

Pulse 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 pulse varieties 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.

Lentil

Herbicide	Broadstrike® Flumetsulam	Brodal Options® Diflufenican	Boxer Gold® Prosulfocarb + S-metolochlor	Diuron	Dual Gold® S-metolochlor	Lexone® Metribuzin	Lexone® Metribuzin	Simazine® Simazine	Simazine® Simazine	Simazine + Diuron500® Simazine + Diuron	Status® Clothodim	Terbyne® Terbutylazine	Terbyne® Terbutylazine	
														Years Tested
PBA Ace	2012-2014	N (1/3)	✓(3)	-	✓(3)	-	30-35 (2/3)	-	21-35 (2/3)	-	-	✓(1)	N (2/2)	10 (1/1)
PBA Blitz	2010-2012	10-13 (2/3)	✓(3)	-	N (1/3)	-	10 (1/3)	-	N (3/3)	-	-	-	N (3/3)	-
PBA Bolt	2013-2015	14 (1/3)	✓(3)	✓(1)	✓(3)	-	12 (1/3)	-	28 (1/3)	-	✓(1)	-	29 (1/1)	✓(2)
Boomer	2005-2009	7-19 (2/5)	7-11 (2/4)	-	✓(5)	-	19 (1/5)	-	34 (1/4)	-	✓(5)	-	N (1/1)	-
Bounty	2009-2011	12 (2/3)	9 (1/3)	-	N (1/3)	-	N (2/3)	-	9 (1/3)	-	-	-	11 (1/3)	-
Cassab	1999-2001	N (1/3)	7 (1/3)	-	N (2/3)	8 (1/2)	N (2/3)	-	-	✓(1)	N (1/3)	-	-	-
Cobber	1994-2002	10 (1/4)	22 (1/4)	-	N (1/2)	✓(1)	12 (1/4)	-	-	-	-	-	-	-
Digger	1994-2001	8-18 (2/7)	15-23 (2/7)	-	N (3/5)	N (2/3)	32 (1/7)	-	-	✓(1)	6 (1/3)	-	-	-
PBA Flash	2006-2013	10-14 (3/8)	N (3/8)	-	N (1/8)	-	N (5/8)	42 (1/3)	42 (1/8)	-	-	-	26 (1/5)	-
Greenfield	2014-2015	N (1/2)	N (1/2)	✓(2)	✓(2)	-	✓(2)	-	✓(2)	-	-	-	-	✓(2)
PBA Giant	2014-2015	✓(2)	✓(2)	✓(2)	✓(2)	-	✓(2)	-	✓(2)	-	-	-	-	✓(2)
PBA Herald XT	2012-2014	✓(3)	✓(3)	-	✓(3)	-	13-21 (3/3)	-	13-39 (3/3)	-	✓(1)	-	N (2/2)	✓(1)
PBA Hurricane XT	2013-2015	✓(3)	✓(3)	✓(1)	✓(3)	-	N (1/3)	-	10-33 (2/3)	-	✓(1)	-	N (1/3)	✓(2)
PBA Jumbo 2	2014-2015	✓(2)	N (1/2)	13 (1/1)	✓(2)	-	30 (1/2)	-	8-25 (1/2)	-	✓(1)	-	-	N (1/2)
PBA Jumbo	2011-2012	12 (1/2)	✓(2)	-	✓(2)	-	N (2/2)	-	N (2/2)	-	-	-	N (1/2)	-
Nipper	2004-2015	8-20 (5/12)	7 (1/12)	✓(1)	N (3/12)	-	10-25 (7/12)	26-52 (3/4)	13-64 (4/12)	N (1/2)	✓(1)	✓(1)	21-40 (2/5)	✓(2)
Northfield	1994-2004	10-25 (3/9)	16-24 (3/9)	-	14 (1/7)	21 (1/2)	17-19 (2/9)	14 (1/1)	✓(1)	N (2/3)	12 (1/4)	-	-	-
Nugget	1999-2005	6-20 (3/6)	11 (1/6)	-	N (1/6)	N (1/2)	6 (1/6)	✓(2)	✓(2)	7 (1/3)	15 (1/4)	-	-	-
Rates (product/ha)		20 g	150 mL	2.5 L	1 kg	500 mL	280 g	180 g	1 kg	1.2 L	500 mL + 500 mL	1 L	1 kg	1 kg
Crop stage at spraying		6 weeks	6 weeks	IBS	PSPE	PSPE	PSPE	3 node	PSPE	6 weeks	PSPE	3 node	PSPE	IBS

* Denotes an off label use. This use is not endorsed by this data and no responsibility will be taken for its interpretation.

