

NVT HARVEST REPORT



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Central Queensland
Northern Region

**Title:**

NVT Harvest Report – Central Queensland

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

PHOTO: Isabelle Rogers

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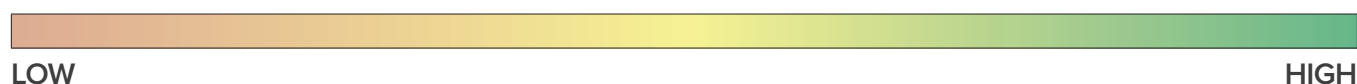
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This guide can be downloaded to your computer or tablet at:
grdc.com.au/harvestreports

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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

VS	SVS	S	MSS	MS	MRMS	MR	RMR	R
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Disease severity scale from very susceptible (VS) to resistant (R)

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

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

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

INTRODUCTION

This **NVT Harvest Report** provides information to support growers and advisers with decisions on variety selection for **Central Queensland**. The information has been generated from the Grains Research and Development Corporation's (GRDC) National Variety Trials (NVT) database. This publication provides a summary of the 2022 and long-term yield performance of varieties of crop species suitable for production in **Central Queensland** together with their quality and disease responses.

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

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

GRDC acknowledges that an ongoing project of this type would not be possible without the cooperation of growers prepared to contribute sites and who often assist with the management of trials on their property.

Interpreting long-term yield results

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

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

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

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

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

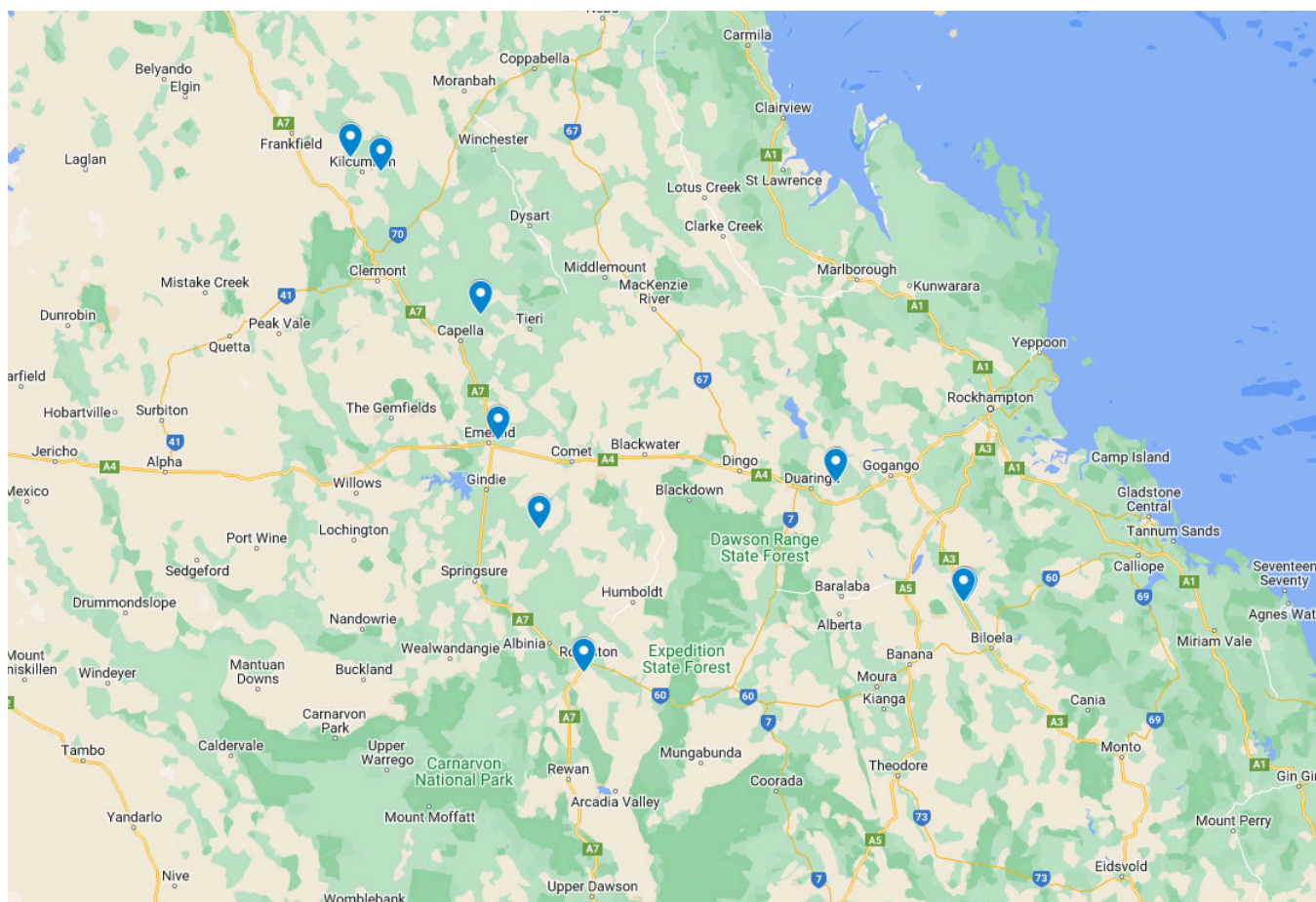
Trials listed as compromised are not suitable for making variety decisions. Results can be found in the [Quarantined trial reports](#).

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

NVT SITE LOCATIONS – Central Queensland

Figure 1: Locality of NVT trial sites in Central Queensland from 2018 to 2022.

SOURCE: NVT Online



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

WHEAT

New wheat varieties

The following information is for wheat varieties released in the 12 months to the date when the MET analysis was published on NVT online.

Variety	Variety owner	Grain classification	End point royalty* (\$)	Comments supplied by variety owner
Jillaroo [Ⓛ]	InterGrain	Milling	3.50	Exceptionally high-yielding, quick-maturity spring wheat suited to mid-May onwards sowing with moderate, compact plant height.
Rebel 65	Rebel Seeds	Milling	None provided.	None provided.
Rebel Rat	Rebel Seeds	Feed	None provided.	A mid-maturity variety similar to Borlaug 100 [Ⓛ] . Upright, grows to about a metre, strong resistance to lodging. Replacement for crown rot susceptible varieties. Large seed, high starch suitable for livestock processing.

