, Clearfield®	ADF																				
Hyola® Solstice CL	R		R	Hybrid, Clearfield®	ADFH																				
Captain CL	R			Winter, hybrid, Clearfield®	AH																				
Hyola® Feast CL	R		R	Winter, hybrid, Clearfield®	H																				
RGT Nizza™ CL	R			Winter, hybrid, Clearfield®	B																				
Hyola® 970CL	R		R	Winter, hybrid, Clearfield®	H																				
Phoenix CL	R			Winter, hybrid, Clearfield®	B																				
Pioneer® 45Y93 CL	R		R	Hybrid, Clearfield®	BC																				
RGT Clavier™ CL	R			Winter, hybrid, Clearfield®	ACH																				
Pioneer® PN526C	RMR			High stability oil, Hybrid, Clearfield®	ABD																				
Pioneer® 45Y95 CL	RMR		R	Hybrid, Clearfield®	C																				
Nuseed® Ceres IMI	RMR			Hybrid	AD																				
Pioneer® 43Y92 CL	RMR		R	Hybrid, Clearfield®	B																				
Pioneer® 44Y94 CL	RMR		R	Hybrid, Clearfield®	BC																				
Pioneer® PY421C	RMR		R	Hybrid, Clearfield®	A																				
VICTORY® V75-03CL	RMR			High stability oil, hybrid, Clearfield®	AB																				
IMIDAZOLINONE AND TRIAZINE-TOLERANT VARIETIES																									
Hyola® Defender CT	R		R	Hybrid, Clearfield®, Triazine	ADF																				
Hyola® Enforcer CT	R			Hybrid, Clearfield®, Triazine	ADF																				
Pioneer® PY520 TC	MR		R	Hybrid, Clearfield®, Triazine	BC																				
GLYPHOSATE-TOLERANT VARIETIES																									
DG Hotham TF	R			Hybrid, TruFlex®	ABH																				
Nuseed® Raptor TF	R			Hybrid, TruFlex®	AD																				
Nuseed® Eagle TF	R			Hybrid, TruFlex®	ABD																				
VICTORY® V55-04TF	R		R	High stability oil, hybrid, TruFlex®	AB																				
DG Lofty TF	R			Hybrid, TruFlex®	ABH																				
Nuseed® Hunter TF	RMR			Hybrid, TruFlex®	AB																				
Pioneer® 45Y28 RR	RMR		R	Hybrid, Roundup Ready®	BC																				
Pioneer® 44Y27 RR	RMR		R	Hybrid, Roundup Ready®	B																				
Pioneer® 44Y30 RR	RMR		R	Hybrid, Roundup Ready®	AB																				
Pioneer® PY422G	MR		R	Hybrid, Optimum GLY®	AB																				
Nuseed® Emu TF	MR			Hybrid, TruFlex®	AB																				
Pioneer® PY525G	MR		R	Hybrid, Optimum GLY®	AB																				

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Table 11: Canola disease guide – 2024 autumn blackleg ratings and resistance groups (continued).

Variety	2024 Blackleg rating Bare	2024 Blackleg rating iLeVo®	2024 Blackleg rating Saltro®	Type	Section A – resistance group of cultivar	Section B – resistance group of previous year’s cultivar (stubble)																		
						A	B	C	AB	AC	AD	ABC	ABD	ABF	ABS	ABDF	ABDS	ADF	BF	BC	H	AH	ACH	ABH
GLYPHOSATE-TOLERANT VARIETIES																								
InVigor® R 4022P	MRMS	R		Hybrid, TruFlex®	ABC																			
InVigor® R 4520P	MRMS	R		Hybrid, Truflex®	B																			
Pioneer® PY323G	MRMS		R	Hybrid, Optimum GLY®	BC																			
GLYPHOSATE AND IMIDAZOLINONE-TOLERANT VARIETIES																								
Hyola® Regiment XC	R		R	Hybrid, TruFlex®, Clearfield®	ADFH																			
Hyola® Battalion XC	RMR			Hybrid, TruFlex®, Clearfield®	ADF																			
Hyola® Garrison XC	RMR		R	Hybrid, TruFlex®, Clearfield®	ADF																			
GLUFOSINATE AND TRIAZINE-TOLERANT VARIETIES																								
InVigor® LT 4530P	RMR	R		Hybrid, LibertyLink®, Triazine	BF																			
GLUFOSINATE AND GLYPHOSATE-TOLERANT VARIETIES																								
InVigor® LR 4540P	RMR	R		Hybrid, LibertyLink®, TruFlex®	B																			