Field Pea

Herbicide	Broadstrike® Flumetsulam	Brodal Options® + MCPA Amine Diflufenican + MCPA Amine	Boxer Gold® Prosulfocarb + S-metolochlor	Diuron	Lexone® Metribuzin	Lexone® Metribuzin	Lexone® Metribuzin	MCPA Sodium	Outlook® Di-methenamid-P	Simazine	Simazine + Diuron	Spinnaker® Imazethapyr	Sakura® Pyroxasulfone	Status® Clothodim	Raptor® Imazamox	Terbyne® Terbutylazine	
																	Years Tested
Bundi	2006-2007	✓(2)	✓(2)	-	-	✓(2)	✓(2)	✓(2)	-	-	✓(2)	15 (1/2)	-	-	N (2/2)	-	
Kaspa	2002-2012	N (1/11)	11 (1/11)	-	N (1/2)	N (2/9)	N (4/11)	9 (1/4)	10 (1/7)	✓(2)	N (1/2)	N (1/8)	✓(9)	-	✓(10)	N (1/4)	
PBA Gunyah	2008-2015	N (1/8)	✓(8)	✓(1)	✓(4)	9 (1/3)	N (3/8)	✓(1)	✓(1)	✓(3)	14 (1/5)	9-11 (2/3)	N (1/3)	✓(1)	✓(1)	11 (1/8)	9 (1/7)
PBA Oura	2011-2013	✓(3)	✓(3)	-	✓(3)	-	✓(3)	-	N (1/3)	✓(1)	✓(3)	-	-	-	✓(3)	✓(3)	
PBA Twilight	2008-2011	N (1/4)	N (1/4)	-	✓(1)	N (1/3)	13 (1/4)	16 (1/1)	✓(1)	✓(1)	✓(1)	9 (1/3)	11 (1/3)	-	✓(4)	N (2/3)	
OZP1101	2012-2015	N (1/4)	14 (1/4)	✓(1)	✓(3)	-	✓(4)	-	-	✓(2)	16 (1/4)	-	-	✓(1)	✓(1)	N (1/4)	N (1/4)
Parafield	1996 - 2005	11-13 (2/10)	✓(10)	-	-	N (3/10)	N (5/10)	✓(1)	5-20 (2/10)	-	-	29 (1/10)	11-15 (2/10)	-	-	7 (1/10)	-
Percy	2014-2015	13 (1/2)	✓(2)	✓(1)	✓(1)	-	✓(2)	-	-	✓(2)	✓(2)	-	-	✓(1)	✓(1)	✓(2)	N (1/2)
PBA Pearl	2012-2013	✓(2)	✓(2)	-	✓(2)	-	✓(2)	-	-	✓(2)	15 (1/2)	-	-	-	-	N (1/2)	N (1/2)
Sturt	2002-2005	10-13 (2/4)	✓(4)	-	-	8 (1/4)	12-17 (2/4)	10 (1/1)	✓(4)	-	✓(4)	7 (1/4)	-	-	-	N (1/4)	-
SW Celine	2006-2007	✓(2)	✓(2)	-	-	✓(2)	✓(2)	N (1/2)	✓(2)	-	✓(2)	✓(2)	-	-	-	N (1/2)	-
PBA Wharton	2012-2015	✓(3)	✓(3)	✓(1)	✓(2)	-	✓(3)	-	-	✓(1)	✓(3)	-	-	✓(1)	✓(1)	✓(3)	✓(3)
Rates (product/ha)		25 g	125 mL + 80 mL	2.5 L	1 kg	280 g	280 g	280 g	900 mL	1 L	1 kg	350 mL + 650 mL	70 g	118 g	1 L	45 g	1 kg
Crop stage at spraying		5 node	5 node	IBS	PSPE	PSPE	3 node	6 node	5 node	IBS	PSPE	3 node	IBS	3 node	3 node	PSPE	