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

WHEAT

BARLEY

CHICKPEA

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

Wheat variety yield performance – Central Queensland

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: Capella main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		4.08	2.36	2.97	4.86
Rebel Rat			115		108
Calibre ^{db}				108	109
SEA Condamine		112	106	104	106
Borlaug 100 ^{db}					103
LRPB Flanker ^{db}		105	113	89	113
Sunmaster ^{db}	No trial	108	101	110	103
Scepter ^{db}		103	100	106	103
LRPB Avenger ^{db}					97
Suncentral ^{db}		103	95	106	101
Coota ^{db}			101	97	104
IMI-TOLERANT					
Sunblade CL Plus ^{db}		108	104	109	103
Elmore CL Plus ^{db}		99	107	101	92
Sowing date		3 May	17 Apr	20 Apr	5 May
Rainfall J–M (mm)		188	242	151	98
Rainfall A–O (mm)		106	63	132	372

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

Table 2: Duaringa main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		3.20	4.34		
Rebel Rat			119		
SEA Condamine		110	112		
Sunmaster ^{db}		114	104		
Mitch ^{db}		107	108		
Scepter ^{db}	No trial	107	102	No trial	No trial
LRPB Hellfire ^{db}		106	102		
Suncentral ^{db}		107	101		
Sunchaser ^{db}		105	100		
Condo ^{db}		100	103		
LG-Gold ^{db}		97	104		
IMI-TOLERANT					
Sunblade CL Plus ^{db}		114	105		
Elmore CL Plus ^{db}		100	104		
Sowing date		10 May	23 Apr		
Rainfall J–M (mm)		202	519		
Rainfall A–O (mm)		55	69		

No 2022 trial cooperator.
Learn more via the [NVT Long Term Yield Reporter](#).

Table 3: Emerald main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.19			3.41	6.26
Borlaug 100 ^{db}					111
Rebel Rat					113
Sunmaster ^{db}				112	111
LRPB Avenger ^{db}					108
Suncentral ^{db}				110	107
SEA Condamine	108	No trial	No trial	112	106
Condo ^{db}	111			111	105
Calibre ^{db}				108	109
Sunchaser ^{db}	111			109	102
Sunprime ^{db}	115			110	100
IMI-TOLERANT					
Sunblade CL Plus ^{db}				109	109
Elmore CL Plus ^{db}	98			101	99
Sowing date	21 May			28 Apr	27 May
Rainfall J–M (mm)	241			187	98
Rainfall A–O (mm)	165			107	370

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

Table 4: Jambin main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.41	3.77	4.49	3.96	
Borlaug 100 ^{db}				114	
Calibre ^{db}				109	
SEA Condamine	120	108	108	111	
Jillaroo ^{db}				107	
Sunmaster ^{db}		102	114	107	
LRPB Hellfire ^{db}	104	102	105	110	
Scepter ^{db}	109	101	108	102	
Suncentral ^{db}		99	109	105	
Sunprime ^{db}	104	96	106	107	
Sunchaser ^{db}	98	99	106	105	
IMI-TOLERANT					
Sunblade CL Plus ^{db}		104	112	108	
Elmore CL Plus ^{db}	93	99	101	99	
Sowing date	4 Jun	9 May	14 May	1 Jun	14 Jun
Rainfall J–M (mm)	267	183	490	183	264
Rainfall A–O (mm)	142	179	212	270	391

Special thanks to 2022 trial cooperator, IJ & MA Hutchings.
Learn more via the [NVT Long Term Yield Reporter](#).

WHEAT

BARLEY

CHICKPEA

Table 5: Kilcummin main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		0.99	2.22	2.67	4.37
LRPB Flanker ^{db}	No trial	116	106	119	125
SEA Condamine		111	108	106	113
Catapult ^{db}				117	115
LRPB Stealth ^{db}					116
RockStar ^{db}				112	116
Calibre ^{db}				117	105
LRPB Reliant ^{db}		105	98	106	115
Rebel Rat			111		103
Coota ^{db}			93	112	107
Borlaug 100 ^{db}					105
IMI-TOLERANT					
Sunblade CL Plus ^{db}		102	102	103	90
Elmore CL Plus ^{db}		100	100	97	90
Sowing date		13 Apr	18 Apr	20 Apr	6 May
Rainfall J–M (mm)		267	227	224	28
Rainfall A–O (mm)		51	47	173	450

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

Table 6: Rolleston/Springsure main season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		4.61	2.42	2.78	6.75
Rebel Rat	Trial failed		105		121
Calibre ^{db}				115	114
Borlaug 100 ^{db}					118
SEA Condamine		109	102	112	114
Sunmaster ^{db}		105	89	106	111
Scepter ^{db}		102	107	105	107
LRPB Avenger ^{db}					109
LRPB Flanker ^{db}		98	134	101	97
Coota ^{db}			124	101	97
Suncentral ^{db}			103	86	101
IMI-TOLERANT					
Sunblade CL Plus ^{db}		105	98	108	109
Elmore CL Plus ^{db}		100	96	104	97
Sowing date	5 Jun	7 May	16 Apr	5 May	3 May
Rainfall J–M (mm)	267	160	316	209	187
Rainfall A–O (mm)	166	109	143	95	463

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

Table 7: Capella early season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.89	3.02	2.27	2.26	5.64
Coolah ^{db}	115	136	119	102	95
LRPB Raider ^{db}			116	104	99
Sunflex ^{db}	116	123	121		97
LRPB Flanker ^{db}	106	130	113	101	100
LRPB Stealth ^{db}		132	115	100	96
Coota ^{db}		133	115	99	93
LRPB Reliant ^{db}		135	106	96	100
LRPB Hellfire ^{db}					86
EGA Gregory ^{db}	101	132	104		99
DS Faraday ^{db}	96	130	100	93	100
IMI-TOLERANT					
Valiant ^{db} CL Plus				98	
Sowing date	18 Apr	13 Apr	15 Apr	13 Apr	5 May
Rainfall J–M (mm)	236	188	242	151	98
Rainfall A–O (mm)	97	106	63	132	372

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

Table 8: Duaringa early season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		2.84	4.58		
Sunflex ^{db}	No trial	112	103	No trial	No trial
LRPB Stealth ^{db}		110	97		
LRPB Lancer ^{db}		111	96		
LRPB Flanker ^{db}		104	100		
Mitch ^{db}		113	93		
Coolah ^{db}		108	96		
Coota ^{db}		107	92		
LRPB Reliant ^{db}		96	93		
EGA Gregory ^{db}		91	90		
LRPB Raider ^{db}			91		
Sowing date		23 Apr	23 Apr		
Rainfall J–M (mm)		202	519		
Rainfall A–O (mm)		55	69		

No 2022 trial cooperator.
Learn more via the [NVT Long Term Yield Reporter](#).

Table 9: Emerald early season wheat.

