

Barley 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 barley 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

✓ (z) no significant yield reductions at recommended rates or higher than recommended rates in (z) 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% (w/z) yield reduction (warning) significant yield reduction at recommended rate in 1 trial only in z years of testing

x-y% (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 500/625	Achieve	Affinity® + MCPA	Ally® + MCPA	Axial	Banvel M	Boxer Gold®
		2,4-D Amine	Tralkoxydim	Carfentrazone - Ethyl + MCPA	Metsulfuron- methyl + MCPA	Pinoxaden + Cloquintocet- Methyl	MCPA + Dicamba	Prosulfocarb + S Metolachlor
Variety	Years Tested	1993-2015	1993-2015	2006-2015	1993-2015	2006-2015	1993-2013	2009-2015
Bass	2010-2011	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	-	✓(2)
Baudin	2009-2012	✓(2)	✓(1)	✓(2)	✓(2)	✓(2)	✓(1)	✓(2)
Barque	1995-2000	6 (1/6)	N (1/6)	-	✓(6)	-	6-10 (5/6)	-
Brewstar	2014-2015	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	-	✓(2)
Buloke	2006-2009	✓(4)	N (1/4)	12 (1/4)	N (1/4)	✓(4)	N (1/4)	✓(1)
Capstan	2002-2004	N (1/3)	N (2/3)	-	✓(3)	-	N (3/3)	-
Charger	2011-2013	✓(3)	✓(3)	✓(3)	✓(3)	✓(3)	-	✓(3)
Commander	2007-2015	N (1/9)	✓(9)	✓(9)	4-10 (3/9)	✓(9)	N (2/3)	✓(6)
Compass	2013-2015	✓(3)	✓(3)	✓(3)	✓(3)	✓(3)	-	✓(3)
Dhow	2001-2003	N (1/3)	✓(3)	-	4 (1/3)	-	N (2/3)	-
Fairview	2013 - 2014	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	-	✓(2)
Fathom	2012-2013	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	-	✓(2)
Finniss	2008-2009	✓(2)	9 (1/2)	✓(2)	✓(2)	7 (1/2)	✓(2)	N (1/1)
Flagship	2004-2009	10 (1/6)	5 (1/6)	N (1/4)	✓(6)	N (1/4)	16 (1/6)	6 (1/1)
Fleet	2004-2006	✓(3)	N (1/3)	✓(1)	✓(3)	✓(1)	5 (1/3)	-
Flinders	2013 - 2014	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	-	✓(2)
Gairdner	1998-2001	N (3/4)	7 (1/4)	-	✓(4)	-	4 (1/4)	-
GrangeR	2013 - 2015	✓(3)	✓(3)	✓(3)	✓(3)	✓(3)	-	✓(3)
Hindmarsh	2007-2015	✓(8)	✓(8)	N (2/8)	11-23 (3/8)	11 (1/8)	8 (1/5)	✓(8)
Keel	1998-2001	✓(4)	✓(4)	-	✓(4)	-	4 (1/4)	-
La Trobe	2013-2015	N (1/4)	N (1/4)	14 (1/4)	✓(4)	✓(4)	✓(4)	✓(4)
Maltstar	2014-2015	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	-	✓(2)
Maritime	2003-2005	✓(3)	N (1/3)	-	N (1/3)	-	✓(3)	-
Oxford	2009-2012	✓(2)	✓(1)	✓(2)	✓(2)	✓(2)	N (1/4)	✓(2)
Schooner	1993-1997	✓(5)	✓(5)	-	✓(5)	-	9-46 (2/5)	-
Scope	2010-2012	✓(2)	-	✓(2)	✓(2)	9 (1/4)	✓(2)	✓(2)
Sloop	1994-2000	N (2/7)	✓(7)	-	9 (1/7)	-	12-24 (3/7)	-
Sloop SA	2009-2010	✓(2)	✓(1)	✓(2)	✓(2)	✓(2)	✓(1)	✓(2)
Spartacus	2015	✓(1)	✓(1)	✓(1)	✓(1)	✓(1)	-	✓(1)
SY Rattler	2012-2013	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	-	✓(2)
Torrens	2001-2003	✓(3)	N (1/3)	-	✓(3)	-	N (2/3)	-
Vlamingh	2009-2010	✓(2)	✓(1)	✓(2)	✓(2)	✓(2)	✓(1)	✓(2)
Westminster	2011-2013	✓(3)	✓(3)	✓(3)	✓(3)	✓(3)	N (1/3)	✓(3)
Wimmera	2010-2012	✓(2)	-	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)
Yarra	2004-2007	5 (1/3)	✓(3)	✓(2)	N (1/3)	✓(2)	N (1/3)	-
Rates (product/ha)		1.4 L	380 g	100 mL + 330 mL	7 g + 330 mL	250 mL	1.4 L	2.5 L
Crop stage at spraying		2 node	4 leaf	4 leaf	4 leaf	4 leaf	6 leaf	IBS

