

# “Wheat Herbicide Tolerance”



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## Key Outcomes:

- With an increase in the number of wheat varieties on the market, the issue of varietal tolerance to registered herbicide mixes is increasing.
- Year to year variation can be great, so comments and summary tables are generally based on two or more season's experimental results

**Trial Objectives:** Investigating the tolerance of wheat varieties to herbicides

**Project Number:** GRDC Project DAS00100

**Trial Duration:** 1993 – Current

**Location:** Blyth District, SA

**Trial Design:** Replicated Plot Trials

**Table 1: Long Term summary of safety rating and potential % yield loss for selected wheat varieties to various herbicides and tank mixes (Blyth district trials)**

Herbicide	Rate/ha	Timing	AGT Katana	Axe	Catalina	Correll	Derrimut	Gladius	Hyperno	Kalka	Peake	Saintly	Scout	Wyalkat- chem
Years Tested			2009- 2010	2008- 2009	2007- 2009	2006- 2009	2006- 2007	2006- 2009	2009- 2010	2001- 2004	2008- 2009	2009- 2010	2009- 2010	2003- 2005
2,4-D Amine 625	1.4L	2 node	✓ (1)	6 (1/2)	N (1/3)	14 (1/4)	N (1/2)	6-11 (2/4)	✓ (1)	6 (1/3)	11 (1/2)	✓ (1)	✓ (1)	9 (1/3)
Achieve®	380g	3 leaf	✓ (1)	N (1/2)	N (1/2)	10 (1/4)	✓ (2)	5 (1/4)	✓ (1)	N (1/4)	✓ (2)	✓ (1)	✓ (1)	N (1/3)
Affinity®	60g	3 leaf	✓ (1)	✓ (2)	✓ (3)	✓ (4)	✓ (2)	✓ (4)	N (1/2)	-	✓ (2)	✓ (1)	✓ (1)	-
Ally®	7g	3 leaf	✓ (1)	7 (1/2)	N (1/3)	8-15 (3/4)	N (1/2)	9-18 (2/4)	✓ (1)	✓ (4)	N (1/2)	✓ (1)	✓ (1)	4-8 (2/3)
Axial®	250ml	3 leaf	N (1/2)	5 (1/2)	✓ (3)	✓ (4)	✓ (2)	✓ (4)	✓ (1)	-	✓ (2)	✓ (1)	✓ (1)	-
Banvel M®	1.4L	5leaf	✓ (1)	N (2/2)	N (1/3)	6 (1/4)	10 (1/2)	N (2/4)	✓ (1)	N (2/4)	✓ (2)	✓ (1)	✓ (1)	✓ (3)
Broadstrike®	25g	5 leaf	-	-	-	-	-	-	-	✓ (4)	-	-	-	4 (1/3)
Bromoxynil MCPA	1.4L	3 leaf	✓ (1)	✓ (2)	✓ (3)	✓ (4)	N (1/2)	✓ (4)	5 (1/1)	N (1/4)	5 (1/2)	✓ (1)	✓ (1)	✓ (3)
Cadence®	200g	5 leaf	✓ (1)	10 (1/2)	6-10 (2/2)	N (1/4)	✓ (2)	9 (1/4)	9 (1/1)	-	✓ (2)	✓ (1)	✓ (1)	-
Diuron/MCPA (500SC)	500ml/ 350ml	3 leaf	✓ (1)	-	✓ (2)	✓ (4)	✓ (2)	✓ (3)	✓ (1)	6 (1/4)	✓ (2)	6 (1/1)	✓ (1)	5 (1/3)
Glean®	20g	PSPE	✓ (1)	-	-	✓ (2)	✓ (2)	✓ (2)	✓ (1)	7-14 (2/4)	-	✓ (1)	N (1/2)	N (1/3)
Hussar®	200g	3 leaf	✓ (1)	10 (1/2)	9 (1/3)	12 (1/4)	✓ (4)	17-19 (2/4)	✓ (1)	-	✓ (2)	N (1/2)	✓ (1)	4 (1/1)
Logran®	35g	PSPE	-	✓ (2)	✓ (3)	✓ (4)	N (1/2)	5 (1/4)	-	✓ (4)	6 (1/2)	-	-	N (1/3)
Lontrel®	150ml	2 leaf	-	-	-	-	-	-	-	✓ (4)	-	-	-	✓ (3)
LVE MCPA	1.2L	5 leaf	-	✓ (1)	✓ (2)	✓ (3)	✓ (2)	N (1/3)	-	✓ (5)	✓ (2)	-	-	✓ (3)
Tigrex®	1L	5 leaf	✓ (1)	✓ (2)	8 (1/3)	7 (1/4)	N (1/2)	7 (1/4)	✓ (1)	5 (1/4)	✓ (2)	✓ (1)	✓ (1)	7 (1/3)

x-y% (w/z)

Significant yield reductions at recommended rate in w years out of z years tested.

x% (w/z)

Significant yield reduction at recommended rate in 1 trial only in z years of testing

N (w/z)

Narrow safety margin – yield loss at higher than recommended herbicide rate in w

years of z years tested.

✓(z)

no yield loss during z years of testing.

## Treatments:

A wide range of herbicides and tank mixes are applied pre and post-sowing (crop dependent) at label recommended and twice recommended rates across each variety under *weed free* conditions. The treatment rates provide an estimate of the varietal tolerance and safety margin likely through any differences in varietal response between the untreated control and the two rates applied.

Preliminary results from evaluation of some newer chemistries (eg. Boxer Gold) against newer varieties can be found at [www.nvtonline.com.au](http://www.nvtonline.com.au)

## Acknowledgements:

Dennis and Robert Dall are gratefully acknowledged for providing land for these experiments together with the SARDI Clare New Variety Agronomy team for their help in trial management.



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