Year	2018	2019	2020	2021	2022	
Mean yield (t/ha)	2.09			3.05	6.65	
LRPB Hellfire ^{db}		No trial	No trial		95	
Borlaug 100 ^{db}					105	
Rebel Rat					103	
Coota ^{db}				108	110	
Sunflex ^{db}	111				108	
Coolah ^{db}	115				112	100
LRPB Stealth ^{db}					110	98
LRPB Lancer ^{db}	135				99	99
LRPB Flanker ^{db}	116				112	80
LRPB Raider ^{db}					112	101
IMI-TOLERANT						
Valiant ^{db} CL Plus				96		
Sowing date	18 Apr			12 Apr	4 May	
Rainfall J–M (mm)	241			187	98	
Rainfall A–O (mm)	165			107	370	

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

Table 11: Kilcummin early season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		0.80	2.00	2.94	4.17
LRPB Raider ^{db}	No trial		109	114	125
Coolah ^{db}		151	121	112	106
LRPB Flanker ^{db}		143	119	111	107
LRPB Reliant ^{db}		150	111	109	110
Sunflex ^{db}		130	122		104
LRPB Stealth ^{db}		149	117	109	103
EGA Gregory ^{db}		142	105		110
DS Faraday ^{db}		131	98	106	116
Coota ^{db}		146	113	108	103
Borlaug 100 ^{db}					91
IMI-TOLERANT					
Valiant ^{db} CL Plus				92	
Sowing date		13 Apr	18 Apr	20 Apr	13 Apr
Rainfall J–M (mm)		267	227	224	28
Rainfall A–O (mm)		51	47	173	450

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

Table 10: Jambin early season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	3.27	2.57	4.19	4.22	5.99
Borlaug 100 ^{db}			121		108
Rebel Rat					108
Sunflex ^{db}	109	119	119		94
LRPB Flanker ^{db}	118	123	110	107	91
Coolah ^{db}	108	122	115	109	89
LRPB Raider ^{db}			110	106	92
LRPB Stealth ^{db}		117	112	107	90
LRPB Reliant ^{db}		121	103	106	88
Coota ^{db}		114	111	107	89
EGA Gregory ^{db}	108	116	99		88
IMI-TOLERANT					
Valiant ^{db} CL Plus				100	
Sowing date	14 May	24 Apr	27 Apr	27 Apr	28 Apr
Rainfall J–M (mm)	267	183	490	183	264
Rainfall A–O (mm)	142	179	212	270	391

Special thanks to 2022 trial cooperator, IJ & MA Hutchings.
Learn more via the [NVT Long Term Yield Reporter](#).

Table 12: Rolleston/Springsure early season wheat.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		3.87	2.14	2.61	6.83
LRPB Hellfire ^{db}	Trial failed				99
Coolah ^{db}		125	128	109	92
LRPB Flanker ^{db}		124	122	107	94
LRPB Stealth ^{db}		123	121	107	94
LRPB Reliant ^{db}		126	123	106	91
Sunflex ^{db}		116	122		96
Coota ^{db}		120	123	107	92
EGA Gregory ^{db}		121	122		90
Borlaug 100 ^{db}					112
LRPB Raider ^{db}				142	111
IMI-TOLERANT					
Valiant ^{db} CL Plus				94	
Sowing date	24 Apr	17 Apr	16 Apr	21 Apr	3 May
Rainfall J–M (mm)	267	160	316	209	187
Rainfall A–O (mm)	166	109	143	95	463

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

Wheat variety quality – Central Queensland

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

The following figures show the grain quality trends as histograms from 2021 and 2022 NVT averaged for trials in the Central Queensland 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 five NVT sites in Central Queensland in 2021.

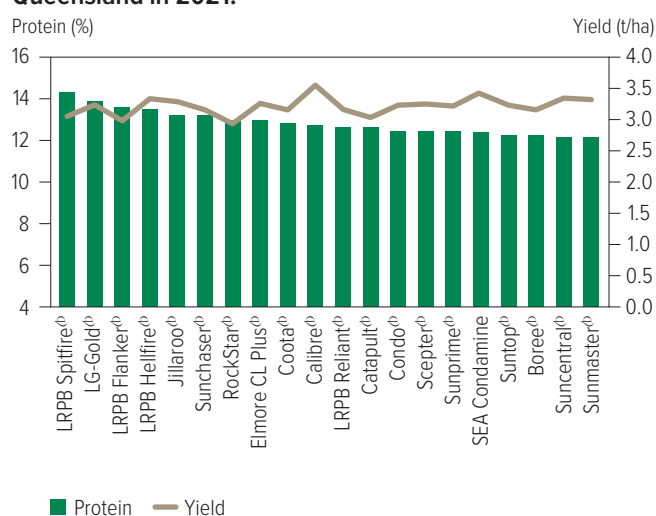


Figure 2: Protein (%) and yield (t/ha) comparisons for main season wheat varieties from four NVT sites in Central Queensland in 2022.

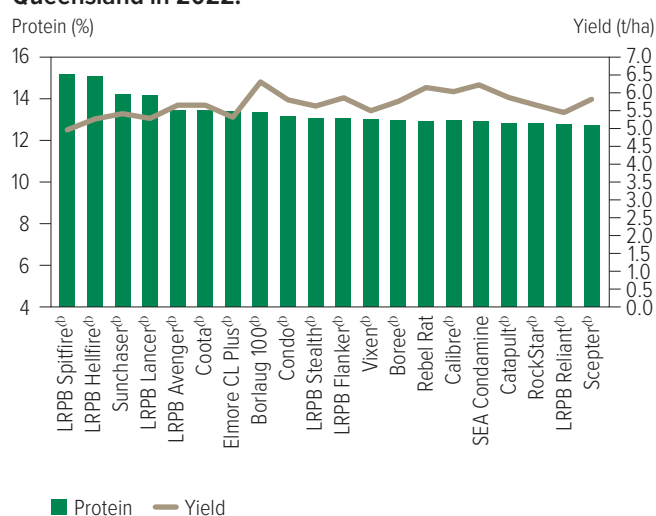


Figure 3: Protein (%) and yield (t/ha) comparisons for early season wheat varieties from five NVT sites in Central Queensland in 2021.

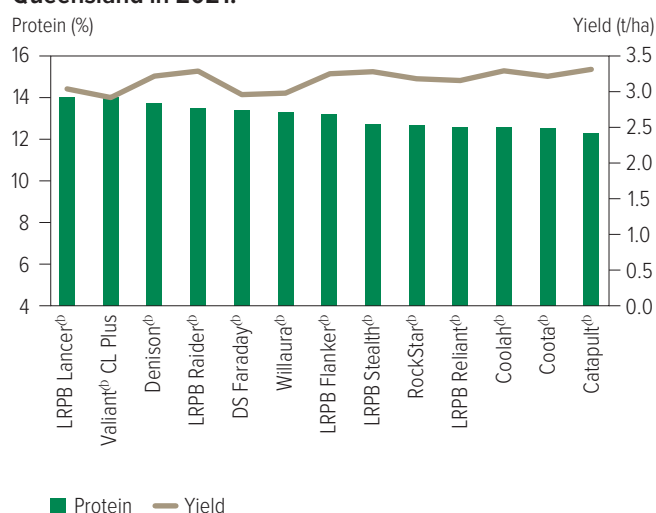
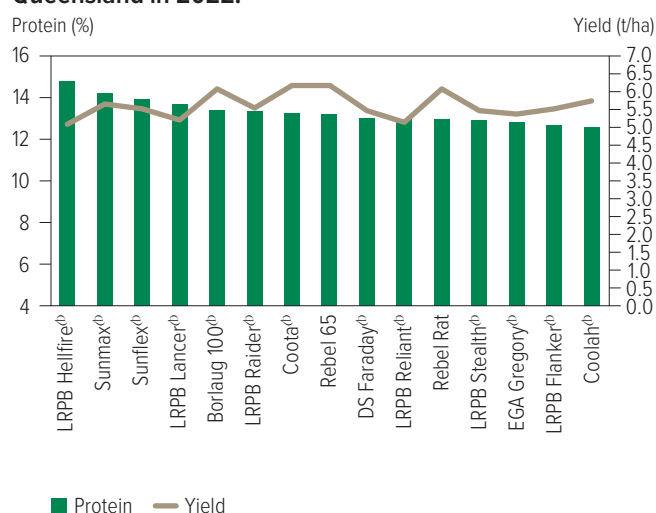


Figure 4: Protein (%) and yield (t/ha) comparisons for early season wheat varieties from five NVT sites in Central Queensland in 2022.