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Chickpea

Herbicide	Balance®	Boxer Gold®	Broadstrike®	Diuron	Lexone®	Outlook®	Sakura®	Simazine	Simazine*	Status®	Terbyne®	
												Isoxaflutole
Variety	Years Tested		2004-2015	2004-2015	2004-2010	2004-2015	2012-2013	2015	2004-2014	2004-2008	2014	2009-2015
Almaz	2006-2007	✓(2)	-	N (1/2)	✓(2)	N (1/2)	-	-	✓(2)	✓(2)	-	-
Genesis 090	2004-2015	✓(12)	✓(1)	N (2/12)	14 (1/7)	✓(12)	8 (1/4)	✓(1)	11 (1/12)	8 (1/5)	✓(1)	N (1/12)
Genesis 079	2007-2009	✓(3)	-	16-20 (2/3)	✓(3)	✓(3)	-	-	✓(3)	N (2/2)	-	✓(1)
Genesis 114	2010-2011	✓(2)	-	✓(2)	✓(1)	✓(2)	✓(1)	-	N (1/2)	-	-	N (1/2)
Genesis 509	2005-2006	✓(2)	-	✓(2)	11 (1/2)	✓(2)	-	-	✓(2)	10 (1/2)	-	-
PBA Monarch	2012-2015	✓(4)	✓(1)	11 (1/4)	-	✓(4)	✓(2)	✓(1)	N (1/4)	-	✓(1)	✓(4)
PBA Slasher	2008-2011	✓(4)	-	N (1/4)	✓(3)	✓(4)	✓(1)	-	N (1/4)	N (1/1)	-	N (1/3)
PBA Striker	2012-2015	✓(4)	✓(1)	N (1/4)	-	N (1/4)	✓(2)	✓(1)	13 (1/4)	-	✓(1)	N (2/4)
Rates (product/ha)		100 g	2.5 L	20 g	1 kg	280 g	1 L	118 g	1 kg	1.2 L	1 L	1 kg
Crop stage at spraying		PSPE	IBS	6 weeks	PSPE	PSPE	IBS	IBS	PSPE	6 weeks	3 node	PSPE

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Faba Bean

Herbicide	Boxer Gold®	Diuron®	Outlook®	Simazine	Simazine	Lexone®	Spinnaker®	Raptor®*	Status®*	Terbyne®		
											Prosulfocarb + S-metolachlor	Diuron
Variety	Years		2015	2000-2015	2011-2013	2000-2015	2001-2008	2003-2010	2000-2015	2003-2015	2014	2009-2015
PBA Samira	2013-2015	✓(1)	✓(3)	✓(1)	✓(3)	-	-	✓(3)	30-35 (2/3)	✓(1)	✓(3)	
Farah	2002-2008	-	✓(7)	-	N (1/7)	6-18 (3/7)	✓(6)	28-39 (2/3)	N (3/6)	-	-	
Fiesta	2000-2007	-	N (1/8)	-	18 (1/8)	21 (1/7)	✓(5)	11-32 (2/8)	N (4/5)	-	-	
Fiord	2000-2002	-	N (1/3)	-	N (2/3)	N (1/2)	-	18-30 (2/3)	-	-	-	
PBA Rana	2009-2011	-	✓(3)	✓(1)	✓(3)	-	N (1/2)	14 (1/3)	18 (1/3)	-	N (1/3)	
Nura	2003-2015	✓(1)	✓(12)	✓(2)	N (2/12)	N (1/7)	✓(8)	10-53 (8/12)	8-20 (4/12)	✓(1)	10 (4/6)	
Rates (product/ha)		2.5 L	1 kg	1 L	1 kg	1.5 L	280 g	85 g	45 g	1 L	1 kg	
Crop stage at spraying		IBS	PSPE	IBS	PSPE	6 weeks	PSPE	PSPE	3-4 leaf	3 node	PSPE	

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 Research site location: Minlaton, Yorke Peninsula, South Australia
 Site soil type : Sandy Clay Loam
 Site pH : 8.1
 Site annual average rainfall: 442 mm



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