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

Section B: Green = best possible rotation (no resistance genes in common)
 Yellow = okay rotation (at least one resistance gene not in common)
 Red = not advised (all resistance genes in common)

Please check updated ratings using the [Blackleg Management Guide](#) or the [NVT Disease Ratings](#).

CHICKPEA

Chickpea variety yield performance – Central South Australia

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

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)			0.60	2.48	
PBA Seamer ^{db}	No trial	Compromised trial		94	Compromised trial
PBA Slasher ^{db}			99	101	
Neelam ^{db}			88	102	
CBA Captain ^{db}			107	97	
PBA Striker ^{db}			75	104	
PBA Maiden ^{db}			83	102	
Sowing date		24 May	2 Jun	8 Jun	23 May
Rainfall J–M (mm)		39	33	96	53
Rainfall A–O (mm)		268	229	290	197

Special thanks to 2023 trial cooperator, Corey Pridham.
Learn more via the [NVT Long Term Yield Reporter](#)

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)			0.47	2.50	
Genesis™ 090	No trial	Compromised trial	125	98	Compromised trial
PBA Royal ^{db}			114	98	
Almaz ^{db}			103	100	
PBA Monarch ^{db}			92	100	
Genesis™ Kalkee			83	101	
PBA Magnus ^{db}			106	96	
Sowing date		24 May	2 Jun	8 Jun	23 May
Rainfall J–M (mm)		39	33	96	53
Rainfall A–O (mm)		268	229	290	197

Special thanks to 2023 trial cooperator, Corey Pridham.
Learn more via the [NVT Long Term Yield Reporter](#)

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

Chickpea variety disease ratings – South Australia

The following table contains varietal ratings for the predominant diseases of chickpea in South Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

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

Table 3: Chickpea disease guide for South Australia.				
Variety	Ascochyta blight (pathogen group 1 – south)	2022-23 Phytophthora root rot	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)
DESI				
CBA Captain [Ⓛ]	S	S	MR	MS
Genesis™ 836	S		MR	MS
Kyabra [Ⓛ]	VS	VS	MRMS	S
Neelam [Ⓛ]	S		MRMS	MS
PBA Boundary [Ⓛ]	S	VS	RMR	MRMS
PBA Drummond [Ⓛ]	VS	VS	MR	MRMS
PBA HatTrick [Ⓛ]	S	S	MRMS	MRMS
PBA Maiden [Ⓛ]	S		MRMS	MRMS
PBA Pistol [Ⓛ]	S		RMR	MRMS
PBA Seamer [Ⓛ]	S	S	MRMS	MRMS
PBA Slasher [Ⓛ]	S		MRMS	MRMS
PBA Striker [Ⓛ]	S		MRMS	MRMS
KABULI				
Almaz [Ⓛ]	S		MRMS	S
Genesis™ 090	MS		MRMS	MS
Genesis™ Kalkee	S		MRMS	MS
PBA Magnus [Ⓛ]	S		MR	MSS
PBA Monarch [Ⓛ]	S		MRMS	MS
PBA Royal [Ⓛ]	MS		MR	MS