WHEAT

BARLEY

CHICKPEA

Test weight comparisons

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

Test weight (kg/hL)

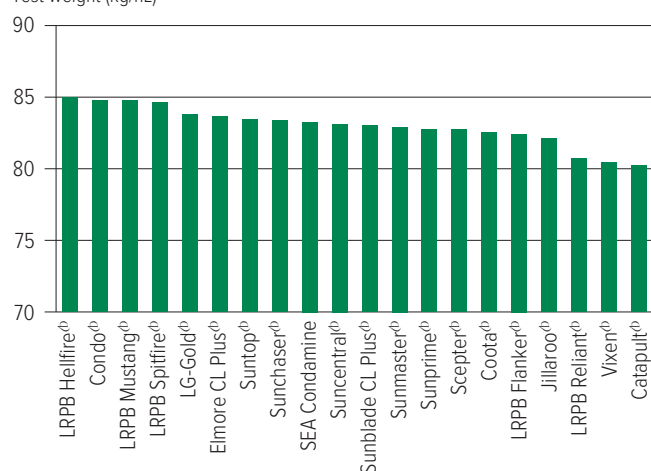


Figure 7: Test weight (kg/hL) comparisons for early season wheat varieties from five NVT sites in Central Queensland in 2021.

Test weight (kg/hL)

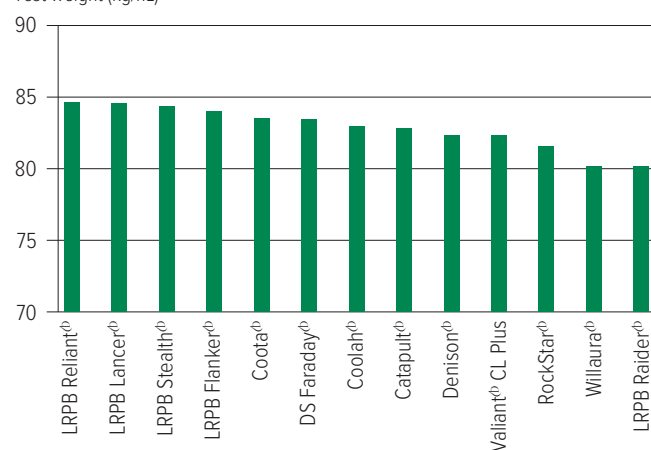


Figure 6: Test weight (kg/hL) comparisons for main season wheat varieties from four NVT sites in Central Queensland in 2022.

Test weight (kg/hL)

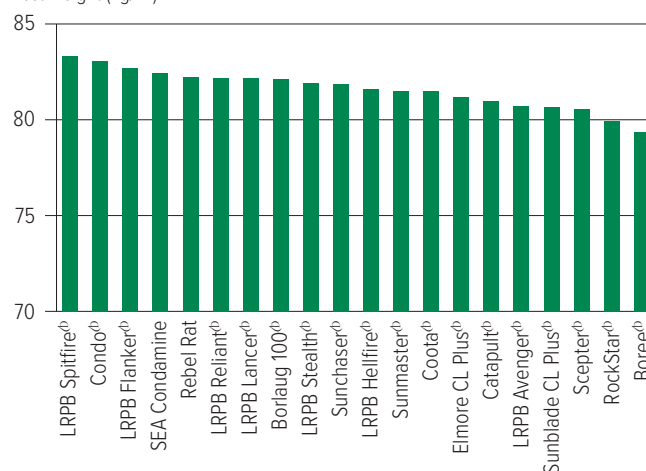
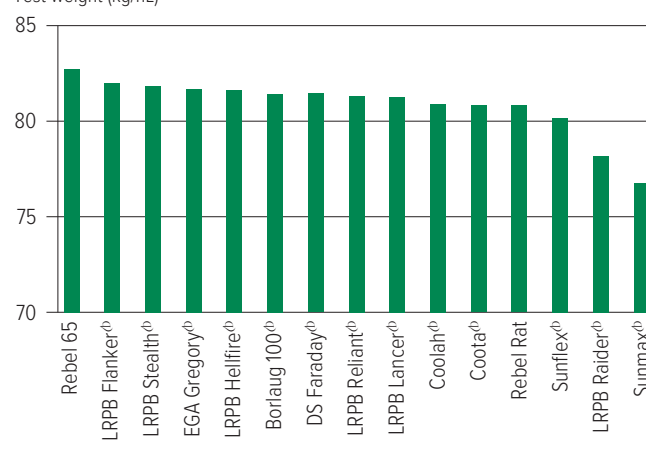


Figure 8: Test weight (kg/hL) comparisons for early season wheat varieties from five NVT sites in Central Queensland in 2022.

Test weight (kg/hL)



WHEAT

BARLEY

CHICKPEA

Screenings comparisons

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

Screenings (%<2.0mm)

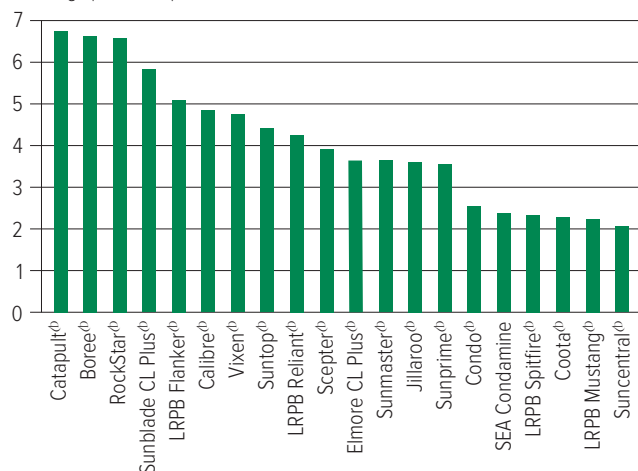


Figure 11: Screenings (<2.0mm) comparisons for early season wheat varieties from five NVT sites in Central Queensland in 2021.

