



GRDC

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CORPORATION

2023 QUARANTINE REPORT



SOUTH AUSTRALIA

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Important information for quarantined trials

To ensure the NVT results remain robust, relevant and of the highest quality, it is agreed policy to exclude trials that have been compromised by events that affect the accuracy of the results from being reported at the single site level. The damage caused by frost, wind, hail, drought and other events is random, uncontrollable, unpredictable and extremely variable in both timing and severity of the damage caused. Therefore, variety tolerances to frost and many other random climatic events cannot be measured or gauged in field-based NVT.

When uncontrolled events occur that are not uniform in their impact, the results are skewed and no longer representative of varietal performance. In these scenarios, the results are quarantined to avoid skewing the overall NVT results.

****WARNING****

Results presented within this report provide growers with a transparent account of NVT trials that were severely compromised by various factors rendering them unsuitable for inclusion in reporting. These trials were harvested, but the results were deemed of no value for the purposes of head-to-head variety comparison and should not be used for any variety selection decisions.

Replication of these results is strictly prohibited, and ANY parties MUST NOT use them for producing variety brochures and marketing material, sowing guides, grower notes or ANY OTHER publication or communication activity.

Cover: NVT Barley.

Photo: Ben O'Connor NVT Systems Manager

Quarantined trials list

Table 1: 2023 South Australian quarantined trials.

Site description	Crop	Trial code	Sowing date	Harvest date	Mean yield	CV value	P value	F value
Mintaro	Wheat	WMaA23MINT5	22-May	4-Dec	2.30	5.94	<0.001	26.72
Rudall	Wheat	WMaA23RUDA5	15-May	13-Nov	1.97	17.08	<0.001	3.65
Warramboo	Wheat	WMaA23WARR5	4-May	1-Nov	0.96	13.91	<0.001	604.78
Mintaro	Wheat	WMDA23MINT5	22-May	4-Dec	1.04	18.48	<0.001	8.90
Paskeville	Wheat	WMDA23PASK5	16-May	12-Nov	2.92	9.07	0.30	1.47
Cooke Plains	Barley	BMaA23COOK5	8-Jun	20-Nov	4.83	6.35	0.98	22.58
Arthurton	Canola	CHTA23ARTH5	6-May	3-Nov	2.16	7.94	0.43	1.04
Lock	Canola	CLGA23LOCK5	1-May	26-Oct	2.69	4.40	<0.001	7.97
Lock	Canola	CLIA23LOCK5	1-May	26-Oct	2.75	4.41	0.002	3.15
Lock	Canola	CLTA23LOCK5	1-May	26-Oct	2.68	4.41	<0.001	6.44
Kulpara	Chickpea	DMDA23KULP5	23-May	13-Nov	0.61	17.31	<0.001	5.41
Kulpara	Chickpea	DMKA23KULP5	23-May	13-Nov	0.52	20.43	0.06	2.19
Lameroo	Faba Bean	FMaA23LAME5	4-May	8-Nov	1.76	7.73	0.003	7.98
Rudall	Field Pea	PMaA23RUDA5	22-May	3-Nov	1.22	8.85	<0.001	276.53
Willamulka	Lentil	QMaA23WILL5	22-May	26-Oct	1.31	4.26	<0.001	463.95
Keith	Lupin	LMNA23KEIT5	26-May	4-Dec	0.23	23.32	<0.001	14.08

Values listed in red are outside the acceptable range: CV $\geq 15\%$, P value ≥ 0.2 and F value ≤ 1.0 .

2023 quarantine report South Australian wheat.