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

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

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FABA BEAN

Faba bean variety yield performance – Central South Australia

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

Table 1: Laura faba bean.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.50	5.05	3.09	7.06	1.93
PBA Samira ^{db}	95	105	98	99	100
PBA Zahra ^{db}	100	103	100	98	101
PBA Amberley ^{db}	94	107	98	97	99
PBA Bendoc ^{db*}	103	101	100	93	95
Fiesta VF	95	101	95	93	101
Farah ^{db}	96	101	96	92	100
PBA Rana ^{db}	79		92	88	89
PBA Marne ^{db}	104	87	95	95	111
Nura ^{db}	98	102	97	89	94
Sowing date	28 May	21 May	28 May	25 May	31 May
Rainfall J–M (mm)	23	102	36	46	28
Rainfall A–O (mm)	231	413	282	388	179

Special thanks to 2023 trial cooperator.

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

Table 2: Maitland faba bean.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	3.19	5.26	5.03	4.76	3.02
PBA Zahra ^{db}	98	105	106	98	99
PBA Samira ^{db}	98	104	102	98	97
PBA Marne ^{db}	103	94	96	100	113
PBA Amberley ^{db}	96	104	103	96	95
PBA Bendoc ^{db*}	96	99	102	94	98
Fiesta VF	95	99	98	94	100
Farah ^{db}	95	99	99	93	99
Nura ^{db}	92	96	98	90	96
PBA Rana ^{db}	86		93	84	84
Sowing date	20 May	13 May	14 May	2 Jun	13 May
Rainfall J–M (mm)	8	47	71	97	69
Rainfall A–O (mm)	267	344	219	417	280

Special thanks to 2023 trial cooperator, Warialda Trust.

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

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

Table 3: Tarlee faba bean.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.45	4.32	5.57	6.74	4.05
PBA Zahra ^{db}	99	98	102	103	97
PBA Samira ^{db}	97	106	98	102	96
PBA Marne ^{db}	96	90	100	104	105
PBA Amberley ^{db}	96	105	97	101	94
Fiesta VF	92	99	94	98	96
Farah ^{db}	93	95	95	98	97
PBA Bendoc ^{db*}	98	84	99	94	99
Nura ^{db}	93	86	93	90	97
PBA Rana ^{db}	84		81	88	85
Sowing date	21 May	26 May	19 May	27 May	4 May
Rainfall J–M (mm)	10	34	43	59	47
Rainfall A–O (mm)	247	355	410	484	282

Special thanks to 2023 trial cooperater.

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

Faba bean variety disease ratings – South Australia

The following table contains varietal ratings for the predominant diseases of faba bean in South Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

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

Table 4: Faba bean disease guide for South Australia.

Variety	Ascochyta blight	Cercospora leaf spot	Chocolate spot (Botrytis)	RLN resistance (<i>Pratylenchus thornei</i>)	Leaf rust
Cairo	VS	S	S	MSS	S
Doza	VS	S	S	MSS	MR
Farah ^{db}	MS	S	S	MS	VS
FBA Ayla ^{db}		S	S	MRMS	MR
Fiesta VF	S	S	S	MS	VS
Nura ^{db}	MR (P)	S	MS	MS	VS
PBA Amberley ^{db}	MR	S	MRMS	MRMS	VS
PBA Bendoc ^{db}	MR	S	S	MRMS	VS
PBA Marne ^{db}	MS	S	MS (P)	MS	MRMS
PBA Nanu ^{db}		S	S	MRMS	MR
PBA Nasma ^{db}	S	S	S	MSS	MRMS
PBA Rana ^{db}	MRMS (P)	S	MS	MS	VS
PBA Samira ^{db}	MR (P)	S	MS	MRMS	S
PBA Warda ^{db}	S	S	S	MRMS	MRMS
PBA Zahra ^{db}	MRMS	S	MS	MRMS	S

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

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

FIELD PEA

New field pea varieties

The following information is for field pea varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	End point royalty* (\$)	Comments supplied by breeding company ¹
APB Bondi [Ⓟ]	Agriculture Victoria	TBC	APB Bondi [Ⓟ] (tested as OZP1903) is a Kaspa-type pea with mid-flowering and mid-maturity. APB Bondi [Ⓟ] combines a number of traits in a semi-leafless and semi-dwarf background. It is rated resistant to moderately resistant to downy mildew; resistant to powdery mildew, pea seed-borne mosaic virus and bean leaf roll virus; tolerant to boron toxicity and moderately tolerant to salinity. It has a high yield potential and wide adaptation. Seed is marketable as Kaspa pea.