Screenings (%<2.0mm)

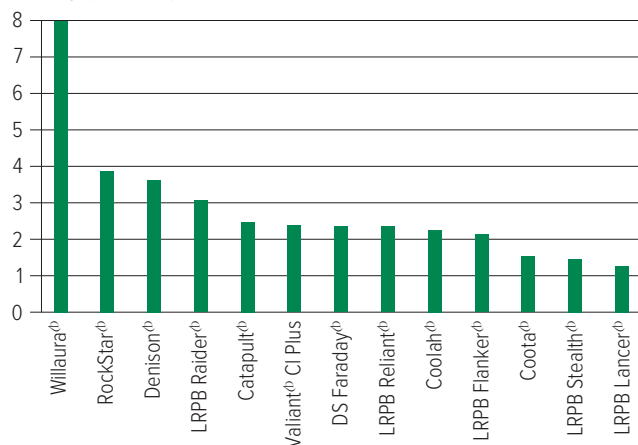


Figure 10: Screenings (<2.0mm) comparisons for main season wheat varieties from four NVT sites in Central Queensland in 2022.

Screenings (%<2.0mm)

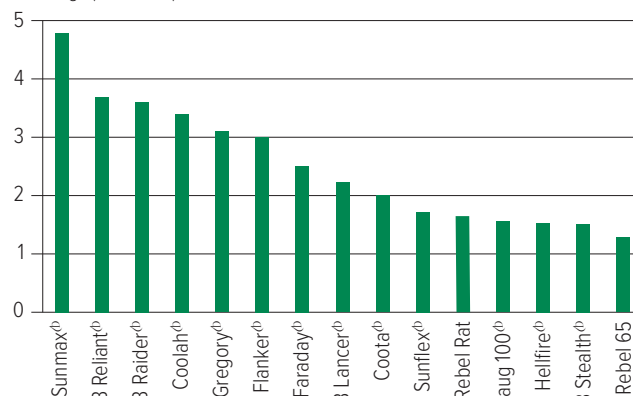
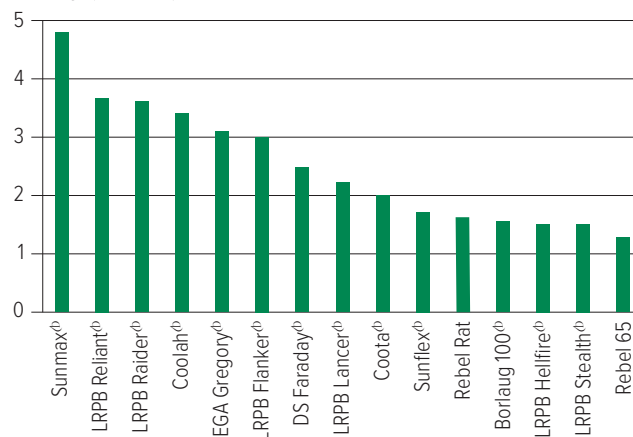


Figure 12: Screenings (<2.0mm) comparisons for early season wheat varieties from five NVT sites in Central Queensland in 2022.

Screenings (%<2.0mm)



WHEAT

BARLEY

CHICKPEA

Wheat variety disease ratings – Queensland

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

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

Table 13: Wheat disease guide for Queensland.

Variety	Leaf rust resistance	Stem rust resistance	Stripe rust (east coast resistance)	Black point	Crown rot resistance	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN tolerance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)	RLN tolerance (<i>Pratylenchus thornei</i>)	Yellow leaf spot resistance
Boree ^{db}	S	MR	SVS	S	S	S	I	MSS	MII	MRMS
Borlaug 100 ^{db}	MR	MR	SVS	MSS	MSS	S	T	MS	T	MRMS
Calibre ^{db}	S	MR	S	MS (P)	S	S	MT	MSS	MI	MRMS
Catapult ^{db}	S	MR	S	S	MSS	S	MII	MS	MT	MRMS
Condo ^{db}	S	MR	MS	MS	S	S	MT	MS	TMT	MS
Coolah ^{db}	RMR	MR	MSS	S	MSS	S	MT	MS	MT	MSS
Coota ^{db}	MR	RMR	S	MS	MSS	MR	MI	MS	MTMI	MSS
DS Faraday ^{db}	R#	RMR	MS	MSS	MSS	S	MTMI	MSS	MT	MSS
EG Titanium	MS	MS	MR	MSS	MSS	MSS	MTMI	MSS	MTMI	MSS
EGA Gregory ^{db}	RMR#	MR	MS	MSS	S	S	MT	MSS	MT	S
Jillaroo ^{db}	S	MS	MSS	MSS (P)	S	S	I	MS (P)	I	MRMS
LG-Gold ^{db}	S	MSS	SVS	S	MSS	S	MTMI	S	MII	S
LRPB Avenger ^{db}	S	MS	S	MS	SVS	MSS	MI	MS	MI	MS
LRPB Flanker ^{db}	RMR#	MR	MRMS	MS	MSS	S	MT	MSS	MT	MSS
LRPB Hellfire ^{db}	MSS	MR	MRMS	S	MSS	MSS	MTMI	MSS	MI	MSS
LRPB Lancer ^{db}	RMR	R	RMR	MRMS	MSS	S	MTMI	MS	TMT	MS
LRPB Mustang ^{db}	MSS	MRMS	MR	MS	MSS	S	MI	MSS	MTMI	MSS
LRPB Nighthawk ^{db}	MSS	RMR	MRMS	MS	MSS	MSS	IVI	MS	MI	MS
LRPB Raider ^{db}	RMR	RMR	MR	S (P)	S	MSS	MTMI	MS	MT	MSS
LRPB Reliant ^{db}	RMR	R	MR	MS	MS	SVS	MTMI	MSS	TMT	S
LRPB Spitfire ^{db}	S	MR	MR (S)	MSS	MS	MSS	MI	MS	MTMI	S
LRPB Stealth ^{db}	RMR#	R	RMR	MRMS	MSS	MSS	MTMI	S	MTMI	MS
Rebel 65	MS (P)	MSS (P)	MSS (P)	MSS (P)	MSS (P)	S	TMT	MS	MT	MSS (P)
Rebel Rat	MSS	MRMS	MS (P)	MSS (P)	S (P)	S	T	MSS	TMT	MRMS
RGT Zanzibar	SVS	VS	MRMS	MRMS	S	S	IVI	MS (P)	MI	MS
RockStar ^{db}	S	MRMS	S	MSS	S	MRMS	I	MS	MI	MRMS
Scepter ^{db}	MSS	MRMS	MSS	MS	MSS	S	MTMI	MSS	MT	MRMS
SEA Condamine	RMR#	MRMS	MSS	MRMS	MSS	S	MT	MS	MT	MSS
Severn ^{db}	MRMS	MS	RMR	MR	S	S		MRMS		MRMS
Sunblade CL Plus ^{db}	MSS	MS	MRMS	MRMS	S	MSS	MI	MRMS	MT	MSS
Suncentral ^{db}	RMR	MRMS	MSS	MRMS	MSS	MRMS	MI	MRMS	MT	MSS
Sunchaser ^{db}	R	MR	RMR	MRMS	MSS	MSS	MTMI	MSS	MT	MS
Sunflex ^{db}	RMR/S	MR	MRMS	MSS	MSS	S	MI	MSS	MI	MS
Sunmaster ^{db}	RMR#	MS	MRMS	MR	S	MRMS	MTMI	MS	TMT	MSS
Sunmax ^{db}	MS	MRMS	RMR	MRMS	MSS	S	MT	MS	MI	MSS
Sunprime ^{db}	MR#	MS	MS	MSS	S	S	MTMI	S	MT	MSS
Suntop ^{db}	MR	MRMS	MRMS	MSS	MSS	S	MT	MRMS	TMT	MSS
Valiant ^{db} CL Plus	S	MR	MSS	MS (P)	S	S	MII	S (P)	IVI	MRMS
Vixen ^{db}	SVS	MRMS	SVS	MSS	S	MRMS	I	MS	I	MRMS
DURUM										
Bitalli ^{db}	MR	RMR	MRMS	MS	SVS	MSS	MI	RMR	MII	MRMS
Caparoi ^{db}	RMR	MR	MS	MSS	VS	MS	MI	MR	MT	MR
DBA Bindaroi ^{db}	MR	MR	MS	MRMS	SVS	MRMS	MI	MR	MTMI	MRMS
DBA Lillaro ^{db}	RMR	RMR	MS	MS	SVS	MRMS	MI	RMR	MT	MRMS

