

Wheat variety response to herbicides in South Australia

This research has been conducted across the mid north of South Australia to determine if new and existing varieties of wheat vary in tolerance to commonly used herbicides

The sensitivity of the variety is summarised, using the following symbols based on the yield responses across all trials:

-	not tested or insufficient data
✓ (2)	no significant yield reductions at recommended rates or higher than recommended rates in (2) trials
N (w/z)	narrow margin, significant yield reductions at higher than recommended rate, but not at recommended rate
significant event occurring w years out of z years tested. Eg. (2/5) = tested for 5 years. 2 returning a significant yield loss	
x% (1/2)	yield reduction (warning) significant yield reduction at recommended rate in 1 trial only in z years of testing
x% (w/z)	yield reductions (warning) significant yield reductions at recommended rate in w years out of z years tested.

Always follow label recommendations. All pesticide applications must accord with the currently registered label for that particular pesticide, crop, pest and region. Any research regarding pesticides of their use reported in this website does not constitute a recommendation for that particular use by the authors, the author's organisations of ACAS. It must be emphasised that crop tolerance and yield responses to herbicides are strongly influenced by seasonal conditions.

Herbicide	Years Tested	2,4-D Amine 625	Achieve®	Affinity® + MCPA	Ally® + MCPA	AtlantisOD®	Axial®	Banvel M®	Boxer Gold®
		2,4-D Amine	Tralkoxydim	Carfentrazone - Ethyl + MCPA	Metsulfuron-methyl	Mesosulfuron	Pinoxaden + Cloquintocet-Methyl	MCPA+ Dicamba	Prosulfocarb + S Metolochlor
Variety	Tested	1993-2015	1993-2015	2006-2015	1993-2015	2011-2012	2006-2015	1993-2009	2009-2015
AGT Katana	2009-2012	✓ (4)	✓ (4)	✓ (4)	6 (1/4)	✓ (1)	N (1/4)	-	✓ (4)
Axe	2008-2009	6 (1/2)	N (1/2)	✓ (2)	7 (1/2)	-	5 (1/2)	N (2/2)	✓ (1)
Caparoi	2009-2010	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Catalina	2007-2012	N (1/3)	N (1/3)	✓ (3)	N (1/3)	N (1/1)	✓ (3)	N (1/3)	✓ (1)
Cobalt	2015	✓ (1)	✓ (1)	✓ (1)	✓ (1)	-	✓ (1)	-	✓ (1)
Cobra	2012-2013	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Cosmick	2014-2015	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Corack	2012-2013	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Correll	2006-2009	14 (1/4)	10 (1/4)	✓ (4)	8-15 (3/4)	✓ (1)	✓ (4)	6 (1/4)	✓ (1)
Dart	2013-2015	N (2/3)	✓ (3)	✓ (3)	N (1/2)	-	✓ (3)	-	✓ (3)
DBA Aurora	2013-2015	✓ (3)	✓ (3)	✓ (3)	✓ (3)	-	✓ (3)	-	✓ (3)
Derrimut	2006-2007	N (1/2)	✓ (2)	✓ (2)	N (1/2)	-	✓ (2)	10 (1/2)	-
EGA Gregory	2009-2010	✓ (2)	✓ (2)	N (1/3)	N (1/3)	-	✓ (2)	-	✓ (2)