Table 2: Main season wheat trial yield data

Region	Mid North		Lower EP		Upper EP	
Locality	Mintaro		Rudall		Warramboo	
Trial ID	WMaA23MINT5		WMaA23RUDA5		WMaA23WARR5	
Variety name	tonnes/ha	% site mean	tonnes/ha	% site mean	tonnes/ha	% site mean
Ascot	2.09	91	1.68	86	-	-
Ballista	2.76	120	1.60	81	0.88	92
Boree	2.50	109	2.41	123	0.99	104
Brumby	2.39	104	2.43	123	0.90	94
Calibre	2.66	116	1.84	93	0.92	96
Catapult	2.13	92	2.67	136	1.46	152
Chief CL Plus	2.20	96	1.53	78	0.80	83
Cosmick	2.54	111	1.58	81	1.24	130
Cutlass	2.11	92	2.24	114	1.48	155
Denison	2.47	108	2.54	129	-	-
Dozer CL Plus	2.64	115	2.00	102	0.83	86
EG Titanium	2.42	105	2.01	102	0.64	67
Emu Rock	2.16	94	1.11	56	0.68	71
Genie	1.72	75	2.11	107	1.68	176
Hammer CL Plus	2.49	108	1.86	95	0.43	45
Kingston	2.39	104	1.92	98	-	-
LRPB Anvil CL Plus	2.29	100	0.90	46	0.77	81
LRPB Bale	1.36	59	-	-	-	-
LRPB Dual	1.83	80	1.55	79	0.98	103
LRPB Major	1.81	79	2.24	114	1.08	113
LRPB Matador	2.19	95	2.06	105	0.98	102
LRPB Oryx	1.78	78	-	-	-	-
LRPB Trojan	2.26	98	1.82	92	0.67	70
Mace	2.42	105	1.82	93	0.63	65
Razor CL Plus	2.26	98	1.51	77	0.52	55
Reilly	2.36	103	1.59	81	1.03	107
RGT Zanzibar	1.50	65	-	-	-	-
RockStar	2.27	99	2.47	126	0.69	72
Scepter	2.44	106	1.80	91	0.91	95
Sheriff CL Plus	2.28	99	1.83	93	0.97	101

Table 2: Main season wheat trial yield data

Region	Mid North		Lower EP		Upper EP	
Locality	Mintaro		Rudall		Warramboo	
Trial ID	WMaA23MINT5		WMaA23RUDA5		WMaA23WARR5	
Variety name	tonnes/ha	% site mean	tonnes/ha	% site mean	tonnes/ha	% site mean
Soaker	2.24	98	2.01	102	0.85	89
Sunblade CL Plus	2.48	108	2.14	109	1.30	136
Sunmaster	1.99	87	2.57	131	1.42	149
Tomahawk CL Plus	2.58	112	1.81	92	0.95	99
Valiant CL Plus	1.40	61	1.90	97	-	-
Vixen	2.61	114	1.40	71	0.53	55
Yitpi	1.60	70	2.13	109	1.01	106
Zen	2.27	99	1.79	91	-	-
Site mean (t/ha)	2.30	100	1.97	100	0.96	100
CV (%)	5.94		17.08		13.91	
Probability	<0.001		<0.001		<0.001	
LSD (t/ha)	0.25		0.58		0.23	
Sowing date	22-May-2023		15-May-2023		04-May-2023	
Trial comments	WARNING: This trial was impacted by excessive weed pressure and is not released. Weed pressure will affect varieties differently and trial results will be unreliable and not a true reflection of variety performance or ranking. The results to be published in the quarantine report. These trial results should not be used to make variety selection decisions.		WARNING: THIS TRIAL WAS SEVERELY AFFECTED BY FROST and is not released. Frost will affect varieties differently and trial results will be unreliable and not a true reflection of variety performance or ranking. The results will be published in the quarantine report. These trial results should not be used to make variety selection decisions.		WARNING: THIS TRIAL WAS SEVERELY AFFECTED BY FROST and is not released. Frost will affect varieties differently and trial results will be unreliable and not a true reflection of variety performance or ranking. The results will be published in the quarantine report. These trial results should not be used to make variety selection decisions.	

Table 3: Durum wheat trial yield data.

