

MSU Weed Science Research Program

POST broadleaf herbicide tank-mixtures with glyphosate in Roundup Ready soybean

Trial ID: SOY11-10 Study Dir.: Sprague, Powell
Conducted: T-14 South 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: 6.9
Plot Size: 10 X 35 FT Design: RANDOMIZED COMPLETE BLOCK

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

Crop and Weed Description

Table with 4 columns: Weed, Code, Common Name, Scientific Name. Lists weeds 1-6 and crop 1 (GLXMA SOYBEAN).

Application Description

A
Application Timing: POST
Date Treated: 6/17/2010
Time Treated: 10:30 am
% Cloud Cover: 70
Air Temp., Unit: 68 F
% Relative Humidity: 66
Wind Speed/Unit/Dir: 2 mph E
Soil Temp., Unit: 67 F
Soil/Leaf Surface M: 5 5
Soil Moist (1=w 5=d): 3

Crop Stage at Each Application

A
Crop Name: GLXMA
Height (In.): 4-6"
Stage (L): V3-4

Weed Stage at Each Application

A
Weed 1 Name: ANGR Height (In.): 5-10" Stage (L): 5-16
Weed 2 Name: AMBEL Height (In.): 3-5" Stage (L): 6-10
Weed 3 Name: CHEAL Height (In.): 2-5" Stage (L): 10-25
Weed 4 Name: ABUTH Height (In.): 3-6" Stage (L): 5-7
Weed 5 Name: AMASS Height (In.): 3-5" Stage (L): 12-15
Weed 6 Name: SOLPT Height (In.): 2" Stage (L): 6

Weed Density (plants/sq. ft.)

Table with 6 columns: Weed Name, Density. Rows for ANGR, AMBEL, ABUTH, CHEAL, SOLPT, AMASS.

Application Equipment

Table with 11 columns: Appl, Sprayer, Speed, Nozzle, Nozzle, Nozzle, Boom, Width, GPA, Carrier, PSI. Row A: Cub, 3.8, AirMix, 11003, 27", 20", 100", 19, water, 28

Comments: There were several plots where woodchuck damage occurred to soybean. Soybean injury and yield for these plots were not evaluated.

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	# Subsamples, Dec.	GLXMA injury percent 6/22/2010 5 DA-A 0	ANGR control percent 6/22/2010 5 DA-A 0	CHEAL control percent 6/22/2010 5 DA-A 0	AMASS control percent 6/22/2010 5 DA-A 0	AMBEL control percent 6/22/2010 5 DA-A 0	ABUTH control percent 6/22/2010 5 DA-A 0	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	2	99	99	99	97	
1	AMS		WG	17	lb/100 gal	POST	A						
2	Flexstar GT	3.31	SL	3	pt/a	POST	A	12	99	99	99	98	
2	Activator 90		L	0.25	% v/v	POST	A						
2	AMS		WG	17	lb/100 gal	POST	A						
3	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	20	98	98	99	99	
3	Flexstar	1.88	L	1	pt/a	POST	A						
3	AMS		WG	17	lb/100 gal	POST	A						
4	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	33	99	98	99	99	
4	Cobra	2	L	10	fl oz/a	POST	A						
4	AMS		WG	17	lb/100 gal	POST	A						
5	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	12	99	99	99	92	
5	Cadet	0.91	L	0.5	fl oz/a	POST	A						
5	AMS		WG	17	lb/100 gal	POST	A						
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	15	99	99	99	90	
6	Resource	0.86	L	3	fl oz/a	POST	A						
6	AMS		WG	17	lb/100 gal	POST	A						
7	Untreated							0	0	0	0	0	
8	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	30	99	99	99	98	
8	Harmony SG	50	WG	0.128	oz/a	POST	A						
8	AMS		WG	17	lb/100 gal	POST	A						
9	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	18	99	99	99	99	
9	Raptor	1	L	4	fl oz/a	POST	A						
9	AMS		WG	17	lb/100 gal	POST	A						
10	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	7	99	99	99	99	
10	FirstRate	84	WG	0.3	oz/a	POST	A						
10	AMS		WG	17	lb/100 gal	POST	A						
LSD (P=.05)								6.3	0.7	0.8	0.0	4.8	3.1
Standard Deviation								4.2	0.5	0.5	0.0	3.3	2.1
CV								28.45	0.52	0.61	0.0	3.79	2.42