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Table 13: Wheat disease guide for Queensland (continued).

Variety	Leaf rust resistance	Stem rust resistance	Stripe rust (east coast resistance)	Black point	Crown rot resistance	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN tolerance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)	RLN tolerance (<i>Pratylenchus thornei</i>)	Yellow leaf spot resistance
DBA Mataroi ^{db}	MR	MR	MS	MS	SVS	MS	MT	RMR	MI	MRMS
DBA Spes ^{db}	RMR	R	MS	MS	VS	MRMS	MTMI	RMR	MI	MRMS
DBA Vittaroi ^{db}	RMR	MR	MS	MSS	SVS	MS	I	MR	MI	MRMS
DBA-Artemis ^{db}	RMR	MR	MRMS	MS	VS	MS	MII	MR	MTMI	MRMS
Westcourt ^{db}	RMR	RMR	MR	MSS	VS	MS	MI	MR	MT	MRMS

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

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New barley varieties

The following information is for barley varieties released in the 12 months to the date when the MET analysis was published on NVT online.

Variety	Variety owner	Grain classification [#]	End point royalty* (\$)	Comments supplied by variety owner
Combat [Ⓓ]	InterGrain	Feed	3.50	Mid-maturity suited to all regions. Semi-prostrate growth habit that will provide more weed competition than Rosalind [Ⓓ] . A potential variety replacement for Rosalind [Ⓓ] with a more competitive plant type.
Titan AX [Ⓓ]	Australian Grain Technologies	Under malt evaluation	4.55	The world's first CoAXium® barley variety. Mid-season maturity, slightly later than Compass [Ⓓ] , similar to RGT Planet [Ⓓ] . Agronomically similar to Compass [Ⓓ] .
Zena [Ⓓ] CL	InterGrain	Under malt evaluation	4.25	Zena [Ⓓ] CL is an imidazolinone-tolerant barley variety best-suited to medium-high rainfall environments.

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

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

Barley variety yield performance – Central Queensland

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: Emerald/Springsure main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		3.63	2.83	3.28	4.71
Yeti [®]	No trial	131	108	121	97
Leabrook [®]		130	108	121	97
Combat [®]				115	105
RGT Planet [®]		111	105	116	108
Beast [®]		122	102	117	91
Compass [®]		128	97	113	88
Commander [®]		116	99	102	97
Laperouse [®]		111	100	102	99
Rosalind [®]		106	95	101	101
LG Alestar [®]				95	102
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Commodus [®] CL			100	111	91
Zena [®] CL				102	109
Titan AX [®]					94
Maximus [®] CL		92	94	85	99
Sowing date		17 Apr	16 Apr	22 Apr	4 May
Rainfall J–M (mm)		160	316	187	98
Rainfall A–O (mm)		109	143	107	370

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

Table 2: Jambin main season barley.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	2.94	3.12	4.22		3.68
Yeti [®]		115	107	Compromised trial	106
Leabrook [®]	114	117	101		103
Combat [®]					99
RGT Planet [®]	108	116	98		105
Beast [®]		117	97		100
Compass [®]	108	113	95		101
Laperouse [®]	99	99	106		105
Rosalind [®]	98	103	97		104
Minotaur [®]					94
Commander [®]	103	100	97		100
HERBICIDE TOLERANT (GROUP 1 AND IMIDAZOLINONE)					
Commodus [®] CL			97		100
Zena [®] CL					105
Maximus [®] CL		84	108		104
Titan AX [®]					97
Sowing date	14 May	24 Apr	27 Apr	27 Apr	28 Apr
Rainfall J–M (mm)	267	183	490	183	264
Rainfall A–O (mm)	142	179	212	270	391

Special thanks to 2022 trial cooperator, IJ and MA Hutchings.
Learn more via the [NVT Long Term Yield Reporter](#).

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Barley variety quality – Central Queensland

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

The following figures show the grain quality trends as histograms from 2021 and 2022 NVT averaged for trials in the Central Queensland 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 two NVT sites in Central Queensland in 2021.

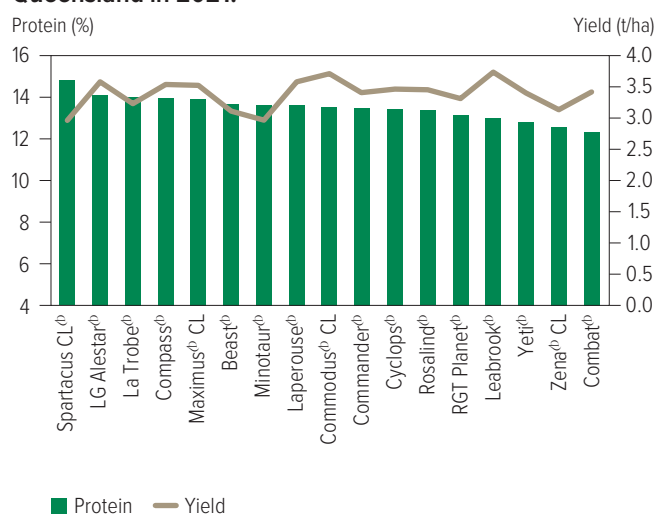
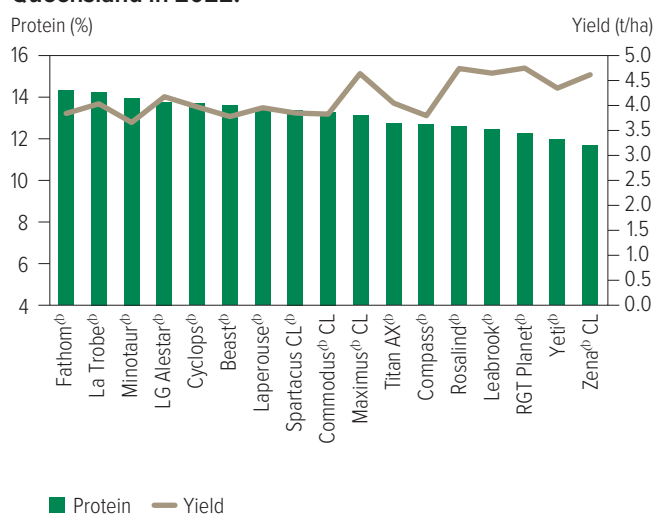


Figure 2: Protein (%) and yield (t/ha) comparisons for main season barley varieties from two NVT sites in Central Queensland in 2022.



