

MSU Weed Science Research Program

Potential antagonisms with MON 63410 in soybean

Trial ID: SOY01-10 Study Dir.: Sprague, Powell
 Conducted: T-10 East Investigator: Christy Sprague

Date Planted: 5/19/2010 Row Spacing: 30 IN
 Variety: Pioneer 92M61 No. of Reps: 4
 Population: 155,000 Seeds/Acre % OM: 2.9
 Soil Type: Loam pH: 7.6
 Plot Size: 10 X 35 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel plow and spring soil finish
 Fertilizer: None

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	mainly foxtail species	SETARIA SP.
2.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
3.	POROL	PURSLANE, COMMON	PORTULACA OLERACEA L.
4.	AMASS	REDROOT PIGWEED, POWELL AMARANTH	AMARANTHUS SP.
5.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
6.	BRAKA	MUSTARD, WILD	BRASSICA KABER (DC.) L.C. Wheeler
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

	A	B
Application Timing:	PRE	POST
Date Treated:	5/19/2010	6/9/2010
Time Treated:	7:40 pm	5:15 pm
% Cloud Cover:	15	50
Air Temp., Unit:	78 F	80 F
% Relative Humidity:	29	42
Wind Speed/Unit/Dir:	0 mph	10 mph SW
Soil Temp., Unit:	65 F	72 F
Soil/Leaf Surface M:	4 -	4 5
Soil Moist (1=w 5=d):	3	3

Crop Stage at Each Application

	A	B
Crop Name:	GLXMA	GLXMA
Height (In.):	-	3-4"
Stage (L):	-	V3

Weed Stage at Each Application

	A	B
Weed 1 Name:	ANGR	ANGR
Height (In.):	-	3-5"
Stage (L):	-	5-6
Weed 2 Name:	AMBEL	AMBEL
Height (In.):	-	1"
Stage (L):	-	6
Weed 3 Name:	POROL	POROL
Height (In.):	-	1-3" dia
Stage (L):	-	6-12
Weed 4 Name:	AMASS	AMASS
Height (In.):	-	2-3"
Stage (L):	-	5-6
Weed 5 Name:	CHEAL	CHEAL
Height (In.):	-	1-2"
Stage (L):	-	6-10
Weed 6 Name:	BRAKA	BRAKA
Height (In.):	-	2-3"
Stage (L):	-	6-7

Weed Density (plants/sq. ft.)

	1	2	3	4	5	6
Weed Name:	ANGR	AMBEL	POROL	AMASS	CHEAL	BRAKA
Density:	8	2	2	12	2	<1

Application Equipment

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GPA	Carrier	PSI
A	Cub	3.8	AirMix	11003	21"	20"	100"	19	water	28
B	Cub	3.8	AirMix	11003	24"	20"	100"	19	water	28

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								GLXMA	ANGR	CHEAL	AMASS	AMBEL	GLXMA	
								injury	control	control	control	control	injury	
								percent	percent	percent	percent	percent	percent	
								6/16/2010	6/16/2010	6/16/2010	6/16/2010	6/16/2010	6/30/2010	
								7 DA-B	7 DA-B	7 DA-B	7 DA-B	7 DA-B	21 DA-B	
								0	0	0	0	0	0	
Trt	Treatment	Form	Form	Rate	Rate	Grow	Appl							
No.	Name	Conc	Type	Unit	Unit	Stg	Code							
1	Valor	51	WG	2	oz/a	PRE	A	0	99	99	99	97	1	
1	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B							
1	AMS		WG	17	lb/100 gal	POST	B							
2	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	0	97	98	99	95	4	
2	AMS		WG	17	lb/100 gal	POST	B							
3	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	0	97	92	99	98	4	
3	MON 63410	3	L	3	pt/a	POST	B							
3	AMS		WG	17	lb/100 gal	POST	B							
4	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	0	97	99	99	99	5	
4	Select Max	0.97	L	9	fl oz/a	POST	B							
4	MON 63410	3	L	3	pt/a	POST	B							
4	AMS		WG	17	lb/100 gal	POST	B							
5	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	0	97	99	99	99	5	
5	Select Max	0.97	L	9	fl oz/a	POST	B							
5	MON 63410	3	L	3	pt/a	POST	B							
5	Herbimax (COC)		L	1	% v/v	POST	B							
5	AMS		WG	17	lb/100 gal	POST	B							
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	0	95	98	99	99	5	
6	MON 63410	3	L	3	pt/a	POST	B							
6	Asana XL	0.66	L	6.4	fl oz/a	POST	B							
6	AMS		WG	17	lb/100 gal	POST	B							
7	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	0	97	97	99	99	3	
7	Select Max	0.97	L	9	fl oz/a	POST	B							
7	MON 63410	3	L	3	pt/a	POST	B							
7	Asana XL	0.66	L	6.4	fl oz/a	POST	B							
7	Herbimax (COC)		L	1	% v/v	POST	B							
7	AMS		WG	17	lb/100 gal	POST	B							
LSD (P=.05)								0.0	1.7	3.3	0.0	3.0	2.6	
Standard Deviation								0.0	1.1	2.2	0.0	2.0	1.7	
CV								0.0	1.18	2.32	0.0	2.04	44.67	