Region	Mid North		Yorke P	
Locality	Mintaro		Paskeville	
Trial ID	WMDA23MINT5		WMDA23PASK5	
Variety name	tonnes/ha	% site mean	tonnes/ha	% site mean
Bitalli	-	-	2.94	101
Caparoi	0.78	76	2.96	102
DBA Bindaroi	0.81	78	2.64	91
DBA Mataroi	0.83	80	3.20	110
DBA Spes	-	-	2.87	99
DBA Vittaroi	-	-	2.79	96
DBA-Artemis	0.81	78	2.76	95
DBA-Aurora	0.96	92	2.99	102
Hyperno	1.34	130	2.80	96
Patron	1.82	175	2.90	100
Saintly	1.14	110	3.22	110
Westcourt	1.37	132	2.67	92
Site mean (t/ha)	1.04	100	2.92	100
CV (%)	18.48		9.07	
Probability	<0.001		0.30	
LSD (t/ha)	0.30		0.42	
Sowing date	22-May-2023		16-May-2023	
Trial comments	WARNING: This trial was impacted by excessive weed pressure and is not released. Weed pressure will affect varieties differently and trial results will be unreliable and not a true reflection of variety performance or ranking. The results to be published in the quarantine report. These trial results should not be used to make variety selection decisions.		WARNING: Trial has a high p-value (0.30) indicating low significance of variety effect. Trial is not released and will be available via the quarantine report. These trial results should not be used to make variety selection decisions.	

2023 quarantine report South Australian barley.

Table 4: Barley main season trial yield data.

Region	Murray Mallee	
Locality	Cooke Plains	
Trial ID	BMAA23COOK5	
Variety name	tonnes/ha	% site mean
Alestar	4.70	97
Beast	4.67	97
Buff	4.94	102
Combat	4.95	102
Commander	4.68	97
Commodus CL	4.92	102
Compass	4.55	94
Cyclops	4.88	101
Fathom	4.90	101
La Trobe	4.85	100
Laperouse	4.97	103
Leabrook	4.79	99
Maximus CL	4.72	98
Minotaur	4.93	102
Neo CL	5.06	105
RGT Planet	4.52	94
Rosalind	4.66	96
Scope CL	4.83	100
Spartacus CL	4.63	96
Spinnaker	4.79	99
Titan AX	4.76	99
Yeti	4.94	102
Zena CL	4.87	101
Site mean (t/ha)	4.83	100
CV (%)	6.35	
Probability	0.98	
LSD (t/ha)	0.49	
Sowing date	08-Jun-2023	
Trial comments	WARNING: Trial has a high p-value (0.98) indicating low significance of variety effect. Trial is not released and will be available via the quarantine report. These trial results should not be used to make variety selection decisions.	

2023 quarantine report South Australian canola.

Table 5: Medium-high rainfall triazine tolerant trial yield data.

Region	Yorke P	
Locality	Arthurton	
Trial ID	CHTA23ARTH5	
Variety name	tonnes/ha	% site mean
ATR Bonito	1.94	90
Bandit TT	2.03	94
DG BIDGEE TT	2.16	100
DG Torrens TT	2.04	94
Hyola Blazer TT	2.39	110
Hyola Defender CT	2.28	106
Hyola Enforcer CT	2.22	103
HyTTec Trident	2.17	100
HyTTec Trifecta	2.12	98
HyTTec Trophy	2.27	105
InVigor LT 4530P	2.20	102
InVigor T 4510	2.16	100
InVigor T 4511	2.13	99
InVigor T 6010	2.13	99
PY520TC	2.02	93
Renegade TT	2.19	101
RGT Baseline TT	2.08	96
RGT Capacity TT	2.21	102
SF Dynatron TT	2.05	95
Site mean (t/ha)	2.16	100
CV (%)	7.94	
Probability	0.43	
LSD (t/ha)	0.29	

Sowing date 06-May-2023

Trial comments

WARNING: Trial has a high p-value (0.43) indicating low significance of variety effect. Trial is not released and will be available via the quarantine report. These trial results should not be used to make variety selection decisions.

Table 6: Low-medium rainfall glyphosate tolerant trial yield data.

Region	Upper EP	
Locality	Lock	
Trial ID	CLGA23LOCK5	
Variety name	tonnes/ha	% site mean
DG Lofty TF	2.53	94
Hyola Battalion XC	2.53	94
Hyola Garrison XC	2.67	99
Hyola Regiment XC	2.58	96
InVigor LR 4540P	2.98	111
InVigor R 4022P	2.67	99
InVigor R 4520P	2.89	107
Nuseed Emu TF	2.82	105
Nuseed Hunter TF	2.94	109
Nuseed Raptor TF	2.87	106
Pioneer 44Y27 (RR)	2.40	89
Pioneer 44Y30 RR	2.85	106
PY323G	3.00	111
PY422G	2.53	94
PY424GC	2.72	101
Site mean (t/ha)	2.69	100
CV (%)	4.40	
Probability	<0.001	
LSD (t/ha)	0.20	
Sowing date	01-May-2023	
Trial comments	<p>WARNING: Trial is not released due to variability caused by mechanical damage. The trial results would be unreliable and not a true reflection of variety performance. Results to be published in the quarantine report. These trial results should not be used to make variety selection decisions.</p>	

Table 7: Low-medium rainfall imidazolinone tolerant trial yield data.