* EPR amount is ex-GST, [Ⓟ] denotes Plant Breeder's Rights apply. ¹ All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

WHEAT

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CANOLA

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FABA BEAN

FIELD PEA

LENTIL

LUPIN

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

Field pea variety yield performance – Central South Australia

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

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

Table 1: Laura field pea.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.51	3.20	2.28	5.05	1.68
PBA Pearl	104	98	117	119	107
APB Bondi ^{db}	96	106	104	109	113
PBA Butler ^{db}	97		105	109	105
PBA Noosa ^{db}	95	97	105	106	103
PBA Taylor ^{db}	97	108	96	100	107
PBA Percy	110	98	105	101	90
Kaspa	95	105	97	98	97
PBA Oura ^{db}	108	98	98	96	98
PBA Gonyah ^{db}	101		93	93	98
PBA Wharton ^{db}	101	100	89	90	105
Sowing date	28 May	21 May	28 May	25 May	31 May
Rainfall J–M (mm)	23	102	36	46	28
Rainfall A–O (mm)	231	413	282	388	179

Special thanks to 2023 trial cooperator, Lucas Woolford.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 2: Minlaton field pea.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.41		4.31	3.66	2.33
APB Bondi ^{db}	104	Compromised trial	120	118	114
PBA Pearl	105		110	114	108
PBA Butler ^{db}	109		111	109	107
PBA Taylor ^{db}	105		110	108	107
PBA Noosa ^{db}	97		109	106	106
Kaspa	103		101	97	99
PBA Wharton ^{db}	95		100	102	101
PBA Gonyah ^{db}	102		95	95	96
PBA Oura ^{db}	100		89	95	94
PBA Percy	105		81	87	88
Sowing date	8 May	21 May	1 Jun	10 Jun	10 May
Rainfall J–M (mm)	5	45	51	92	35
Rainfall A–O (mm)	243	410	308	286	234

Special thanks to 2023 trial cooperator, Adam Cook.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 3: Riverton field pea.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.34	3.17	4.43	3.76	3.51
APB Bondi ^{db}	103	120	109	117	114
PBA Pearl	111	106	106	123	104
PBA Butler ^{db}	100		106	114	106
PBA Taylor ^{db}	98	116	105	105	107
PBA Noosa ^{db}	101	101	103	108	108
Kaspa	94	105	100	98	101
PBA Wharton ^{db}	100	101	99	89	102
PBA Gonyah ^{db}	96		98	91	96
PBA Oura ^{db}	103	93	97	93	91
PBA Percy	103	87	94	96	83
Sowing date	5 Jun	27 May	2 Jun	27 May	24 May
Rainfall J–M (mm)	15	42	45	59	39
Rainfall A–O (mm)	313	401	354	484	233

Special thanks to 2023 trial cooperator, Jake Nicholls.
Learn more via the [NVT Long Term Yield Reporter](#)

Table 4: Willamulka field pea.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.36	1.35	2.27	2.17	2.06
PBA Butler ^{db}	102		111	107	108
APB Bondi ^{db}	106	111	105	107	110
PBA Taylor ^{db}	98	111	108	104	109
Kaspa	98	107	110	100	101
PBA Pearl	112	96	96	108	102
PBA Gonyah ^{db}	93		105	99	102
PBA Noosa ^{db}	108	100	97	101	98
PBA Wharton ^{db}	94	101	94	97	103
PBA Oura ^{db}	95	94	96	99	99
PBA Percy	96	90	99	99	95
Sowing date	18 May	21 May	27 May	8 Jun	22 May
Rainfall J–M (mm)	5	32	36	135	52
Rainfall A–O (mm)	212	273	234	238	216