Emu Rock	2012-2015	✓ (4)	✓ (4)	✓ (4)	✓ (4)	-	✓ (4)	-	✓ (4)
Espada	2009-2010	N (1/2)	7 (1/2)	✓ (2)	✓ (2)	-	✓ (2)	7 (1/2)	✓ (2)
Estoc	2009-2012	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	N (1/4)	-	✓ (2)
Frame	1993-2010	5-18 (3/18)	3-12 (2/18)	✓ (5)	4-21 (4/18)	✓ (1)	✓ (5)	5-21 (2/17)	✓ (2)
Gladius	2006-2012	6-11 (2/4)	5 (1/4)	✓ (4)	9-18 (2/4)	✓ (2)	✓ (4)	N (2/4)	N (1/1)
Grenade CL Plus	2013-2015	N (1/3)	N (1/3)	✓ (3)	✓ (3)	-	N (1/3)	-	✓ (3)
Guardian	2008-2012	9 (1/2)	✓ (2)	✓ (2)	N (1/2)	-	✓ (2)	✓ (2)	✓ (1)
Harper	2013-2015	✓ (3)	N (1/3)	✓ (3)	✓ (3)	-	✓ (3)	-	✓ (3)
Hatchet CL Plus	2014-2015	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Hyperno	2009-2012	✓ (2)	✓ (2)	N (2/4)	9 (1/1)	✓ (2)	✓ (2)	-	✓ (2)
Impose CL Plus	2013	-	N (1/3)	-	N (1/3)	-	N (1/3)	-	-
Janz	1993-00,08	3-5 (2/9)	✓ (9)	✓ (1)	N (3/9)	-	✓ (1)	5-15 (2/9)	-
Justica CL Plus	2012-2013	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Kalka	2001-2004	6 (1/3)	N (1/4)	-	N (1/4)	-	-	N (2/4)	-
Kord CL Plus	2012-2013	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Kukri	2000-2002	3 (1/3)	✓ (3)	-	4-6 (2/3)	-	-	4 (1/3)	-
Kunjin	2009-2010	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	6 (1/1)
Mace	2009-2015	✓ (5)	✓ (5)	✓ (5)	✓ (5)	✓ (1)	N (2/5)	-	N (1/5)
SF Ovalo	2015	✓ (1)	✓ (1)	✓ (1)	✓ (1)	-	✓ (1)	-	✓ (1)
Orion	2009-2010	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Peake	2008-2009	11 (1/2)	✓ (2)	✓ (2)	N (1/2)	-	✓ (2)	✓ (2)	✓ (1)
Phantom	2012-2013	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Saintly	2009-2012	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Sentinel	2009-2012	N (1/3)	✓ (1)	✓ (1)	N (1/3)	-	N (1/3)	-	✓ (1)
Scout	2009-2012	✓ (2)	✓ (2)	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)
Shield	2013-2015	✓ (3)	N (1/3)	✓ (3)	N (1/3)	-	✓ (3)	-	✓ (3)
Supreme	2015	✓ (1)	✓ (1)	✓ (1)	✓ (1)	-	✓ (1)	-	✓ (1)
Tamaroi	1996-2003	3-4 (2/8)	5 (1/8)	-	11 (1/8)	-	-	✓ (8)	-
Tenfour	2015	✓ (1)	✓ (1)	✓ (1)	✓ (1)	-	✓ (1)	-	✓ (1)
Tjilkuri	2009-2010	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Trojan	2013-2015	N (1/3)	N (1/3)	✓ (3)	✓ (3)	-	✓ (3)	-	✓ (3)
Viking	2014-2015	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
Wallup	2012-2013	✓ (2)	✓ (2)	✓ (2)	✓ (2)	-	✓ (2)	-	✓ (2)
WID802	2010-2012	-	-	-	N (1/2)	-	✓ (1)	-	-
Wyalkatchem	2003-2005	9 (1/3)	N (1/3)	-	4-8 (2/3)	-	-	✓ (3)	-
Yawa	2010-2011	-	-	N (1/2)	8 (1/2)	-	N (1/2)	-	✓ (1)
Yitpi	1998-2015	2-9 (3/5)	✓ (5)	N (1/5)	2-8 (2/5)	✓ (2)	✓ (5)	N (1/5)	✓ (5)
Young	2005-2006	✓ (2)	✓ (2)	✓ (1)	9 (1/2)	-	✓ (1)	4 (1/2)	-
Rates (product/ha)		1.4 L	380 g	100 mL + 330 mL	7 g + 330 mL	330 mL	250 mL	1.4 L	2.5 L
Crop stage at spraying		2 node	3 leaf	3 leaf	5 leaf	3 leaf	3 leaf	5 leaf	IBS