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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Weed Code		SOLPT		ANGR		CHEAL		AMASS		AMBEL			
Crop Code		GLXMA											
Rating Data Type		control		control		control		control		control			
Rating Unit		percent		percent		percent		percent		percent			
Rating Date		6/22/2010		7/1/2010		7/1/2010		7/1/2010		7/1/2010			
Trt-Eval Interval		5 DA-A		14 DA-A		14 DA-A		14 DA-A		14 DA-A			
# Subsamples, Dec.		0		0		0		0		0			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	0	99	99	99	98
1	AMS		WG	17	lb/100 gal	POST	A						
2	Flexstar GT	3.31	SL	3	pt/a	POST	A	99	10	99	99	99	99
2	Activator 90		L	0.25	% v/v	POST	A						
2	AMS		WG	17	lb/100 gal	POST	A						
3	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	15	99	99	99	99
3	Flexstar	1.88	L	1	pt/a	POST	A						
3	AMS		WG	17	lb/100 gal	POST	A						
4	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99		99	99	99	99
4	Cobra	2	L	10	fl oz/a	POST	A						
4	AMS		WG	17	lb/100 gal	POST	A						
5	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	5	99	96	99	78
5	Cadet	0.91	L	0.5	fl oz/a	POST	A						
5	AMS		WG	17	lb/100 gal	POST	A						
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	10	99	99	99	84
6	Resource	0.86	L	3	fl oz/a	POST	A						
6	AMS		WG	17	lb/100 gal	POST	A						
7	Untreated							0	0	0	0	0	0
8	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	20	99	99	99	98
8	Harmony SG	50	WG	0.128	oz/a	POST	A						
8	AMS		WG	17	lb/100 gal	POST	A						
9	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	13	99	99	99	99
9	Raptor	1	L	4	fl oz/a	POST	A						
9	AMS		WG	17	lb/100 gal	POST	A						
10	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	3	99	99	99	99
10	FirstRate	84	WG	0.3	oz/a	POST	A						
10	AMS		WG	17	lb/100 gal	POST	A						
LSD (P=.05)								0.0	7.6	0.0	3.4	0.0	5.9
Standard Deviation								0.0	3.9	0.0	2.3	0.0	4.1
CV								0.0	47.21	0.0	2.62	0.0	4.76

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								ABUTH	ANGR	CHEAL	AMASS	AMBEL	ABUTH
								control	control	control	control	control	control
								percent	percent	percent	percent	percent	percent
								7/1/2010	7/13/2010	7/13/2010	7/13/2010	7/13/2010	7/13/2010
								14 DA-A	26 DA-A	26 DA-A	26 DA-A	26 DA-A	26 DA-A
								0	0	0	0	0	0
Trt	Treatment	Form	Form	Rate	Rate	Grow	Appl						
No.	Name	Conc	Type	Unit	Unit	Stg	Code						
1	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	96	98	98	99
1	AMS		WG	17	lb/100 gal	POST	A						
2	Flexstar GT	3.31	SL	3	pt/a	POST	A	99	99	98	99	98	98
2	Activator 90		L	0.25	% v/v	POST	A						
2	AMS		WG	17	lb/100 gal	POST	A						
3	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	98	98	99	99	98
3	Flexstar	1.88	L	1	pt/a	POST	A						
3	AMS		WG	17	lb/100 gal	POST	A						
4	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	91	99	99	99
4	Cobra	2	L	10	fl oz/a	POST	A						
4	AMS		WG	17	lb/100 gal	POST	A						
5	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	96	88	99	89	98
5	Cadet	0.91	L	0.5	fl oz/a	POST	A						
5	AMS		WG	17	lb/100 gal	POST	A						
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	96	92	98	88	99
6	Resource	0.86	L	3	fl oz/a	POST	A						
6	AMS		WG	17	lb/100 gal	POST	A						
7	Untreated							0	0	0	0	0	0
8	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	94	99	99	99
8	Harmony SG	50	WG	0.128	oz/a	POST	A						
8	AMS		WG	17	lb/100 gal	POST	A						
9	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	97	97	99	99	99
9	Raptor	1	L	4	fl oz/a	POST	A						
9	AMS		WG	17	lb/100 gal	POST	A						
10	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	95	99	99	99
10	FirstRate	84	WG	0.3	oz/a	POST	A						
10	AMS		WG	17	lb/100 gal	POST	A						
LSD (P=.05)								0.0	3.8	6.3	1.4	1.8	1.6
Standard Deviation								0.0	2.6	4.3	1.0	1.2	1.1
CV								0.0	2.93	5.06	1.1	1.43	1.23

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Weed Code

Crop Code

Rating Data Type

Rating Unit

Rating Date

Trt-Eval Interval

Subsamples, Dec.

GLXMA
moisture
percent
10/18/2010
123 DA-A
1
GLXMA
yield
bu/acre
10/18/2010
at 13% M
1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
1	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	10.3	40.3
1	AMS		WG	17	lb/100 gal	POST	A		
2	Flexstar GT	3.31	SL	3	pt/a	POST	A	10.2	43.0
2	Activator 90		L	0.25	% v/v	POST	A		
2	AMS		WG	17	lb/100 gal	POST	A		
3	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	10.0	38.2
3	Flexstar	1.88	L	1	pt/a	POST	A		
3	AMS		WG	17	lb/100 gal	POST	A		
4	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	10.3	36.6
4	Cobra	2	L	10	fl oz/a	POST	A		
4	AMS		WG	17	lb/100 gal	POST	A		
5	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	11.2	38.0
5	Cadet	0.91	L	0.5	fl oz/a	POST	A		
5	AMS		WG	17	lb/100 gal	POST	A		
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	10.0	42.3
6	Resource	0.86	L	3	fl oz/a	POST	A		
6	AMS		WG	17	lb/100 gal	POST	A		
7	Untreated							12.6	10.7
8	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	10.1	39.5
8	Harmony SG	50	WG	0.128	oz/a	POST	A		
8	AMS		WG	17	lb/100 gal	POST	A		
9	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	10.2	44.1
9	Raptor	1	L	4	fl oz/a	POST	A		
9	AMS		WG	17	lb/100 gal	POST	A		
10	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	10.2	39.8
10	FirstRate	84	WG	0.3	oz/a	POST	A		
10	AMS		WG	17	lb/100 gal	POST	A		

LSD (P=.05)

1.27

7.83

Standard Deviation

0.85

5.27

CV

8.12

14.15

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

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