WHEAT HERBICIDE TOLERANCE

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Key Points:

- 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 Notes:

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

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.

The results are outlined in Table 1 below. Additional data is available on the NVT website.

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

Variety	AGT Kat-ana	Axe	Cata-lina	Corr-ell	Esp-ada	Estoc	Glad-ius	Hyp-erno	Mace	Saint -ly	Scout	Tjil-kuri	Rates (product/ha)	Crop stage at spraying
Years tested	2009-2011	2008-2009	2007-2009	2006-2009	2009-2010	2009-2011	2006-2009	2009-2011	2009-2011	2009-2011	2009-2011	2009-2010		
2,4-D Amine 625	✓(2)	6 (1/2)	N (1/3)	14 (1/4)	N (1/2)	✓(2)	6-11 (2/4)	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	1.4L	2 node
Achieve®	✓(2)	N (1/2)	N (1/3)	10 (1/4)	7 (1/2)	✓(2)	5 (1/4)	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	380g	3 leaf
Affinity®	✓(2)	✓(2)	✓(3)	✓(4)	✓(2)	✓(2)	✓(4)	N (2/3)	✓(2)	✓(2)	✓(2)	✓(2)	60g	3 leaf
Ally®	N (1/3)	7 (1/2)	N (1/3)	8-15 (3/4)	✓(2)	✓(2)	9-18 (2/4)	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	7g	3 leaf
Axial®	N (1/3)	5 (1/2)	✓(3)	✓(4)	✓(2)	N (1/3)	✓(4)	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	250mL	3 leaf
Banvel M®	-	N (2/2)	N (1/3)	6 (1/4)	7 (1/2)	-	N (2/4)	-	-	-	-	-	1.4L	5leaf
Boxer Gold®	✓(2)	✓(1)	✓(1)	✓(1)	✓(2)	✓(2)	N (1/1)	✓(2)	N (1/3)	✓(2)	✓(2)	✓(2)	2.5L	IBS
Bromoxynil/ MCPA	✓(2)	✓(2)	✓(3)	✓(4)	✓(2)	✓(2)	✓(4)	5 (1/2)	N (1/3)	✓(2)	✓(2)	✓(2)	1.4L	3 leaf
Cadence®	✓(2)	10 (1/2)	6-10 (2/3)	N (1/4)	✓(2)	✓(2)	9 (1/4)	9 (1/2)	N (1/3)	✓(2)	✓(2)	✓(2)	200g	5 leaf
Conclude®	-	-	✓(2)	✓(2)	-	-	✓(2)	-	-	-	✓(2)	-	700mL	5 leaf
Crusader®	-	-	-	✓(1)	-	-	✓(1)	✓(1)	-	-	✓(1)	-	500mL	3 leaf
Diuron(500SC) /MCPA	✓(2)	6 (1/1)	✓(2)	✓(3)	-	✓(2)	✓(3)	✓(2)	✓(2)	6 (1/3)	✓(2)	✓(2)	500mL/ 350mL	3 leaf
Glean®	✓(2)	9 (1/2)	✓(1)	12 (1/2)	6 (1/2)	N (1/3)	7 (1/2)	N (1/3)	N (1/3)	N (1/3)	N (1/3)	✓(2)	20g	3 leaf
Hussar®	✓(2)	10 (1/2)	✓(2)	12 (1/4)	✓(2)	✓(2)	17-19 (2/4)	N (1/3)	✓(2)	N (1/3)	✓(2)	✓(2)	200g	3 leaf
Logran®	-	N (1/2)	-	✓(4)	N (1/2)	-	5 (1/4)	-	-	-	-	-	35g	PSPE
LVE MCPA	-	✓(1)	-	✓(3)	-	-	N (1/3)	-	-	-	-	-	1.2L	5 leaf
Sakura®	-	-	-	✓(2)	-	-	✓(2)	-	-	-	✓(2)	-	118g	IBS
Tigrex®	✓(2)	✓(2)	✓(2)	7 (1/4)	7 (1/2)	✓(2)	7 (1/4)	✓(2)	✓(2)	✓(2)	✓(2)	✓(2)	1L	5 leaf

X-y% (w/z) Significant yield reductions at recommended rate in w years out of z years tested. eg 6-10 (2/4) is yield losses of 6 to 10% in 2 out of 4 years tested

x% (w/z) Significant yield reduction at recommended rate in 1 trial only in z years of testing eg 8 (1/2) is 8% yield loss in 1 out of 2 years tested

N (w/z) Narrow safety margin – yield loss at higher than recommended herbicide rate only w years of z years tested.

✓(z) no yield loss during z years of testing

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