Test weight comparisons

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

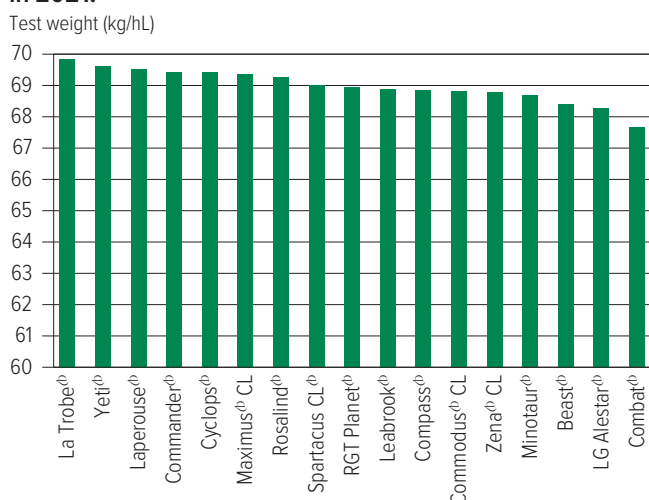
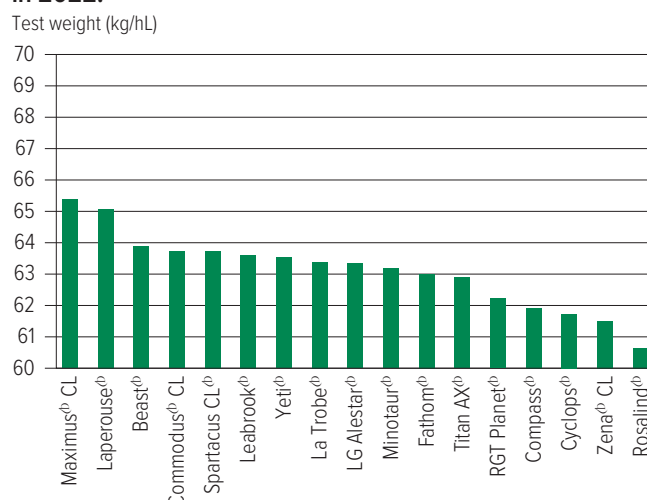


Figure 4: Test weight (kg/hL) comparisons for main season barley varieties from two NVT sites in Central Queensland in 2022.



Screenings comparisons

Figure 5: Screenings (<2.2mm) comparisons for main season barley varieties from two NVT sites in Central Queensland in 2021.

Screenings (%<2.2mm)

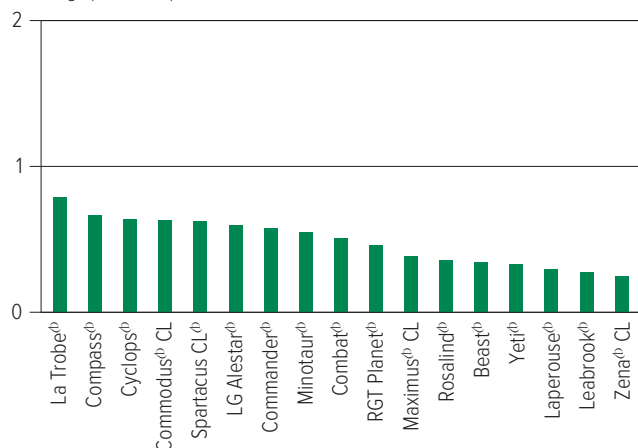
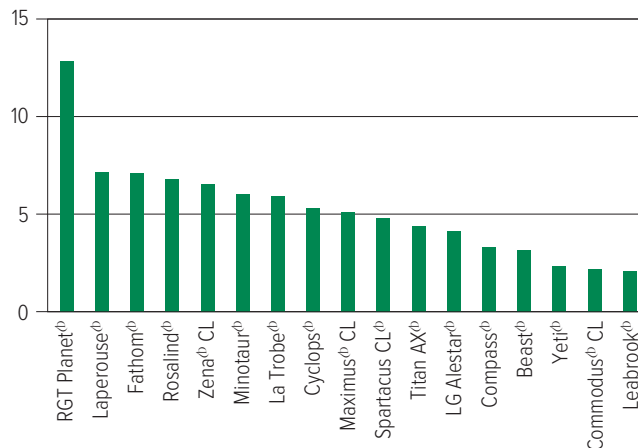


Figure 6: Screenings (<2.2mm) comparisons for main season barley varieties from two NVT sites in Central Queensland in 2022.

Screenings (%<2.2mm)



Retention comparisons

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

Retention (%>2.5mm)

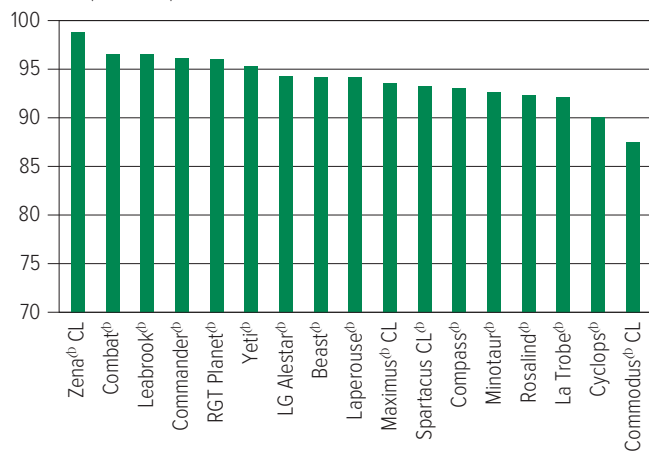
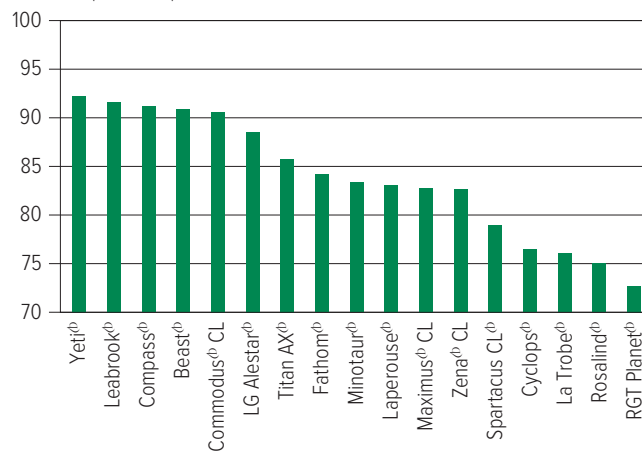


Figure 8: Retention (>2.5mm) comparisons for main season barley varieties from two NVT sites in Central Queensland in 2022.