Herbicide	Years Tested	Bromoxynil + MCPA	Cadence® + MCPA	Crusader®	Diuron + MCPA	Hussar®	Logran®	Paradigm + LVE MCPA	Sakura®	Tigrex®
		Bromoxynil + MCPA	Dicamba + MCPA	Pyrosulam	Diuron + MCPA Amine	Iodosulfuron-Merthylsodium	Triasulfuron	Haloxifen + Florasulam + LVE MCPA	Pyroxasulfone	MCPA + Diflufenican
		1994-2015	2006-2015	2011-2012	1993-2015	2005-2015	1993-2009	2015	2010-2015	1996-2015
Variety										
AGT Katana	2009-2012	✓(4)	✓(4)	-	✓(4)	✓(4)	-	-	✓(1)	✓(4)
Axe	2008-2009	✓(2)	10 (1/2)	-	6 (1/1)	10 (1/2)	N (1/2)	-	-	✓(2)
Caparoi	2009-2010	✓(2)	✓(2)	-	✓(2)	✓(2)	✓(2)	-	-	✓(2)
Catalina	2007-2012	✓(3)	6-10 (2/3)	N (1/1)	✓(2)	✓(2)	-	-	-	✓(2)
Cobalt	2015	✓(1)	✓(1)	-	✓(1)	✓(1)	-	✓(1)	✓(1)	✓(1)
Cobra	2012-2013	✓(2)	N (2/3)	-	✓(2)	✓(2)	-	-	✓(2)	✓(2)
Cosmick	2014-2015	✓(2)	✓(2)	-	N (1/2)	✓(2)	-	✓(1)	✓(2)	✓(2)
Corack	2012-2013	✓(2)	N (1/4)	-	N (1/2)	✓(2)	-	-	✓(2)	✓(2)
Correll	2006-2009	✓(4)	N (1/4)	✓(1)	✓(3)	12 (1/4)	✓(4)	-	✓(2)	7 (1/4)
Dart	2013-2015	✓(3)	N (1/3)	-	N (2/3)	✓(3)	-	✓(1)	✓(3)	✓(3)
DBA Aurora	2013-2015	✓(3)	✓(3)	-	✓(3)	✓(3)	-	✓(1)	-	✓(3)
Derrimut	2006-2007	N (1/2)	✓(2)	-	✓(2)	✓(2)	N (1/2)	-	-	N (1/2)
EGA Gregory	2009-2010	✓(2)	N (1/3)	-	✓(2)	✓(2)	-	-	-	✓(2)
Emu Rock	2012-2015	✓(4)	N (1/4)	-	✓(4)	✓(4)	-	✓(1)	8 (2/4)	✓(4)
Espada	2009-2010	✓(2)	✓(2)	-	-	✓(2)	N (1/2)	-	-	7 (1/2)
Estoc	2009-2012	✓(2)	✓(2)	-	✓(2)	✓(2)	-	-	-	✓(2)
Frame	1993-2010	2-7 (5/17)	8 (1/5)	✓(1)	4-6 (3/17)	N (2/6)	2 (1/17)	-	✓(2)	N (4/15)
Gladius	2006-2012	✓(4)	9 (1/4)	✓(2)	✓(3)	17-19 (2/4)	5 (1/4)	-	✓(2)	7 (1/4)
Grenade CL Plus	2013-2015	✓(3)	✓(3)	-	✓(3)	✓(3)	-	✓(1)	✓(3)	✓(3)
Guardian	2008-2012	✓(2)	N (1/2)	-	-	✓(2)	✓(2)	-	✓(2)	6 (1/2)
Harper	2013-2015	✓(3)	✓(3)	-	✓(3)	✓(3)	-	✓(1)	✓(2)	✓(3)
Hatchet CL Plus	2014-2015	✓(2)	✓(2)	-	✓(2)	✓(2)	-	✓(1)	✓(2)	✓(2)
Hyperno	2009-2012	5 (1/2)	9 (1/2)	9 (1/2)	✓(2)	N (1/4)	-	-	-	✓(2)
Impose CL Plus	2013	N (1/2)	N (2/3)	-	-	N (1/3)	-	-	✓(1)	✓(1)
Janz	1993-00,08	6 (1/8)	✓(1)	-	2 (1/9)	8 (1/1)	2 (1/9)	-	-	5 (1/6)
Justica CL Plus	2012-2013	✓(2)	N (2/2)	-	✓(2)	✓(2)	-	-	✓(2)	✓(2)
Kalka	2001-2004	N (1/4)	-	-	6 (1/4)	-	✓(4)	-	-	5 (1/4)
Kord CL Plus	2012-2013	✓(2)	N (1/2)	-	✓(2)	✓(2)	-	-	✓(2)	✓(2)
Kukri	2000-2002	4 (1/3)	-	-	✓(3)	-	8 (1/3)	-	-	9 (1/3)
