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## Tolerance of recommended cereal varieties of new herbicides

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(i) Trial No. 88EC28

Treatment	Rate (/ha)	Timing	Aroona	Blade	Eradu	Gutha	Kulin
Control yield (t/ha)			1.61	1.52	1.33	1.42	1.56
Logran	35 g	IBS	100	105	100	104	106
	70 g		90	91	97	92	99
Lexone	200 g	IBS	78*	107	106	90	79*
Grasp	2.0 L + WA	Z13-14	102	112	117	110	107
	4.0 L + WA		77*	80*	89	83	85
	2.0 L + oil		112	108	111	99	98
Tigrex	0.5 L	Z14	105	108	104	102	101
	1.0 L		103	106	104	102	96
Puma	0.7 L	Z13-14	103	107	105	103	102
	1.4 L		102	115	113	118	100
Ally + MCPA	5 g + 0.5 L	Z14	102	96	105	103	99
	10 g + 1.0 L		82*	89	82	81*	80*
Finesse + MCPA	24 g + 0.5 L	Z14	90	99	86	97	93
	48 g + 1.0 L		85	87	87	90	89
Lexone + simazine	100 g + 0.5 L	IAS	82*	92	92	77*	85
Lexone	200 g	Z13	92	100	96	96	95
Diuron + Brodal	0.5 L + 50 mL	Z13	85	89	94	79*	83
Hoegrass + Glean	0.75 L + 5 g	Z13	93	94	113	98	97

Treatment	Rate	Gamenya	O'Connor	Stirling	Echidna	Murray
Control yield (t/ha)		1.47	1.71	1.74	1.74	2.05
Logran	35 g	102	72**	75*	64	59
	70 g	100	69**	75*	62	53
Lexone (IBS)	200 g	79*	84*	88	55	55
Grasp	2.0 L + WA	107	102	112	-	-
	4.0 L + WA	82*	71**	70**	-	-
	2.0 L + oil	96	91	109	-	-
Tigrex	0.5 L	100	75**	88	90	79
	1.0 L	94	80*	83	116	86
Puma	0.7 L	92	95	88	-	-
	1.4 L	99	94	101	-	-
Ally + MCPA	5 g + 0.5 L	90	73**	70**	56	56
	10 g + 1.0 L	79*	55**	54**	41	41
Finesse + MCPA	24 g + 0.5 L	100	68**	60**	59	56
	48 g + 1.0 L	74**	57**	65**	66	44
Lexone + simazine	100 g + 0.5 L	84	68**	84	76	55
Lexone	200 g	90	81	95	61	56
Diuron + Brodal	0.5 L + 50 mL	79*	71**	81	76	60
Hoegrass + Glean	0.75 L + 5 g	93	80*	89	35	49

## Comments

Herbicides which showed large effects were Logran on barley and oats, Lexone on all crops with IBS application though tolerance in Blade and Eradu wheat was good, Grasp at twice the recommended rate on all species, Tigrex on barley, Ally + MCPA at recommended rates on barley and twice recommended rates on all species, Lexone + simazine on all species (Blade and Eradu best), diuron + Brodal on all species and Hoegrass + Glean on barley. oats and barley generally showed poorer tolerance to nearly all herbicides tested. Wheat tolerance to Logran, Tigrex and Puma was very good.

Trial title: Tolerance of recommended cereal varieties to new herbicides  
Trial number: 88SC31  
Officers: D. Bowran  
Co-operator: Location: M.R.S.  
Crop(s): Wheat, Barley, Oats, Date sown: 1/6/88  
Triticale Fertilizer: 100 kg/ha Agras

Soil type: Clay loam No.1  
Ground preparation: Sprayseed prior to seeding  
Experiment design: Split plot Seeding rate: 50 kg/ha

Plot size: 2 m x 10 m  
Harvesting: 1.4 m x 8.5 m

Spraying details:

<u>Spraying date:</u>	1/6/88	30/6/88	6/7/88
<u>Crop stage:</u>	IBS	Z13-14	Z14-15
<u>Nozzle type:</u>	80015LP	11015VB	11015VB
<u>Volume (L/ha):</u>	55	47	49
<u>Pressure (Kpa):</u>	200	240	220
<u>Temperatures (°C):</u>			

(a) wet/dry	17.5/21	13/16	
(b) previous 24 h (min/max)			
(c) next 24 h (min/max)			

Rainfall (mm):

(a) previous 24 h	nil	nil	nil
(b) next 24 h	17.4 mm	nil	2.2 mm

May -	June -	July -	Aug -	Sept -	Oct -
59.4	49.4	46.2	57.4	20.2	8.8

Weeds: Wild oats, soursob, barley grass all at low density.

(ii) Trial No. 88SC31

Treatment	Rate (/ha)	Timing	Eradu	Kulin	Bodallin	Gutha	Halberd
Control yield (t/ha)			3.53	3.73	2.95	2.48	2.96
Control							
Logran	35 g	IBS	104	100	107	114	102
	70 g		104	113	105	114	110
Stomp	1.5 L	IBS	89	94	89	109	98
Grasp	1.5 L + WA	Z13-14	79**	84	86	103	96
	3.0 L + WA		66**	64**	56**	76**	76**
	1.5 + oil		92	90	85	98	91
Puma	0.7 L	Z13-14	92	96	96	101	91
	1.4 L		98	102	96	101	97
Ally + MCPA	5 g + 500 mL	Z14	87	90	86	96	85*
	10 g + 1.0 L		98	87	91	111	97
A7779A	370 g	Z13-14	112	102	107	115	111
	740 g		104	116	102	125	112
Diuron + Brodal	0.5 L + 50 mL	Z13-14	97	105	91	104	99
Hoegrass + Glean	0.75 L + 5 g + oil	Z13-14	103	102	101	122	105

