

MSU Weed Science Research Program

Weed control and soybean tolerance with Trivence

Trial ID: SOY08-14
 Conducted: Campus T-12

Study Dir.: Sprague and Powell
 Investigator: Christy Sprague

Date Planted: May/21/2014 **Row Spacing:** 30 IN
Variety: Pioneer 26T76R **No. of Reps:** 4
Population: 150,000 seeds/A **% OM:** 4
Soil Type: Loam **pH:** 6.8
Plot Size: 10 X 35 FT **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel plow. Spring soil finish 2x.
Fertilizer: None

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	mainly foxtail species	SETARIA SP.
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	AMAPO	AMARANTH, POWELL	AMARANTHUS POWELLII S.WATS.
4.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
5.	SINAR	MUSTARD, WILD	SINAPIS ARVENSIS L.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

	A	B
Application Timing:	PRE	POST
Date Treated:	May/22/2014	Jun/16/2014
Time Treated:	9:15 AM	2:20 PM
% Cloud Cover:	20	40
Air Temp., Unit:	64 F	85 F
% Relative Humidity:	63	41
wind Speed/Unit/Dir:	8 mph NW	6 mph SW
Soil Temp., Unit:	60 F	77 F
Soil/Leaf Surface M:	5 -	5 5
Soil Moist (1=w 5=d):	5	5

Crop Stage at Each Application

	A	B
Crop Name:	GLXMA	GLXMA
Height (In.):	-	6"
Stage (L):	-	V2-V3

Weed Stage at Each Application

	A	B
Weed 1 Name:	ANGR	ANGR
Height (In.):	-	0.25-8"
Stage (L):	-	1-16
Weed 2 Name:	CHEAL	CHEAL
Height (In.):	-	1-4"
Stage (L):	-	4-Many
Weed 3 Name:	AMAPO	AMAPO
Height (In.):	-	1-3"
Stage (L):	-	4-18
Weed 4 Name:	AMBEL	AMBEL
Height (In.):	-	1-3"
Stage (L):	-	4-8
Weed 5 Name:	SINAR	SINAR
Height (In.):	-	1-2"
Stage (L):	-	1-4

Weed Density (plants/sq. ft.)

	1	2	3	4	5
Date:	Jul/17/2014	Jul/17/2014	Jul/17/2014	Jul/17/2014	Jul/17/2014
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	SINAR
Density:	45	2	<1	2	<1

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom	GPA	Carrier	PSI
	Type	MPH	Type	Size	Height	Spacing	width			
A	Cub	3.8	AIXR	11003	21"	20"	100"	19	Water	30
B	Cub	3.8	AIXR	11003	27"	20"	100"	19	Water	30

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Weed Code									ANGR	CHEAL	AMAPO	AMBEL
Crop Code									GLXMA			
Rating Data Type									injury	control	control	control
Rating Unit									percent	percent	percent	percent
Rating Date									Jun/16/2014	Jun/16/2014	Jun/16/2014	Jun/16/2014
Trt-Eval Interval									25 DA-A	25 DA-A	25 DA-A	25 DA-A
# Subsamples, Dec.												

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Envive	41.3	WG	3.5	oz/a	PRE	A	5	62	90	99	77
1	Abundit Extra	3	SL	32	fl oz/a	POST	B					
1	AMS		WG	17	lb/100 gal	POST	B					
2	Envive	41.3	WG	3.5	oz/a	PRE	A	7	78	94	99	80
2	Zidua	85	WG	1.5	oz/a	PRE	A					
2	Abundit Extra	3	SL	32	fl oz/a	POST	B					
2	AMS		WG	17	lb/100 gal	POST	B					
3	Untreated							0	0	0	0	0
4	Canopy	75	WG	4	oz/a	PRE	A	2	67	65	99	63
4	Cinch	7.64	L	1	pt/a	PRE	A					
4	Abundit Extra	3	SL	32	fl oz/a	POST	B					
4	AMS		WG	17	lb/100 gal	POST	B					
5	Canopy	75	WG	4	oz/a	PRE	A	0	52	66	99	60
5	Abundit Extra	3	SL	32	fl oz/a	POST	B					
5	Cinch	7.64	L	1	pt/a	POST	B					
5	AMS		WG	17	lb/100 gal	POST	B					
6	Trivence	61.3	WG	8	oz/a	PRE	A	3	63	79	99	71
6	Abundit Extra	3	SL	32	fl oz/a	POST	B					
6	AMS		WG	17	lb/100 gal	POST	B					
7	Trivence	61.3	WG	8	oz/a	PRE	A	6	74	96	99	81
7	Zidua	85	WG	1.5	oz/a	PRE	A					
7	Abundit Extra	3	SL	32	fl oz/a	POST	B					
7	AMS		WG	17	lb/100 gal	POST	B					
8	Boundary	6.5	L	1.5	pt/a	PRE	A	5	82	60	99	55
8	Abundit Extra	3	SL	32	fl oz/a	POST	B					
8	AMS		WG	17	lb/100 gal	POST	B					
9	Fierce	76	WG	3	oz/a	PRE	A	7	70	86	99	77
9	Abundit Extra	3	SL	32	fl oz/a	POST	B					
9	AMS		WG	17	lb/100 gal	POST	B					
LSD (P=.05)								4.5	13.4	14.7	0.0	10.4
CV								79.83	15.11	14.32	0.0	11.4