Herbicide	Years Tested	Broadstrike	Bromoxynil MCPA	Cadence® + MCPA	Decision	Diuron + MCPA Amine	Glean	Hoegrass®
		Flumetsulam	Bromoxynil + MCPA	Dicamba + MCPA	Diclofop-methyl + Sethoxydim	Diuron + MCPA Amine	Chlorsulfuron	Diclofop-methyl
		1993-2015	1994-2015	2006-2015	2005-2012	1993-2015	1993-2009	1993-2004
Bass	2010-2011	✓(2)	✓(2)	N (1/2)	-	✓(2)	-	-
Baudin	2009-2012	✓(1)	✓(2)	N (1/3)	✓(2)	✓(2)	✓(1)	-
Barque	1995-2000	✓(6)	7-8 (2/6)	-	-	✓(6)	✓(3)	4 (1/6)
Brewstar	2014-2015	✓(2)	✓(2)	✓(2)	-	✓(2)	-	-
Buloke	2006-2009	✓(4)	10 (1/4)	9-11 (2/4)	12 (1/4)	13 (1/4)	✓(2)	-
Capstan	2002-2004	8 (1/3)	✓(3)	-	-	N (1/3)	✓(3)	N (1/3)
Charger	2011-2013	✓(3)	✓(3)	✓(3)	-	✓(3)	✓(3)	-
Commander	2007-2015	✓(9)	8 (1/9)	12 (1/9)	✓(6)	7-10 (2/9)	✓(3)	-
Compass	2013-2015	✓(3)	✓(3)	✓(3)	-	✓(3)	✓(3)	-
Dhow	2001-2003	✓(3)	15 (1/3)	-	-	✓(3)	✓(3)	✓(3)
Fairview	2013 - 2014	✓(2)	✓(2)	✓(2)	-	N (1/2)	-	-
Fathom	2012-2013	N (1/2)	✓(2)	N (1/2)	-	✓(2)	-	-
Finniss	2008-2009	10 (1/2)	✓(2)	N (1/2)	N (1/2)	N (1/2)	-	-
Flagship	2004-2009	✓(6)	12 (1/6)	14 (1/4)	✓(5)	N (1/6)	✓(4)	N (1/1)
Fleet	2004-2006	✓(3)	N (1/3)	N (1/1)	N (1/2)	7 (1/3)	✓(3)	N (1/1)
Flinders	2013 - 2014	✓(2)	✓(2)	✓(2)	-	✓(2)	-	-
Gairdner	1998-2001	✓(4)	7 (1/4)	-	-	6 (1/4)	✓(3)	6 (1/4)
GrangeR	2013 - 2015	✓(3)	✓(3)	✓(3)	-	N (1/3)	-	-
Hindmarsh	2007-2015	N (2/8)	6 (2/8)	✓(8)	7 (1/3)	3-10 (2/8)	✓(1)	-
Keel	1998-2001	✓(4)	3-8 (2/4)	-	-	✓(4)	N (1/3)	✓(4)
La Trobe	2013-2015	✓(4)	N (1/4)	✓(4)	-	✓(4)	-	-
Maltstar	2014-2015	✓(2)	✓(2)	✓(2)	-	✓(2)	-	-
Maritime	2003-2005	5 (1/3)	N (1/3)	-	✓(1)	N (2/3)	N (1/3)	9 (1/2)
Oxford	2009-2012	✓(1)	✓(2)	✓(2)	✓(2)	✓(2)	✓(1)	-
Schooner	1993-1997	14 (1/5)	N (1/4)	-	-	N (2/5)	✓(1)	9 (1/5)
Scope	2010-2012	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	-	-
Sloop	1994-2000	16 (1/7)	3-4 (2/7)	-	-	✓(7)	✓(3)	22 (1/7)
Sloop SA	2009-2010	✓(1)	✓(2)	✓(2)	✓(2)	✓(2)	✓(1)	-
Spartacus	2015	✓(1)	✓(1)	✓(1)	-	✓(1)	✓(1)	-
SY Rattler	2012-2013	✓(2)	✓(2)	✓(2)	-	✓(2)	-	-
Torrens	2001-2003	N (1/3)	N (1/3)	-	-	✓(3)	✓(3)	✓(3)
Vlamingh	2009-2010	✓(1)	✓(2)	✓(2)	✓(2)	✓(2)	✓(1)	-
Westminster	2011-2013	✓(3)	✓(3)	✓(3)	N (1/3)	N (1/3)	✓(3)	-
Wimmera	2010-2012	✓(2)	N (2/4)	✓(2)	✓(2)	✓(2)	-	-
Yarra	2004-2007	4 (1/3)	N (2/3)	N (2/2)	✓(3)	✓(3)	✓(3)	-
Rates (product/ha)		25 g	1.4 L	200 g + 330 mL	1.0 L	280 g + 330 mL	20 g	1 L
Crop stage at spraying		5 leaf	3 leaf	6 leaf	4 leaf	3 leaf	4 leaf	4 leaf