Special thanks to 2023 trial cooperator, Brett Crosby.
Learn more via the [NVT Long Term Yield Reporter](#)

WHEAT

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FIELD PEA

LENTIL

LUPIN

Field pea variety disease ratings – South Australia

The following table contains varietal ratings for the predominant diseases of field pea in South Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

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

Table 5: Field pea disease guide for South Australia.

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

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

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

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New lentil varieties

The following information is for lentil varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	End point royalty* (\$)	Comments supplied by breeding company ¹
ALB Terrier ^{db}	Agriculture Victoria	TBC	ALB Terrier ^{db} is an imidazolinone herbicide tolerant, small market class red lentil with mid-flowering and maturity characteristics. It is rated RMR to pathotype two of Ascochyta, which is the best in its class. It is broadly adapted to various lentil growing regions of Australia.

* EPR amount is ex-GST, ^{db} denotes Plant Breeder's Rights apply. ¹ All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

WHEAT

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LENTIL

LUPIN

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

Lentil variety yield performance – Central South Australia

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

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

Year	2019	2020	2021	2022	2023	
Mean yield (t/ha)	1.46	1.60		3.73	1.35	
GIA Thunder ^{(b)*}		130	Trial failed	128	113	
ALB Terrier ^(b)				133	106	
PBA Jumbo2 ^(b)	116	110		118	103	
PBA Hallmark XT ^{(b)*}	87	90		120	91	
GIA Leader ^{(b)*}	82	108		105	99	
PBA HighlandXT ^{(b)*}	114	93		94	100	
PBA Hurricane XT ^{(b)*}	94	101		98	99	
PBA KelpieXT ^{(b)*}	122	93		89	98	
GIA Lightning ^{(b)*}		111		78	112	
Nipper ^(b)	82	79		90	84	
Sowing date	28 May	21 May		28 May	25 May	31 May
Rainfall J–M (mm)	23	102		36	46	28
Rainfall A–O (mm)	231	413	282	388	179	

Special thanks to 2023 trial cooperator, Lucas Woolford.

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

Year	2019	2020	2021	2022	2023	
Mean yield (t/ha)	2.44		3.60	2.34	2.32	
GIA Thunder ^{(b)*}		Compromised trial	105	129	107	
PBA Jumbo2 ^(b)	114		99	122	107	
ALB Terrier ^(b)			101	122	99	
PBA KelpieXT ^{(b)*}	112		95	109	108	
GIA Lightning ^{(b)*}			107	97	103	
PBA HighlandXT ^{(b)*}	106		104	98	106	
PBA Hallmark XT ^{(b)*}	93		100	97	98	
PBA Hurricane XT ^{(b)*}	97		95	101	96	
PBA Bolt ^(b)	98		104	79	103	
GIA Leader ^{(b)*}	93		93	103	92	
Sowing date	21 May		14 May	1 Jun	2 Jun	13 May
Rainfall J–M (mm)	8		47	71	97	69
Rainfall A–O (mm)	267	344	219	417	280	

Special thanks to 2023 trial cooperator, Warialda Trust.

