Oat 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 oats 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% (1/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 regisetered label for that particular pesticide, crop, pest and region. Any research regarding pesticides of their use reported in this website does not consititute a recommedation 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		2,4-D Amine 625	Affinity® + MCPA	Ally + MCPA	Banvel M	Boxer Gold®*	Broadstrike	Bromoxynil MCPA	Cadence®	Cadence® + MCPA
		2,4-D Amine	Carfentrazone - Ethyl + MCPA	Metsulfuron-methyl + MCPA	MCPA+Dicamba	Prosulfocarb + S-Metolachlor	Flumetsulam	Bromoxynil + MCPA	Dicamba	Dicamba + MCPA
Variety	**Years Tested**	1995-2015	2012-2015	1995-2015	1995-2015	2011-2015	1995-2015	1995-2015	2011-2013	2014-2015
Bannister	2013-2015	✓(3)	✓(3)	✓(3)	-	✓(3)	✓(3)	✓(3)	✓(3)	-
Brusher	2003-2004	**7** (1/2)	-	✓(2)	**5** (1/2)	-	**8** (1/2)	**N** (1/2)	-	-
Dunnart	2011-2015	✓(5)	**N** (1/3)	✓(5)	**N** (2/5)	✓(2)	✓(5)	✓(5)	**10-18** (2/5)	✓(2)
Forester	2011-2013	✓(2)	✓(2)	✓(1)	✓(1)	✓(2)	✓(2)	✓(2)	**N** (1/3)	-
Glider	1998-2003	**8** (1/3)	-	✓(3)	**9** (1/3)	-	✓(3)	✓(3)	-	-
Kangaroo	2004-2006	**4-17** (2/3)	-	✓(3)	**15-35** (2/3)	-	**10** (1/3)	**16** (1/3)	-	-
Mitika	2003-2006	**6** (1/4)	-	**7** (1/4)	**8-40** (3/4)	-	**7** (1/4)	**6** (1/4)	-	-
Mulgara	2008-2010	**N** (2/3)	-	**6** (1/2)	**7** (1/3)	-	✓(3)	**7** (1/3)	-	-
Numbat	1998,2001	✓(2)	-	**11** (1/1)	**N** (2/2)	-	✓(2)	✓(2)	-	-
Possum	2001-2004	**6-8** (2/3)	-	✓(3)	**15-22** (3/3)	-	**N** (1/3)	**4-13** (2/3)	-	-
Potoroo	2013-2015	✓(3)	✓(3)	✓(3)	✓(3)	✓(3)	✓(3)	✓(3)	**N** (1/3)	✓(2)
Quoll	1995-2001	**7** (1/5)	-	**4-10** (2/5)	**8** (1/5)	-	✓(5)	**9** (1/5)	-	-
Tammar	2012-2013	✓(2)	✓(2)	✓(2)	✓(1)	✓(2)	✓(2)	✓(2)	✓(1)	-
Tungoo	2007-2010	**N** (1/4)	-	**9** (1/4)	**12** (1/4)	-	✓(4)	**8** (1/4)	-	-
Williams	2014-2015	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	-	✓(2)
Wintaroo	2001,2003, 2007	**N** (1/3)	-	**N** (1/3)	**35** (1/3)	-	✓(3)	✓(3)	-	-
Wombat	2011-2015	✓(5)	**N** (1/3)	✓(5)	**N** (1/5)	✓(5)	**N** (1/5)	**N** (1/5)	**38-67** (2/5)	✓(1)
Yallara	2005-2007	**6** (1/3)	-	**N** (1/3)	**27-54** (3/3)	-	**4** (1/3)	**N** (2/3)	-	-
Rates (product/ha)		1 L	100 mL + 500 mL	7 g + 1 L	1.4 L	2.5 L	25 g	1.4 L	200 g	200 g + 330 mL
Crop stage at spraying		2 node	3 leaf	3 leaf	3-5 leaf	IBS	5- 6 leaf	3 leaf	5 leaf	5 leaf

*Not currently registered for use in Oats

Herbicide		Conclude®	Diuron + Dual Gold	Diuron + MCPA	Eclipse + LVE MCPA	Glean	Paradigm + LVE MCPA	Terbutryn	Tigrex®
		MCPA + Florasulam	Diuron + S-metolachlor	Diuron + MCPAAmine	Metosulam + LVE MCPA	Chlorsulfuron	Halauxifen + Florasulam + LVE MCPA	Terbutryn	MCPA + Diflufenican
Variety	**Years Tested**	2011-2015	1995-2006	1995-2015	1995-2015	1995-2015	2015	1995-2010	1995-2015
Bannister	2013-2015	✓(3)	-	✓(3)	✓(3)	✓(3)	✓(1)	-	✓(3)
Brusher	2003-2004	-	✓(2)	**6** (1/2)	✓(2)	✓(2)	-	**8** (1/2)	**13** (1/3)
Dunnart	2011-2015	✓(5)	-	✓(5)	✓(5)	✓(5)	-	-	**N** (1/5)
Forester	2011-2013	✓(2)	-	✓(2)	✓(1)	✓(2)	-	-	✓(2)
Glider	1998-2003	-	✓(3)	✓(3)	✓(3)	✓(3)	-	✓(3)	**N** (1/3)
Kangaroo	2004-2006	-	✓(3)	**16-20** (2/3)	**N** (1/3)	✓(3)	-	**6-19** (2/3)	**5-17** (3/3)
Mitika	2003-2006	-	✓(4)	**N** (1/3)	**3** (1/4)	✓(4)	-	**7** (1/4)	**9-13** (3/4)
Mulgara	2008-2010	-	-	✓(3)	✓(3)	**12** (1/3)	-	**N** (1/3)	**N** (1/3)
Numbat	1998,2001	-	✓(2)	✓(2)	**N** (1/2)	✓(2)	-	**6** (1/2)	**11** (1/2)
Possum	2001-2004	-	✓(3)	**13** (1/3)	✓(3)	✓(3)	-	**12** (1/3)	**18** (1/3)
Potoroo	2013-2015	✓(1)	-	✓(1)	✓(1)	✓(1)	-	-	✓(2)
Quoll	1995-2001	-	✓(4)	✓(5)	**8-9** (2/5)	✓(5)	-	**10** (1/5)	**8-14** (2/5)
Tammar	2012-2013	✓(2)	-	✓(2)	✓(2)	✓(2)	-	-	✓(2)
Tungoo	2007-2009	-	-	✓(4)	**N** (1/4)	**9** (1/4)	-	**N** (2/4)	**N** (1/4)
Williams	2014-2015	✓(2)	-	✓(2)	✓(2)	✓(2)	✓(1)	-	✓(2)
Wintaroo	2001-2003, 2007	-	✓(2)	✓(3)	**7** (1/3)	✓(3)	-	✓(3)	**10** (1/3)
Wombat	2011-2015	✓(5)	-	✓(5)	✓(5)	✓(5)	-	-	**11-23** (2/5)
Yallara	2005-2007	-	✓(2)	**N** (1/3)	**N** (1/3)	**7** (1/3)	-	**7** (1/3)	**8-11** (3/3)
Rates (product/ha)		700 mL	830 g + 1 L	280 g + 350 mL	7 g + 700 mL	20 g	25 g + 400 mL	850 mL	1 L
Crop stage at spraying		5 leaf	PSPE	3 leaf	3 - 6 leaf	3 leaf	3 leaf	3 leaf	5-6 leaf

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Research site locations: Kybunga and Mallala, 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 (Kybunga) and 403 mm (Mallala)

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