MSU Weed Science Research Program

Postemergence only options for weed control in non-GMO soybean

Trial ID: SOY08.5-15 Study Dir.: Sprague and Powell
Conducted: Campus C-16 Investigator: Christy Sprague

Date Planted: May/07/2015 **Row Spacing:** 30 IN
Variety: MCIA2308N **No. of Reps:** 4
Population: 150,000 seeds/A **% OM:** 2.7
Soil Type: Loam **pH:** 7.1
Plot Size: 10 **X** 30 **FT** **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel plow; spring finish twice
Fertilizer: None at planting

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.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
4.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
5.	SINAR	MUSTARD, WILD	SINAPIS ARVENSIS L.
Crop	**Code**	**Common Name**	
1.	GLXMA	SOYBEAN	

Application Description

	A
Application Timing:	POST
Date Treated:	Jun/11/2015
Time Treated:	6:00 PM
% Cloud Cover:	100
Air Temp., Unit:	73 F
% Relative Humidity:	63
Wind Speed/Unit/Dir:	3 mph NE
Soil Temp., Unit:	73 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"
Stage (L):	V2

Weed Stage at Each Application

	A
Weed 1 Name:	ANGR
Height (In.):	2-4"
Stage (L):	3
Weed 2 Name:	CHEAL
Height (In.):	1-3"
Stage (L):	4-10
Weed 3 Name:	AMBEL
Height (In.):	2-6"
Stage (L):	4
Weed 4 Name:	ABUTH
Height (In.):	2-5"
Stage (L):	4
Weed 5 Name:	SINAR
Height (In.):	6-18"
Stage (L):	4-8

Weed Density (plants/sq. ft.)

	1	2	3	4	5
Date:	Jun/09/2015	Jun/09/2015	Jun/09/2015	Jun/09/2015	Jun/09/2015
Weed Name:	ANGR	CHEAL	AMBEL	ABUTH	SINAR
Density:	207	2	99	1	17

Application Equipment

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GPA	Carrier	PSI
A	Cub	3.8	AIXR	11003	25"	20"	100"	19	Water	28

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	GLXMA injury	ANGR control	CHEAL control	AMBEL control	ABUTH control
Weed Code												
Crop Code								GLXMA				
Rating Data Type								injury	control	control	control	control
Rating Unit								percent	percent	percent	percent	percent
Rating Date								Jun/25/2015	Jun/25/2015	Jun/25/2015	Jun/25/2015	Jun/25/2015
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
1	Raptor	1	L	5	fl oz/a	POST	A	24	64	69	73	87
1	Flexstar	1.88	L	1	pt/a	POST	A					
1	Crop oil concentrate		L	1	% v/v	POST	A					
1	AMS		WG	2.5	lb/a	POST	A					
2	Synchrony XP	28.4	WG	0.5	oz/a	POST	A	35	89	64	98	98
2	Cobra	2	L	8	fl oz/a	POST	A					
2	Assure II	0.88	L	9	fl oz/a	POST	A					
2	Crop oil concentrate		L	0.5	% v/v	POST	A					
2	AMS		WG	2.5	lb/a	POST	A					
3	Basagran	4	L	1	qt/a	POST	A	29	81	53	76	98
3	Ultra Blazer	2	L	1	pt/a	POST	A					
3	Select Max	0.97	L	12	fl oz/a	POST	A					
3	Crop oil concentrate		L	1	% v/v	POST	A					
3	AMS		WG	2.5	lb/a	POST	A					
4	Harmony SG	50	WG	0.125	oz/a	POST	A	24	89	61	66	87
4	Flexstar	1.88	L	1	pt/a	POST	A					
4	Select Max	0.97	L	12	fl oz/a	POST	A					
4	Crop oil concentrate		L	0.5	% v/v	POST	A					
4	AMS		WG	2.5	lb/a	POST	A					
LSD (P=.05)								6.0	13.0	7.1	12.0	10.3
CV								13.48	10.07	7.19	9.58	6.93

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

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	SINAR	GLXMA	ANGR	CHEAL	AMBEL
Weed Code								SINAR	GLXMA	ANGR	CHEAL	AMBEL
Crop Code												
Rating Data Type								control	injury	control	control	control
Rating Unit								percent	percent	percent	percent	percent
Rating Date								Jun/25/2015	Jul/02/2015	Jul/02/2015	Jul/02/2015	Jul/02/2015
Trt-Eval Interval								14 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A
# Subsamples, Dec.								0	0	0	0	0
1	Raptor	1	L	5	fl oz/a	POST	A	99	19	70	63	65
1	Flexstar	1.88	L	1	pt/a	POST	A					
1	Crop oil concentrate		L	1	% v/v	POST	A					
1	AMS		WG	2.5	lb/a	POST	A					
2	Synchrony XP	28.4	WG	0.5	oz/a	POST	A	99	35	96	70	94
2	Cobra	2	L	8	fl oz/a	POST	A					
2	Assure II	0.88	L	9	fl oz/a	POST	A					
2	Crop oil concentrate		L	0.5	% v/v	POST	A					
2	AMS		WG	2.5	lb/a	POST	A					
3	Basagran	4	L	1	qt/a	POST	A	99	20	79	59	65
3	Ultra Blazer	2	L	1	pt/a	POST	A					
3	Select Max	0.97	L	12	fl oz/a	POST	A					
3	Crop oil concentrate		L	1	% v/v	POST	A					
3	AMS		WG	2.5	lb/a	POST	A					
4	Harmony SG	50	WG	0.125	oz/a	POST	A	99	18	86	50	61
4	Flexstar	1.88	L	1	pt/a	POST	A					
4	Select Max	0.97	L	12	fl oz/a	POST	A					
4	Crop oil concentrate		L	0.5	% v/v	POST	A					
4	AMS		WG	2.5	lb/a	POST	A					
LSD (P=.05)								0.0	5.0	10.4	21.0	9.6
CV								0.0	13.79	7.87	21.77	8.41