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

Year	2019	2020	2021	2022	2023	
Mean yield (t/ha)	1.36	3.56		3.56	2.22	
GIA Thunder ^{(b)*}		111	Compromised trial	111	107	
ALB Terrier ^(b)				106	99	
GIA Lightning ^{(b)*}		108		102	104	
PBA Jumbo2 ^(b)	96	102		108	106	
PBA Ace ^(b)	109	115		97	90	
GIA Leader ^{(b)*}	101	107		98	91	
PBA HighlandXT ^{(b)*}	97	95		101	107	
PBA KelpieXT ^{(b)*}	88	95		105	106	
PBA Hurricane XT ^{(b)*}	99	103		99	96	
PBA Bolt ^(b)	100	94		96	104	
Sowing date	8 May	21 May		1 Jun	10 Jun	10 May
Rainfall J–M (mm)	5	45		51	92	35
Rainfall A–O (mm)	243	410	308	286	234	

Special thanks to 2023 trial cooperator, Adam Cook.

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

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	2.39	3.99	3.98	4.73	2.85
GIA Thunder ^{(b)*}		114	112	126	108
PBA Jumbo2 ^(b)	110	107	108	126	100
ALB Terrier ^(b)			104	121	104
PBA KelpieXT ^{(b)*}	110	103	107	114	96
GIA Lightning ^{(b)*}		108	107	85	111
PBA HighlandXT ^{(b)*}	107	102	102	99	99
PBA Hurricane XT ^{(b)*}	96	99	100	102	99
GIA Leader ^{(b)*}	91	98	98	104	100
PBA Ace ^(b)	93	101	104	82	108
PBA Hallmark XT ^{(b)*}	95	94	92	104	93
Sowing date	5 Jun	27 May	2 Jun	27 May	24 May
Rainfall J–M (mm)	15	42	45	59	39
Rainfall A–O (mm)	313	401	354	484	233

Special thanks to 2023 trial cooperator, Jake Nicholls.

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

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FIELD PEA

LENTIL

LUPIN

Table 5: Willamulka lentil.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)		1.53			
GIA Thunder ^{db*}	Trial results below standard	107	Trial failed	Compromised trial	Compromised trial
GIA Leader ^{db*}		106			
PBA Hallmark XT ^{db*}		105			
GIA Lightning ^{db*}		100			
PBA Hurricane XT ^{db*}		99			
PBA Jumbo2 ^{db}		95			
PBA Ace ^{db}		94			
PBA HighlandXT ^{db*}		93			
PBA Bolt ^{db}		90			
Nipper ^{db}		85			
Sowing date	18 May	21 May	27 May	8 Jun	22 May
Rainfall J–M (mm)	5	32	36	135	52
Rainfall A–O (mm)	212	273	234	238	216

Special thanks to 2023 trial cooperator, Brett Crosby.

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

Lentil variety disease ratings – South Australia

The following table contains varietal ratings for the predominant diseases of lentil in South Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

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

Table 6: Lentil disease guide for South Australia.

Variety	Ascochyta blight (Pathotype 2 PBA Hurricane XT ^{db} virulent)	Ascochyta blight (Pathotype 1 Nipper ^{db} virulent)	Botrytis grey mould	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)
ALB Terrier ^{db}	MR (P)	R	MRMS (P)	MR	MR
GIA Leader ^{db}	MR (P)	MR (P)	MRMS (P)	MRMS (P)	MR (P)
GIA Lightning ^{db}	MRMS (P)	R (P)	MS (P)	MRMS (P)	MR (P)
GIA Metro ^{db}	RMR (P)	MR (P)	MRMS (P)	MR (P)	MRMS (P)
GIA Sire ^{db}	MRMS (P)	R (P)	MS (P)	MRMS (P)	MRMS (P)
GIA Thunder ^{db}	MRMS (P)	R (P)	MRMS (P)	MR (P)	MR (P)
Nipper ^{db}	MR	MRMS	MRMS	RMR	MR
PBA Ace ^{db}	MR	R	MS	MR	MRMS
PBA Bolt ^{db}	MRMS	MR	S	MR	MR
PBA Hallmark XT ^{db}	MRMS	RMR	MRMS	MR	MRMS
PBA HighlandXT ^{db}	MR (P)	MR	MS	MR	MRMS
PBA Hurricane XT ^{db}	MRMS (P)	RMR	MS	MRMS	MRMS
PBA Jumbo2 ^{db}	RMR	R	MR (P)	MR	MRMS
PBA KelpieXT ^{db}	MRMS	MRMS	MS	MRMS	MRMS

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

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

LUPIN

New lupin varieties

The following information is for lupin varieties released in the 12 months to the date when the MET analysis was published on NVT online. Please go to nvt.grdc.com.au to find trial results for any new varieties released since the publication of this harvest report.