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

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Weed Code	SINAR	ANGR	CHEAL	AMAPO
Crop Code	GLXMA			
Rating Data Type	control	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	Jun/16/2014	Jun/30/2014	Jun/30/2014	Jun/30/2014
Trt-Eval Interval	25 DA-A	14 DA-B	14 DA-B	14 DA-B
# Subsamples, Dec.				

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code	SINAR	GLXMA	ANGR	CHEAL	AMAPO
1	Envive	41.3	WG	3.5	oz/a	PRE	A	94	0	90	99	99
1	Abundit Extra	3	SL	32	fl oz/a	POST	B					
1	AMS		WG	17	lb/100 gal	POST	B					
2	Envive	41.3	WG	3.5	oz/a	PRE	A	94	0	94	99	99
2	Zidua	85	WG	1.5	oz/a	PRE	A					
2	Abundit Extra	3	SL	32	fl oz/a	POST	B					
2	AMS		WG	17	lb/100 gal	POST	B					
3	Untreated							0	0	0	0	0
4	Canopy	75	WG	4	oz/a	PRE	A	95	0	96	99	99
4	Cinch	7.64	L	1	pt/a	PRE	A					
4	Abundit Extra	3	SL	32	fl oz/a	POST	B					
4	AMS		WG	17	lb/100 gal	POST	B					
5	Canopy	75	WG	4	oz/a	PRE	A	99	0	98	99	99
5	Abundit Extra	3	SL	32	fl oz/a	POST	B					
5	Cinch	7.64	L	1	pt/a	POST	B					
5	AMS		WG	17	lb/100 gal	POST	B					
6	Trivence	61.3	WG	8	oz/a	PRE	A	99	0	90	99	99
6	Abundit Extra	3	SL	32	fl oz/a	POST	B					
6	AMS		WG	17	lb/100 gal	POST	B					
7	Trivence	61.3	WG	8	oz/a	PRE	A	99	0	96	99	99
7	Zidua	85	WG	1.5	oz/a	PRE	A					
7	Abundit Extra	3	SL	32	fl oz/a	POST	B					
7	AMS		WG	17	lb/100 gal	POST	B					
8	Boundary	6.5	L	1.5	pt/a	PRE	A	91	0	98	99	99
8	Abundit Extra	3	SL	32	fl oz/a	POST	B					
8	AMS		WG	17	lb/100 gal	POST	B					
9	Fierce	76	WG	3	oz/a	PRE	A	99	0	96	99	99
9	Abundit Extra	3	SL	32	fl oz/a	POST	B					
9	AMS		WG	17	lb/100 gal	POST	B					
LSD (P=.05)								8.9	0.0	3.4	0.0	0.0
CV								7.16	0.0	2.8	0.0	0.0

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

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Weed Code	AMBEL	SINAR	GLXMA	ANGR	CHEAL
Crop Code					
Rating Data Type	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/30/2014	Jun/30/2014	Jul/14/2014	Jul/14/2014	Jul/14/2014
Trt-Eval Interval	14 DA-B	14 DA-B	28 DA-B	28 DA-B	28 DA-B
# Subsamples, Dec.					