Treatment	Rate	Coorong	O'Connor	Stirling	Echidna	Winjardie
Control yield (t/ha)		2.58	3.48	3.70	3.68	2.70
Control						
Logran	35 g	113	98	86	80**	100
	70 g	109	89	100	97	116
Stomp	1.5 L	99	98	95	96	88
Grasp	1.5 L + WA	86	101	90	0	0
	3.0 L + WA	62**	88	88	0	0
	1.5 + oil	92	102	100	0	0
Puma	0.7 L	84	96	92	0	0
	1.4 L	91	100	89	0	0
Ally + MCPA	5 g + 500 mL	75*	87	83	92	94
	10 g + 1.0 L	85	85	91	100	92
A7779A	370 g	105	108	94	104	116
	740 g	112	115	105	103	98
Diuron + Brodal	0.5 L + 50 mL	103	102	91	101	97
Hoegrass + Glean	0.75 L + 5 g + oil	111	103	98	38**	72**

## Comments

Herbicide tolerance was generally satisfactory at this site with only Grasp showing large yield reductions at the twice recommended rate. All rates of Grasp delayed ear emergence and increased tiller number which probably reflects early crop damage. Barley showed superior crop tolerance to Grasp when compared to wheat. This site was actually the Merredin Research Station and not the South Carrabin block.

Trial title: Tolerance of recommended cereal varieties to new herbicides  
Trial number: 88N73  
Officers: D. Bowran  
Co-operator:  
Crop(s): Wheat, Barley, Oats, Location: N.R.S.  
Triticale Date sown: 21/6/88  
Soil type: Sandy gravel/clay, rock Fertilizer: 100 kg/ha Agras  
No.1  
Ground preparation: Cultivated, followed by 1.0 L Sprayseed prior to seeding  
Experiment design: Seeding rate: 50 kg/ha  
Plot size: 2 m x 10 m  
Harvesting: 1.4 m x 8.5 m  
Spraying details:  
Spraying date: 21/6/88 20/7/88 18/8/88  
Crop stage: IBS Z12-13 Z14-15  
Nozzle type: 11015LP 11015VB 11015VB  
Volume (L/ha): 49 48  
Pressure (Kpa): 230 240  
Temperatures (°C):

(a) wet/dry 9.5/13.5  
(b) previous 24 h  
(min/max)  
(c) next 24 h  
(min/max)

Rainfall (mm):

(a) previous 24 h nil nil nil  
(b) next 24 h nil nil nil

May -	June -	July -	Aug -	Sept -	Oct -
86.0	79.7	54.5	40.8	41.0	8.6

Weeds: Nil.

(iii) Trial No. 88N73

Treatment	Rate (/ha)	Timing	Gutha	Cranbrook	Aroona	Kulin	Tincurrin
Control yield (t/ha)			1.66	1.50	1.50	1.75	1.94
Logran	35 g	IBS	89	115	112	110	105
	70 g		92	110	112	89	85
Ally + MCPA	5 g + 0.5 L	Z14-15	108	121	111	102	98
	10 g + 1.0 L		93	103	91	85	84
A7779A	370 g	Z12-13	95	111	95	94	106
	740 g		93	116	111	94	97
Diuron + Brodal	0.5 L + 50 mL	Z12-13	87	114	100	91	86
Lontrel	600 mL	Z12-13	99	133	116	110	100
Hoegrass + Glean	0.75 L + 5 g	Z12-13	104	139	125	111	98
	1.5 L + 10 g		83*	100	86	73**	84
Grasp	0.75 L	Z14-15	80*	115	115	109	99
	1.0 L		99	108	105	89	89
	1.5 L		83*	97	99	87	97
	2.0 L		78**	103	99	97	102
Finesse + MCPA 24 g + 0.5 L		Z16 +	78**	109	100	105	109
	48 g + 1.0 L		63**	101	103	103	110

Treatment	Rate	Muir	Moondyne	Stirling	Echidna	Mortlock
Control yield (t/ha)		1.75	2.23	1.92	2.31	2.15
Logran	35 g	110	92	91	107	110
	70 g	93	66**	103	71	89
Ally + MCPA	5 g + 0.5 L	102	83*	96	97	96
	10 g + 1.0 L	84	62**	77*	79	91
A7779A	370 g	119	86	99	94	100
	740 g	95	70**	93	82	84
Diuron + Brodal	0.5 L + 50 mL	100	80**	88	95	102
Lontrel	600 mL	105	80**	102	101	104
Hoegrass + Glean	0.75 L + 5 g	115	70**	108	69	101
	1.5 L + 10 g	82	51**	84	31	50
Grasp	0.75 L	105	81*	100	55	56
	1.0 L	97	81*	116	36	49
	1.5 L	107	87	124	0	0
	2.0 L	110	87	113	0	0
Finesse + MCPA 24 g + 0.5 L		95	72**	79*	98	97
	48 g + 1.0 L	94	69**	80*	108	100



## Comments

With the exception of Gutha all wheat varieties showed good tolerance to most herbicides in this trial. Only the twice recommended rates of Ally + MCPA and Hoegrass + Glean had a trend towards decreased yield. Gutha was affected by lodging at this site with breakage occurring between the 2nd and 3rd nodes with Grasp being generally the worst affected of any herbicide treatment. Moondyne barley showed higher sensitivity to nearly all treatments compared to Stirling. Oat tolerance was generally lower to most herbicides than wheat tolerance.