Kunjin	2009-2010	N (2/3)	✓(2)	-	✓(2)	✓(2)	-	-	-	✓(2)
Mace	2009-2015	N (125)	N (2/5)	✓(1)	N (2/5)	✓(5)	-	✓(1)	✓(5)	✓(5)
SF Ovalo	2015	✓(1)	✓(1)	-	✓(1)	✓(1)	-	✓(1)	✓(1)	✓(1)
Orion	2009-2010	✓(2)	✓(2)	-	✓(2)	✓(2)	-	-	-	✓(2)
Peake	2008-2009	5 (1/2)	✓(2)	-	✓(1)	✓(2)	6 (1/2)	-	-	✓(2)
Phantom	2012-2013	✓(2)	9 (1/2)	-	✓(2)	✓(2)	-	-	✓(2)	✓(2)
Saintly	2009-2012	✓(2)	✓(2)	-	6 (1/2)	N (1/3)	-	-	-	✓(2)
Sentinel	2009-2012	✓(1)	✓(1)	-	✓(1)	✓(1)	-	-	-	-
Scout	2009-2012	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	-	✓(2)	✓(2)	✓(2)
Shield	2013-2015	✓(3)	✓(3)	-	✓(3)	N (1/3)	-	✓(1)	✓(3)	✓(3)
Supreme	2015	✓(1)	✓(1)	-	✓(1)	✓(1)	-	✓(1)	✓(1)	✓(1)
Tamaroi	1996-2003	N (3/8)	-	-	4 (1/8)	-	N (2/8)	-	-	✓(8)
Tenfour	2015	✓(1)	✓(1)	-	✓(1)	✓(1)	-	✓(1)	✓(1)	✓(1)
Tjikuri	2009-2010	✓(2)	✓(2)	-	✓(2)	✓(2)	-	-	-	✓(2)
Trojan	2013-2015	✓(3)	N (1/2)	-	N (1/3)	✓(3)	-	✓(1)	✓(3)	✓(3)
Viking	2014-2015	✓(2)	N (1/2)	-	N (1/2)	✓(2)	-	✓(1)	✓(2)	✓(2)
Wallup	2012-2013	✓(2)	N (1/2)	-	✓(2)	✓(2)	-	-	✓(2)	✓(2)
WID802	2010-2012	-	-	-	-	-	-	-	-	-
Wyalkathem	2003-2005	✓(3)	-	-	5 (1/3)	4 (1/1)	N (1/3)	-	-	7 (1/3)
Yawa	2010-2011	-	-	-	-	-	-	-	-	-
Yitpi	1998-2015	N (3/5)	✓(5)	✓(2)	✓(5)	✓(5)	6-8 (2/4)	✓(1)	✓(5)	N (3/5)
Young	2005-2006	✓(2)	N (1/1)	-	✓(2)	3 (1/2)	✓(2)	-	-	✓(2)
Rates (product/ha)		1.4 L	200 g + 330 mL	500 mL	280 g + 250 mL	200 g	35 g	25 g + 400 mL	118 g	1 L
Crop stage at spraying		3 leaf	5 leaf	3 leaf	3 leaf	3 leaf	PSPE	3 leaf	IBS	5 leaf

Research site manager:

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Research site location:

Kybunga, Mid North of South Australia

Site soil type :

Friable light clay loam overlying carbonate at varying depths

Site pH :

Water 8.2, CaCl 7.5

Site annual average rainfall:

507 mm



DISCLAIMER: While every care has been taken in preparing this publication, the organisations involved accept no responsibility for decisions or actions taken as a result of any data or interpretation contained in this report.

ACAS seeks to avoid putting information regarding unregistered pesticides or unregistered use of pesticides on this website.

However it is possible that occasionally ACAS may unintentionally include such information.

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