Variety	Breeding company	End point royalty* (\$)	Comments supplied by breeding company ¹
Gidgee [Ⓓ]	Australian Grain Technologies	4.50	A very high and stable yielding alternative to PBA Jurien [Ⓓ] and Mandelup [Ⓓ] . Widely adapted but particularly well adapted to the northern and central wheatbelt of WA. Metribuzin tolerant. Reduced risk of seed splitting compared with PBA Jurien [Ⓓ] . Moderately resistant to stem Phomopsis. Good CMV resistance. Slightly quicker maturity relative to PBA Jurien [Ⓓ] , slightly slower than Mandelup [Ⓓ] .
Rosemont [Ⓓ]	Australian Grain Technologies	4.50	A very high yielding alternative to PBA Jurien [Ⓓ] , Coyote [Ⓓ] and Mandelup [Ⓓ] . Best performance in softer-finishing situations and southern WA environments. Unique white flower and faintly speckled seed. Metribuzin tolerant. Excellent early vigour. Reduced risk of seed splitting compared with PBA Jurien [Ⓓ] . Taller plant height, may improve harvestability. Moderately resistant to stem Phomopsis. Good CMV resistance. Slightly slower maturity relative to PBA Jurien [Ⓓ] , slightly quicker than Coyote [Ⓓ] .

* EPR amount is ex-GST, [Ⓓ] denotes Plant Breeder's Rights apply. ¹ All data in the table was provided by breeders. Readers should raise any issues with the displayed data directly with the breeder.

WHEAT

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FIELD PEA

LENTIL

LUPIN

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

Lupin variety yield performance – Central South Australia

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

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

Table 1: Spalding narrow-leaf lupin.

Year	2019	2020	2021	2022	2023
Mean yield (t/ha)	1.45	1.90	1.39	4.73	2.45
Coyote ^{db}		109	120	101	107
PBA Bateman ^{db}	112	110	110	104	107
PBA Gunyidi ^{db}	109	111	109	103	105
Jenabillup ^{db}	105	108	101	104	104
Rosemont ^{db}				104	106
PBA Barlock ^{db}	102	101	90	107	104
PBA Jurien ^{db}	104	95	88	108	106
Lawler ^{db}		98	104	101	103
Mandelup ^{db}	101	98	97	102	101
Wonga	92	111	99	96	94
Sowing date	14 May	27 Apr	31 May	26 May	8 May
Rainfall J–M (mm)	8	84	42	42	35
Rainfall A–O (mm)	267	411	290	458	297

Special thanks to 2023 trial cooperator, David Bruce.

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

Lupin variety disease ratings – South Australia

The following table contains varietal ratings for the predominant diseases of lupin in South Australia. These ratings are updated annually by crop pathologists and were released in March 2024.

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

Table 2: Lupin disease guide for South Australia.

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

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

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

WHEAT

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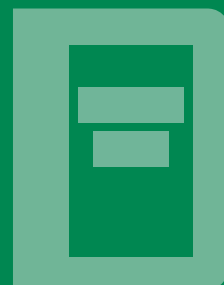
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LUPIN

NVT tools



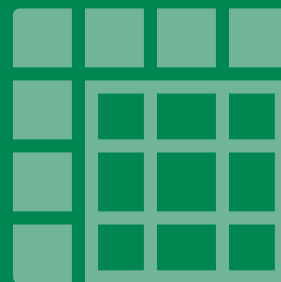
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NVT Disease Ratings

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