

MSU Weed Science Research Program

Effect of Smart System micronutrients on glyphosate activity

Trial ID: SOY16-10 Study Dir.: Sprague, Powell
Conducted: H6-8 Soils Investigator: Christy Sprague

Date Planted: 6/17/2010 Row Spacing: 30 IN
Variety: Pioneer 92M61 No. of Reps: 4
Population: 157,000 seeds/acre % OM: 2.9
Soil Type: Loam pH: 6.8
Plot Size: 10 X 25 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 1-5 and crop 1.

Application Description

A
Application Timing: POST
Date Treated: 7/12/2010
Time Treated: 2:30 pm
% Cloud Cover: 70
Air Temp., Unit: 84 F
% Relative Humidity: 60
Wind Speed/Unit/Dir: 3 mph SW
Soil Temp., Unit: 82 F
Soil/Leaf Surface M: 5 5
Soil Moist (1=w 5=d): 4

Crop Stage at Each Application

A
Crop Name: GLXMA
Height (In.): 6-8"
Stage (L): V3-4

Weed Stage at Each Application

A
Weed 1 Name: ABUTH
Height (In.): 3-4"
Stage (L): 5-6
Weed 2 Name: AMASS
Height (In.): 2-4"
Stage (L): 10-16
Weed 3 Name: CHEAL
Height (In.): 1-3"
Stage (L): 8-20
Weed 4 Name: ANGR
Height (In.): 2-3"
Stage (L): 6-8
Weed 5 Name: POROL
Height (In.): -
Stage (L): -

Weed Density (plants/sq. ft.)

Table with 5 columns: Weed Name, Density, Weed Name, Density, Weed Name, Density, Weed Name, Density, Weed Name, Density.

Application Equipment

Table with 11 columns: Appl, Sprayer, Speed, Nozzle, Nozzle, Nozzle, Nozzle, Boom, Width, GPA, Carrier, PSI.

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Weed Code								ANGR	ABUTH	CHEAL	AMASS	POROL	
Crop Code							GLXMA						
Rating Data Type							injury	control	control	control	control	control	
Rating Unit							percent	percent	percent	percent	percent	percent	
Rating Date							7/20/2010	7/20/2010	7/20/2010	7/20/2010	7/20/2010	7/20/2010	
Trt-Eval Interval							8 DA-A	8 DA-A	8 DA-A	8 DA-A	8 DA-A	8 DA-A	
# Subsamples, Dec.							0	0	0	0	0	0	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	Untreated						A	0	0	0	0	0	
2	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	98	94	99	95	
2	AMS		WG	8.5	lb/100 gal	POST	A						
3	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	95	85	98	83	
3	Smart Trio		L	32	fl oz/a	POST	A						
3	AMS		WG	8.5	lb/100 gal	POST	A						
4	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	99	90	99	91	
4	Smart Mn		L	32	fl oz/a	POST	A						
4	AMS		WG	8.5	lb/100 gal	POST	A						
5	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	96	80	96	74	
5	Smart Zn		L	32	fl oz/a	POST	A						
5	AMS		WG	8.5	lb/100 gal	POST	A						
6	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	96	88	97	88	
6	Eezy Man		L	32	fl oz/a	POST	A						
6	AMS		WG	8.5	lb/100 gal	POST	A						
7	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	96	98	99	91	
7	Prolec		L	32	fl oz/100 gal	POST	A						
8	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	98	77	91	78	
8	Smart Trio		L	32	fl oz/a	POST	A						
9	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	96	93	97	81	
9	Smart Mn		L	32	fl oz/a	POST	A						
10	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	89	70	88	70	
10	Smart Zn		L	32	fl oz/a	POST	A						
11	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	93	75	86	81	
11	Eezy Man		L	32	fl oz/a	POST	A						
LSD (P=.05)								0.0	5.2	13.4	4.3	1.0	12.1
Standard Deviation								0.0	3.6	7.8	3.0	0.7	8.4
CV								0.0	4.16	10.15	3.43	0.76	11.13

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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Trial ID: SOY16-10
Conducted: H6-8 SoilsStudy Dir.: Sprague, Powell
Investigator: Christy Sprague