Region	Upper EP	
Locality	Lock	
Trial ID	CLIA23LOCK5	
Variety name	tonnes/ha	% site mean
Hyola Continuum CL	2.76	100
Hyola Solstice CL	2.69	98
Nuseed Ceres IMI	2.77	100
Pioneer 43Y92 (CL)	2.44	88
Pioneer 44Y94 CL	2.80	101
PY421C	2.86	104
Site mean (t/ha)	2.75	100
CV (%)	4.41	
Probability	0.00	
LSD (t/ha)	0.20	
Sowing date	01-May-2023	
Trial comments	WARNING: Trial is not released due to variability caused by mechanical damage. The trial results would be unreliable and not a true reflection of variety performance. Results to be published in the quarantine report. These trial results should not be used to make variety selection decisions.	

Table 8: Low-medium rainfall triazine tolerant trial yield data.

Region	Upper EP	
Locality	Lock	
Trial ID	CLTA23LOCK5	
Variety name	tonnes/ha	% site mean
ATR Bluefin	2.33	87
ATR Bonito	2.30	86
ATR Swordfish	2.42	90
Bandit TT	2.61	97
DG Avon TT	2.37	88
DG Torrens TT	2.55	95
Hyola Blazer TT	2.70	101
Hyola Defender CT	2.79	104
Hyola Enforcer CT	2.81	105
HyTTec Trident	2.96	110
HyTTec Trophy	2.92	109
HyTTec Velocity	2.95	110
InVigor LT 4530P	2.57	96
InVigor T 4510	2.83	105
InVigor T 4511	2.78	103
Renegade TT	2.69	100
RGT Capacity TT	2.52	94
SF Spark TT	2.85	106
Site mean (t/ha)	2.68	100
CV (%)	4.41	
Probability	<0.001	
LSD (t/ha)	0.20	

Sowing date 01-May-2023

Trial comments

WARNING: Trial is not released due to variability caused by mechanical damage. The trial results would be unreliable and not a true reflection of variety performance. Results to be published in the quarantine report. These trial results should not be used to make variety selection decisions.

2023 quarantine report South Australian chickpea.

Table 9: Desi chickpea trial yield data.

Region	Yorke P	
Locality	Kulpara	
Trial ID	DMDA23KULP5	
Variety name	tonnes/ha	% site mean
CBA Captain	0.69	113
Neelam	0.73	119
PBA Maiden	0.71	116
PBA Slasher	0.71	115
PBA Striker	0.77	126
Site mean (t/ha)	0.61	100
CV (%)	17.31	
Probability	<0.001	
LSD (t/ha)	0.17	
Sowing date	23-May-2023	
Trial comments	WARNING: This trial was impacted by excessive weed pressure and is not released. Weed pressure will affect varieties differently and trial results will be unreliable and not a true reflection of variety performance or ranking. The results to be published in the quarantine report. These trial results should not be used to make variety selection decisions.	

Table 10: Kabuli chickpea trial yield data.

Region	Yorke P	
Locality	Kulpara	
Trial ID	DMKA23KULP5	
Variety name	tonnes/ha	% site mean
Almaz	0.39	75
Genesis 090	0.50	96
PBA Magnus	0.65	125
PBA Monarch	0.61	117
PBA Royal	0.46	88
Site mean (t/ha)	0.52	100
CV (%)	20.43	
Probability	0.06	
LSD (t/ha)	0.18	
Sowing date	23-May-2023	
Trial comments	<p>WARNING: This trial was impacted by excessive weed pressure and is not released. Weed pressure will affect varieties differently and trial results will be unreliable and not a true reflection of variety performance or ranking. The results to be published in the quarantine report. These trial results should not be used to make variety selection decisions.</p>	

2023 quarantine report South Australian faba bean.