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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								ANGR	CHEAL	AMASS	AMBEL	BRAKA	ANGR
Weed Code													
Crop Code													
Rating Data Type								control	control	control	control	control	control
Rating Unit								percent	percent	percent	percent	percent	percent
Rating Date								6/30/2010	6/30/2010	6/30/2010	6/30/2010	6/30/2010	8/2/2010
Trt-Eval Interval								21 DA-B	21 DA-B	21 DA-B	21 DA-B	21 DA-B	54 DA-B
# Subsamples, Dec.								0	0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	Valor	51	WG	2	oz/a	PRE	A	94	98	98	98	99	75
1	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B						
1	AMS		WG	17	lb/100 gal	POST	B						
2	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	90	94	95	97	99	61
2	AMS		WG	17	lb/100 gal	POST	B						
3	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	96	98	98	98	99	88
3	MON 63410	3	L	3	pt/a	POST	B						
3	AMS		WG	17	lb/100 gal	POST	B						
4	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	98	98	97	98	99	90
4	Select Max	0.97	L	9	fl oz/a	POST	B						
4	MON 63410	3	L	3	pt/a	POST	B						
4	AMS		WG	17	lb/100 gal	POST	B						
5	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	98	98	98	98	99	93
5	Select Max	0.97	L	9	fl oz/a	POST	B						
5	MON 63410	3	L	3	pt/a	POST	B						
5	Herbimax (COC)		L	1	% v/v	POST	B						
5	AMS		WG	17	lb/100 gal	POST	B						
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	94	95	97	98	99	88
6	MON 63410	3	L	3	pt/a	POST	B						
6	Asana XL	0.66	L	6.4	fl oz/a	POST	B						
6	AMS		WG	17	lb/100 gal	POST	B						
7	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	98	97	97	96	99	89
7	Select Max	0.97	L	9	fl oz/a	POST	B						
7	MON 63410	3	L	3	pt/a	POST	B						
7	Asana XL	0.66	L	6.4	fl oz/a	POST	B						
7	Herbimax (COC)		L	1	% v/v	POST	B						
7	AMS		WG	17	lb/100 gal	POST	B						
LSD (P=.05)								4.5	3.9	3.4	3.0	0.0	10.8
Standard Deviation								3.1	2.6	2.3	2.0	0.0	7.3
CV								3.21	2.7	2.33	2.05	0.0	8.72

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Weed Code		Crop Code		Rating Data Type		Rating Unit		Rating Date		Trt-Eval Interval		# Subsamples, Dec.	
Trt	Treatment	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	CHEAL	AMASS	AMBEL	POROL	GLXMA moisture percent	GLXMA yield bu/acre at 13% M
1	Valor	51	WG	2	oz/a	PRE	A	99	95	96	99	8.6	48.9
1	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B						
1	AMS		WG	17	lb/100 gal	POST	B						
2	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	91	88	91	68	8.6	44.2
2	AMS		WG	17	lb/100 gal	POST	B						
3	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	95	97	93	84	8.5	43.3
3	MON 63410	3	L	3	pt/a	POST	B						
3	AMS		WG	17	lb/100 gal	POST	B						
4	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	92	91	90	71	8.5	45.0
4	Select Max	0.97	L	9	fl oz/a	POST	B						
4	MON 63410	3	L	3	pt/a	POST	B						
4	AMS		WG	17	lb/100 gal	POST	B						
5	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	94	96	92	86	8.6	42.4
5	Select Max	0.97	L	9	fl oz/a	POST	B						
5	MON 63410	3	L	3	pt/a	POST	B						
5	Herbimax (COC)		L	1	% v/v	POST	B						
5	AMS		WG	17	lb/100 gal	POST	B						
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	90	98	90	68	8.5	43.4
6	MON 63410	3	L	3	pt/a	POST	B						
6	Asana XL	0.66	L	6.4	fl oz/a	POST	B						
6	AMS		WG	17	lb/100 gal	POST	B						
7	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	B	96	96	93	81	8.6	44.8
7	Select Max	0.97	L	9	fl oz/a	POST	B						
7	MON 63410	3	L	3	pt/a	POST	B						
7	Asana XL	0.66	L	6.4	fl oz/a	POST	B						
7	Herbimax (COC)		L	1	% v/v	POST	B						
7	AMS		WG	17	lb/100 gal	POST	B						
LSD (P=.05)								7.9	5.5	4.1	22.1	0.20	4.92
Standard Deviation								5.3	3.7	2.8	14.9	0.13	3.31
CV								5.71	3.95	3.01	18.68	1.58	7.43

Means followed by same letter do not significantly differ (P=.05, LSD)

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