Weed Code	ANGR	ABUTH	CHEAL	AMASS	POROL
Crop Code	GLXMA				
Rating Data Type	injury	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	7/26/2010	7/26/2010	7/26/2010	7/26/2010	7/26/2010
Trt-Eval Interval	14 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	GLXMA injury percent	ANGR control percent	ABUTH control percent	CHEAL control percent	AMASS control percent	POROL control percent
1	Untreated							0	0	0	0	0	0
2	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	99	98	99	99	98
2	AMS		WG	8.5	lb/100 gal	POST	A						
3	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	99	94	99	99	97
3	Smart Trio		L	32	fl oz/a	POST	A						
3	AMS		WG	8.5	lb/100 gal	POST	A						
4	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	99	96	98	97	98
4	Smart Mn		L	32	fl oz/a	POST	A						
4	AMS		WG	8.5	lb/100 gal	POST	A						
5	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	98	96	98	99	91
5	Smart Zn		L	32	fl oz/a	POST	A						
5	AMS		WG	8.5	lb/100 gal	POST	A						
6	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	99	97	98	99	96
6	Eezy Man		L	32	fl oz/a	POST	A						
6	AMS		WG	8.5	lb/100 gal	POST	A						
7	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	99	99	99	97	99
7	Prolec		L	32	fl oz/100 gal	POST	A						
8	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	99	93	95	99	96
8	Smart Trio		L	32	fl oz/a	POST	A						
9	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	99	96	99	99	94
9	Smart Mn		L	32	fl oz/a	POST	A						
10	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	98	83	92	99	79
10	Smart Zn		L	32	fl oz/a	POST	A						
11	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	0	98	83	97	99	95
11	Eezy Man		L	32	fl oz/a	POST	A						
LSD (P=.05)								0.0	1.1	8.3	3.9	2.5	8.3
Standard Deviation								0.0	0.8	4.9	2.7	1.7	5.7
CV								0.0	0.86	5.74	3.08	1.93	6.69

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Conducted: H6-8 SoilsStudy Dir.: Sprague, Powell
Investigator: Christy Sprague

Weed Code								ANGR	ABUTH	CHEAL	AMASS	POROL	GLXMA
Crop Code													moisture
Rating Data Type								control	control	control	control	control	percent
Rating Unit								percent	percent	percent	percent	percent	percent
Rating Date								8/2/2010	8/2/2010	8/2/2010	8/2/2010	8/2/2010	10/18/2010
Trt-Eval Interval								21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	98 DA-A
# Subsamples, Dec.								0	0	0	0	0	1
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	Untreated							0	0	0	0	0	9.9
2	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	99	99	99	99	99	9.8
2	AMS		WG	8.5	lb/100 gal	POST	A						
3	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	99	99	99	99	98	9.8
3	Smart Trio		L	32	fl oz/a	POST	A						
3	AMS		WG	8.5	lb/100 gal	POST	A						
4	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	99	98	99	99	99	9.9
4	Smart Mn		L	32	fl oz/a	POST	A						
4	AMS		WG	8.5	lb/100 gal	POST	A						
5	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	99	99	99	99	96	9.9
5	Smart Zn		L	32	fl oz/a	POST	A						
5	AMS		WG	8.5	lb/100 gal	POST	A						
6	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	99	99	99	99	99	9.8
6	Eezy Man		L	32	fl oz/a	POST	A						
6	AMS		WG	8.5	lb/100 gal	POST	A						
7	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	99	99	99	99	99	9.8
7	Prolec		L	32	fl oz/100 gal	POST	A						
8	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	99	96	98	99	99	9.9
8	Smart Trio		L	32	fl oz/a	POST	A						
9	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	99	98	99	99	98	9.9
9	Smart Mn		L	32	fl oz/a	POST	A						
10	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	99	89	98	99	90	9.7
10	Smart Zn		L	32	fl oz/a	POST	A						
11	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	99	92	99	99	97	9.9
11	Eezy Man		L	32	fl oz/a	POST	A						
LSD (P=.05)								0.0	5.8	1.4	0.0	4.2	0.16
Standard Deviation								0.0	3.4	1.0	0.0	2.9	0.11
CV								0.0	3.87	1.08	0.0	3.29	1.13

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Investigator: Christy SpragueWeed Code
Crop Code
Rating Data Type
Rating Unit
Rating Date
Trt-Eval Interval
Subsamples, Dec.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	Untreated							47.4
2	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	52.3
2	AMS		WG	8.5	lb/100 gal	POST	A	
3	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	53.3
3	Smart Trio		L	32	fl oz/a	POST	A	
3	AMS		WG	8.5	lb/100 gal	POST	A	
4	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	49.5
4	Smart Mn		L	32	fl oz/a	POST	A	
4	AMS		WG	8.5	lb/100 gal	POST	A	
5	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	53.4
5	Smart Zn		L	32	fl oz/a	POST	A	
5	AMS		WG	8.5	lb/100 gal	POST	A	
6	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	55.2
6	Eezy Man		L	32	fl oz/a	POST	A	
6	AMS		WG	8.5	lb/100 gal	POST	A	
7	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	52.0
7	Prolec		L	32	fl oz/100 gal	POST	A	
8	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	52.1
8	Smart Trio		L	32	fl oz/a	POST	A	
9	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	52.0
9	Smart Mn		L	32	fl oz/a	POST	A	
10	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	53.2
10	Smart Zn		L	32	fl oz/a	POST	A	
11	Roundup PowerMax	4.5	SL	16	fl oz/a	POST	A	48.3
11	Eezy Man		L	32	fl oz/a	POST	A	
LSD (P=.05)								6.05
Standard Deviation								4.19
CV								8.1

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