Retention (%>2.5mm)



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Barley variety disease ratings – Queensland

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

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

Table 3: Barley disease guide for Queensland.

Variety	Black point	Crown rot	Leaf rust	Net form net blotch	Spot form net blotch	Powdery mildew	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN tolerance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)	RLN tolerance (<i>Pratylenchus thornei</i>)	Ramularia
Beast ^{db}	MSS	S	S	MRMS	MS	S	MRMS	MI	MRMS	T	SVS (P)
Bottler ^{db}	MRMS	SVS	MS	MS	MSS	RMR	MS	MT	RMR	MI	SVS (P)
Combat ^{db}	MSS (P)	S (P)	MS	MRMS	RMR	MS	MR		MS		SVS (P)
Commander ^{db}	MSS	S	SVS	MS-S	MS	MSS	MRMS	MTMI	MRMS	MT	SVS (P)
Commodus ^{db} CL	MS	S (P)	S	MRMS	MRMS	MS	MRMS	TMT	MRMS	MTMI	SVS (P)
Compass ^{db}	MSS	S	VS	MS	MS	MSS	MRMS	TMT	MR	TMT	SVS (P)
Cyclops ^{db}	MS	S (P)	S	MRMS	MRMS	S	MRMS	MI	MRMS	MTMI	SVS (P)
Fathom ^{db}	MSS	SVS	MS	MS	MR	MRMS	MRMS	T	MR	TMT	SVS (P)
La Trobe ^{db}	MSS	S	S	MS	S	MSS	MRMS	MT	MRMS	MT	SVS (P)
Laperouse ^{db}	MSS	S	SVS	MRMS	MR	MSS	MR	MI	MR	MTMI	VS (P)
Leabrook ^{db}	MS	S	SVS	MS	MRMS	S	MRMS	MT	RMR	TMT	VS (P)
LG Alestar ^{db}	MRMS	S	MS	MR-MSS	MSS	MR	MR	I	MR	MTMI	SVS (P)
Maximus ^{db} CL	MSS	S	S	MRMS	MRMS	MS	MRMS	MT	MR	MTMI	VS (P)
Minotaur ^{db}	MS	MS	SVS	MRMS	MSS	S	MRMS	MI	MR	MT	SVS (P)
RGT Planet ^{db}	MRMS	MSS	MS	MRMS-S	S	RMR	MRMS	MT	MR	MI	VS (P)
Rosalind ^{db}	MS	MSS	MRMS	MRMS	MS	MSS	MRMS	MT	MR	TMT	VS (P)
Spartacus CL ^{db}	MSS	S	MSS	MS	S	MSS	MRMS	MII	MRMS	MI	VS (P)
Titan AX ^{db}	MSS (P)	MSS (P)	S	MRMS	MRMS	MS	R		MR		VS (P)
Yeti ^{db}	MSS	S	S	MS	MR	MSS	MR	TMT	MR	TMT	VS (P)
Zena ^{db} CL	MRMS (P)	MSS (P)	MSS	MS	MSS	R	MRMS		MR		VS (P)

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.

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Chickpea variety yield performance – Central Queensland

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: Emerald/Springsure desi chickpea.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)				2.43	3.35
PBA Drummond ^{db}	109	108	102	100	115
PBA Seamer ^{db}	102	101	101	105	110
PBA Pistol ^{db}	92	101	98	98	116
CBA Captain ^{db}	104	99	99	99	94
Kyabra ^{db}	88	100	95	89	100
PBA HatTrick ^{db}	94	92	95	93	84
Sowing date	11 May	7 May	1 May	11 May	27 May
Rainfall J–M (mm)	267	160	316	187	98
Rainfall A–O (mm)	166	109	143	107	514

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

Table 2: Jambin desi chickpea.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)	1.88		3.05	2.48	
PBA Drummond ^{db}	116	Trial failed	106	110	Trial failed
PBA Seamer ^{db}	97		101	104	
CBA Captain ^{db}	104		98	98	
PBA Pistol ^{db}	88		103	102	
Kyabra ^{db}	91		102	94	
PBA HatTrick ^{db}	90		94	88	
Sowing date	14 May	9 May	14 May	10 May	14 Jun
Rainfall J–M (mm)	267	183	490	183	264
Rainfall A–O (mm)	142	179	212	270	391

Special thanks to 2022 trial cooperator, IJ & MA Hutchings.
Learn more via the [NVT Long Term Yield Reporter](#).

Table 3: Kilcummin desi chickpea.

Year	2018	2019	2020	2021	2022
Mean yield (t/ha)		1.64	1.88	2.15	3.88
PBA Pistol ^{db}	No trial	107	105	98	105
PBA Seamer ^{db}		109	103	94	107
PBA Drummond ^{db}		106	96	106	103
CBA Captain ^{db}		97	96	100	99
Kyabra ^{db}		92	100	108	94
PBA HatTrick ^{db}		91	97	99	96
Sowing date		2 May	30 Apr	29 Apr	6 May
Rainfall J–M (mm)		267	227	224	28
Rainfall A–O (mm)		51	47	173	450

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

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

Chickpea variety disease ratings – Queensland

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

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

Table 4: Chickpea disease guide for Queensland.

Variety	Ascochyta blight (pathogen group 2 – north)	Phytophthora root rot	RLN resistance (<i>Pratylenchus neglectus</i>)	RLN tolerance (<i>Pratylenchus neglectus</i>)	RLN resistance (<i>Pratylenchus thornei</i>)	RLN tolerance (<i>Pratylenchus thornei</i>)
DESI						
CBA Captain [Ⓛ]	MS	S	MR	MT	MS	MT
Kyabra [Ⓛ]	VS	VS	MRMS	MT	S	MT
PBA Boundary [Ⓛ]	S	VS	RMR	MI	MRMS	MT
PBA Drummond [Ⓛ]	VS	VS	MR	TMT	MRMS	MT
PBA HatTrick [Ⓛ]	S	S	MRMS	MT	MRMS	MTMI
PBA Pistol [Ⓛ]	VS		RMR	T	MS	MII
PBA Seamer [Ⓛ]	MS	S	MRMS	MI	MRMS	MTMI

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

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

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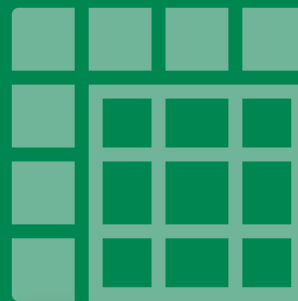
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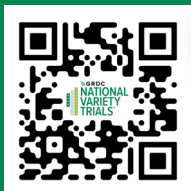


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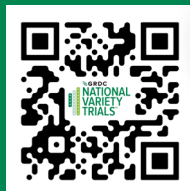
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