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	ABUTH	SINAR	GLXMA	ANGR	CHEAL
	Weed Code							ABUTH	SINAR		ANGR	CHEAL
	Crop Code									GLXMA		
	Rating Data Type							control	control	injury	control	control
	Rating Unit							percent	percent	percent	percent	percent
	Rating Date							Jul/02/2015	Jul/02/2015	Jul/20/2015	Jul/20/2015	Jul/20/2015
	Trt-Eval Interval							21 DA-A	21 DA-A	39 DA-A	39 DA-A	39 DA-A
	# Subsamples, Dec.							0	0	0	0	0
1	Raptor	1	L	5	fl oz/a	POST	A	91	99	0	56	64
1	Flexstar	1.88	L	1	pt/a	POST	A					
1	Crop oil concentrate		L	1	% v/v	POST	A					
1	AMS		WG	2.5	lb/a	POST	A					
2	Synchrony XP	28.4	WG	0.5	oz/a	POST	A	91	99	7	85	77
2	Cobra	2	L	8	fl oz/a	POST	A					
2	Assure II	0.88	L	9	fl oz/a	POST	A					
2	Crop oil concentrate		L	0.5	% v/v	POST	A					
2	AMS		WG	2.5	lb/a	POST	A					
3	Basagran	4	L	1	qt/a	POST	A	99	99	6	61	49
3	Ultra Blazer	2	L	1	pt/a	POST	A					
3	Select Max	0.97	L	12	fl oz/a	POST	A					
3	Crop oil concentrate		L	1	% v/v	POST	A					
3	AMS		WG	2.5	lb/a	POST	A					
4	Harmony SG	50	WG	0.125	oz/a	POST	A	71	99	0	78	43
4	Flexstar	1.88	L	1	pt/a	POST	A					
4	Select Max	0.97	L	12	fl oz/a	POST	A					
4	Crop oil concentrate		L	0.5	% v/v	POST	A					
4	AMS		WG	2.5	lb/a	POST	A					
	LSD (P=.05)							17.4	0.0	3.2	17.0	10.1
	CV							12.4	0.0	63.66	15.18	10.84

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMBEL	ABUTH	SINAR	GLXMA	GLXMA
Weed Code								AMBEL	ABUTH	SINAR		
Crop Code											GLXMA	GLXMA
Rating Data Type								control	control	control	moisture	yield
Rating Unit								percent	percent	percent	percent	bu/acre
Rating Date								Jul/20/2015	Jul/20/2015	Jul/20/2015	Oct/12/2015	Oct/12/2015
Trt-Eval Interval								39 DA-A	39 DA-A	39 DA-A	123 DA-A	at 13% M
# Subsamples, Dec.								0	0	0	1	1
1	Raptor	1	L	5	fl oz/a	POST	A	71	96	99	13.5	53.4
1	Flexstar	1.88	L	1	pt/a	POST	A					
1	Crop oil concentrate		L	1	% v/v	POST	A					
1	AMS		WG	2.5	lb/a	POST	A					
2	Synchrony XP	28.4	WG	0.5	oz/a	POST	A	83	97	99	16.6	57.0
2	Cobra	2	L	8	fl oz/a	POST	A					
2	Assure II	0.88	L	9	fl oz/a	POST	A					
2	Crop oil concentrate		L	0.5	% v/v	POST	A					
2	AMS		WG	2.5	lb/a	POST	A					
3	Basagran	4	L	1	qt/a	POST	A	58	97	99	14.3	30.3
3	Ultra Blazer	2	L	1	pt/a	POST	A					
3	Select Max	0.97	L	12	fl oz/a	POST	A					
3	Crop oil concentrate		L	1	% v/v	POST	A					
3	AMS		WG	2.5	lb/a	POST	A					
4	Harmony SG	50	WG	0.125	oz/a	POST	A	61	53	99	15.7	46.1
4	Flexstar	1.88	L	1	pt/a	POST	A					
4	Select Max	0.97	L	12	fl oz/a	POST	A					
4	Crop oil concentrate		L	0.5	% v/v	POST	A					
4	AMS		WG	2.5	lb/a	POST	A					
LSD (P=.05)								19.5	9.7	0.0	4.93	13.32
CV								17.88	7.08	0.0	19.65	17.06

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