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code	AMBEL	SINAR	GLXMA	ANGR	CHEAL
1	Envive	41.3	WG	3.5	oz/a	PRE	A	99	99	0	92	99
1	Abundit Extra	3	SL	32	fl oz/a	POST	B					
1	AMS		WG	17	lb/100 gal	POST	B					
2	Envive	41.3	WG	3.5	oz/a	PRE	A	99	99	0	97	99
2	Zidua	85	WG	1.5	oz/a	PRE	A					
2	Abundit Extra	3	SL	32	fl oz/a	POST	B					
2	AMS		WG	17	lb/100 gal	POST	B					
3	Untreated							0	0	0	0	0
4	Canopy	75	WG	4	oz/a	PRE	A	98	99	0	98	99
4	Cinch	7.64	L	1	pt/a	PRE	A					
4	Abundit Extra	3	SL	32	fl oz/a	POST	B					
4	AMS		WG	17	lb/100 gal	POST	B					
5	Canopy	75	WG	4	oz/a	PRE	A	98	99	0	97	99
5	Abundit Extra	3	SL	32	fl oz/a	POST	B					
5	Cinch	7.64	L	1	pt/a	POST	B					
5	AMS		WG	17	lb/100 gal	POST	B					
6	Trivence	61.3	WG	8	oz/a	PRE	A	99	99	0	96	99
6	Abundit Extra	3	SL	32	fl oz/a	POST	B					
6	AMS		WG	17	lb/100 gal	POST	B					
7	Trivence	61.3	WG	8	oz/a	PRE	A	99	99	0	95	99
7	Zidua	85	WG	1.5	oz/a	PRE	A					
7	Abundit Extra	3	SL	32	fl oz/a	POST	B					
7	AMS		WG	17	lb/100 gal	POST	B					
8	Boundary	6.5	L	1.5	pt/a	PRE	A	95	99	0	97	99
8	Abundit Extra	3	SL	32	fl oz/a	POST	B					
8	AMS		WG	17	lb/100 gal	POST	B					
9	Fierce	76	WG	3	oz/a	PRE	A	99	99	0	97	99
9	Abundit Extra	3	SL	32	fl oz/a	POST	B					
9	AMS		WG	17	lb/100 gal	POST	B					
LSD (P=.05)								1.0	0.6	0.0	3.1	0.2
CV								0.75	0.43	0.0	2.52	0.19

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

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Weed Code	AMAPO	AMBEL	SINAR	GLXMA	GLXMA
Crop Code				moisture	yield
Rating Data Type	control	control	control	percent	bu/acre
Rating Unit	percent	percent	percent		
Rating Date	Jul/14/2014	Jul/14/2014	Jul/14/2014	Nov/03/2014	Nov/03/2014
Trt-Eval Interval	28 DA-B	28 DA-B	28 DA-B	140 DA-B	at 13% M
# Subsamples, Dec.					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMAPO	AMBEL	SINAR	GLXMA moisture	GLXMA yield
1	Envive	41.3	WG	3.5	oz/a	PRE	A	99	99	99	14.0	71.7
1	Abundit Extra	3	SL	32	fl oz/a	POST	B					
1	AMS		WG	17	lb/100 gal	POST	B					
2	Envive	41.3	WG	3.5	oz/a	PRE	A	99	99	99	13.6	72.5
2	Zidua	85	WG	1.5	oz/a	PRE	A					
2	Abundit Extra	3	SL	32	fl oz/a	POST	B					
2	AMS		WG	17	lb/100 gal	POST	B					
3	Untreated							0	0	0	15.1	22.2
4	Canopy	75	WG	4	oz/a	PRE	A	99	98	99	14.7	72.5
4	Cinch	7.64	L	1	pt/a	PRE	A					
4	Abundit Extra	3	SL	32	fl oz/a	POST	B					
4	AMS		WG	17	lb/100 gal	POST	B					
5	Canopy	75	WG	4	oz/a	PRE	A	99	94	99	13.8	71.5
5	Abundit Extra	3	SL	32	fl oz/a	POST	B					
5	Cinch	7.64	L	1	pt/a	POST	B					
5	AMS		WG	17	lb/100 gal	POST	B					
6	Trivence	61.3	WG	8	oz/a	PRE	A	99	99	99	14.1	72.4
6	Abundit Extra	3	SL	32	fl oz/a	POST	B					
6	AMS		WG	17	lb/100 gal	POST	B					
7	Trivence	61.3	WG	8	oz/a	PRE	A	99	99	99	13.7	71.8
7	Zidua	85	WG	1.5	oz/a	PRE	A					
7	Abundit Extra	3	SL	32	fl oz/a	POST	B					
7	AMS		WG	17	lb/100 gal	POST	B					
8	Boundary	6.5	L	1.5	pt/a	PRE	A	99	90	99	14.0	73.9
8	Abundit Extra	3	SL	32	fl oz/a	POST	B					
8	AMS		WG	17	lb/100 gal	POST	B					
9	Fierce	76	WG	3	oz/a	PRE	A	99	98	99	14.1	73.6
9	Abundit Extra	3	SL	32	fl oz/a	POST	B					
9	AMS		WG	17	lb/100 gal	POST	B					
LSD (P=.05)								0.0	2.9	0.5	0.67	4.82
CV								0.0	2.3	0.38	3.24	4.94

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