Herbicide Variety	Years Tested	Paradigm + LVE MCPA	Precept	Tigrex
		Halauxifen + Florasulam + LVE MCPA	Pyrasulfotole + MCPA	MCPA + Diflufenican
		2015	2014-2015	1996-2015
Bass	2010-2011	-	-	✓(2)
Baudin	2009-2012	-	-	✓(2)
Barque	1995-2000			5-8 (3/5)
Brewstar	2014-2015	✓(1)	✓(2)	✓(2)
Buloke	2006-2009	-	-	✓(4)
Capstan	2002-2004	-	-	10 (1/3)
Charger	2011-2013	-	-	✓(3)
Commander	2007-2015	✓(1)	✓(2)	✓(9)
Compass	2013-2015	✓(1)	✓(2)	✓(3)
Dhow	2001-2003	-	-	✓(3)
Fairview	2013 - 2014	✓(1)	✓(2)	✓(2)
Fathom	2012-2013	-	-	✓(2)
Finniss	2008-2009	-	-	✓(2)
Flagship	2004-2009	-	-	8 (1/6)
Fleet	2004-2006	-	-	7-8 (2/3)
Flinders	2013 - 2014	✓(1)	✓(2)	N (1/2)
Gairdner	1998-2001	-	-	3 (1/4)
GrangeR	2013 - 2015	✓(1)	✓(2)	✓(3)
Hindmarsh	2007-2015	✓(1)	✓(2)	8 (1/8)
Keel	1998-2001	-	-	4-6 (3/4)
La Trobe	2013-2015	✓(1)	✓(2)	N (1/4)
Maltstar	2014-2015	✓(1)	✓(2)	N (1/2)
Maritime	2003-2005	-	-	7 (1/3)
Oxford	2009-2012	-	-	✓(2)
Schooner	1993-1997	-	-	✓(2)
Scope	2010-2012	-	-	✓(2)
Sloop	1994-2000			4-9 (2/5)
Sloop SA	2009-2010	-	-	✓(2)
Spartacus	2015	✓(1)	✓(1)	✓(1)
SY Rattler	2012-2013	-	-	✓(2)
Torrens	2001-2003	-	-	✓(3)
Vlamingh	2009-2010	-	-	✓(2)
Westminster	2011-2013	-	-	✓(3)
Wimmera	2010-2012	-	-	✓(2)
Yarra	2004-2007	-	-	✓(3)
Rates (product/ha)		25 g + 400 mL	1 L	1 L
Crop stage at spraying		3 leaf	4 leaf	5 leaf

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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



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