Table 11: Faba bean trial yield data.

Region	Murray Mallee	
Locality	Lameroo	
Trial ID	FMaA23LAME5	
Variety name	tonnes/ha	% site mean
Farah	1.80	102
Fiesta VF	1.79	101
Nura	1.80	102
PBA Amberley	1.71	97
PBA Bendoc	1.83	104
PBA Marne	2.09	118
PBA Rana	1.29	73
PBA Samira	1.44	82
PBA Zahra	1.95	111
Site mean (t/ha)	1.76	100
CV (%)	7.73	
Probability	0.00	
LSD (t/ha)	0.23	

Sowing date 04-May-2023

Trial comments

WARNING: Trial is not released due to excessive pod drop caused by strong winds. This affects varieties differently and trial results will be unreliable and not a true reflection of variety performance or ranking. Results to be published in the quarantine report. These trial results should not be used to make variety selection decisions.

2023 quarantine report South Australian field pea.

Table 12: Field pea trial yield data.

Region	Lower EP	
Locality	Rudall	
Trial ID	PMaA23RUDA5	
Variety name	tonnes/ha	% site mean
APB Bondi	1.39	114
GIA Kastar	0.81	66
GIA Ourstar	0.75	61
Kaspa	1.38	113
PBA Butler	1.39	114
PBA Gunyah	1.38	113
PBA Noosa	1.17	96
PBA Oura	1.02	83
PBA Pearl	1.09	89
PBA Percy	1.22	100
PBA Taylor	1.34	110
PBA Wharton	1.03	84
Site mean (t/ha)	1.22	100
CV (%)	8.85	
Probability	<0.001	
LSD (t/ha)	0.18	

Sowing date	22-May-2023
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Trial comments

WARNING: THIS TRIAL WAS SEVERELY AFFECTED BY FROST and is not released. Frost will affect varieties differently and trial results will be unreliable and not a true reflection of variety performance or ranking. The results will be published in the quarantine report. These trial results should not be used to make variety selection decisions.

2023 quarantine report South Australian lentil.

Table 13: Lentil trial yield data.

Region	Yorke P	
Locality	Willamulka	
Trial ID	QMaA23WILL5	
Variety name	tonnes/ha	% site mean
ALB Terrier	1.40	107
GIA Leader	1.06	81
GIA Lightning	1.52	116
GIA Metro	0.99	76
GIA Sire	1.08	82
GIA Thunder	1.37	105
Nipper	1.02	78
PBA Ace	1.43	109
PBA Bolt	1.43	110
PBA Hallmark XT	1.34	103
PBA HighlandXT	1.51	115
PBA Hurricane XT	1.27	97
PBA Jumbo2	1.37	105
PBA Kelpie XT	1.37	105
Site mean (t/ha)	1.31	100
CV (%)	4.26	
Probability	<0.001	
LSD (t/ha)	0.10	

Sowing date 22-May-2023

Trial comments

WARNING: Trial is not released due to excessive pod drop caused by strong winds. This affects varieties differently and trial results will be unreliable and not a true reflection of variety performance or ranking. Results to be published in the quarantine report. These trial results should not be used to make variety selection decisions.

2023 quarantine report South Australian lupin.

Table 14: Lupin trial yield data.

Region	South East	
Locality	Keith	
Trial ID	LMNA23KEIT5	
Variety name	tonnes/ha	% site mean
Coyote	0.39	171
Gidgee	0.09	39
Jenabillup	0.26	114
Lawler	0.13	56
Mandelup	0.25	110
PBA Barlock	0.19	85
PBA Bateman	0.41	181
PBA Gunyidi	0.41	182
PBA Jurien	0.24	105
Rosemont	0.14	63
Wonga	0.20	90
Site mean (t/ha)	0.23	100
CV (%)	23.32	
Probability	<0.001	
LSD (t/ha)	0.09	
Sowing date	26-May-2023	

Trial comments

WARNING: This trial was impacted by excessive weed pressure and is not released. Weed pressure will affect varieties differently and trial results will be unreliable and not a true reflection of variety performance or ranking. The results to be published in the quarantine report. These trial results should not be used to make variety selection decisions.