

Efficacy of CHA-044 Preemergence in Soybean.

Trial ID: 12-2B-MW40

Location: Belleville Res. Center

Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-22-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:

To determine herbicidal efficacy and selectvity of CHA-044 when applied preemergence to soybean in 2012.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: HS 43L12 **Description:** LL
BBCH Scale: BSOY **Planting Date:** 5-22-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant
Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Pest 3 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf
Pest 4 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT² **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 6.8 **Soil Name:** PIERRON
CEC: 8

Additional Measured Elements

Element	Quantity	Unit
P1	77	LB/A
K	252	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

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Application Description

	A
Application Date:	5-23-12
Time of Day:	18:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RJW
Air Temperature, Unit:	80 F
% Relative Humidity:	38
Wind Velocity, Unit:	8 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	67 F
Soil Moisture:	BELNOR
% Cloud Cover:	10
Next Rain Occurred On:	5-31-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W DESC
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	NA
Pest 3 Code, Type, Scale:	ABUTH W DESC
Stage Majority, Percent:	NA
Pest 4 Code, Type, Scale:	IPOHE W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							GLXMA 6-6-12 Injury Percent	GLXMA 6-20-12 Injury Percent	GLXMA 7-4-12 Injury Percent	GLXMA 6-6-12 Chlorosis Percent	GLXMA 6-20-12 Chlorosis Percent	GLXMA 7-4-12 Chlorosis Percent
							14 DA-A	28 DA-A	42 DA-A	14 DA-A	28 DA-A	42 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate	Growth Unit	Appl Stage				
1	CHA-044	5.25	EC	1.31 lb ai/a	32 fl oz/a	PRE	A		0 a	0 a	0 a	0 a
2	CHA-044	5.25	EC	1.64 lb ai/a	40 fl oz/a	PRE	A		0 a	0 a	0 a	0 a
3	DAWN ALERT	2 AS 3 ME		0.375 lb ai/a 0.50 lb ai/a	24 fl oz/a 21.3 fl oz/a	PRE PRE	A A		0 a	0 a	0 a	0 a
4	PREFIX	5.29	EC	1.32 lb ai/a	32 fl oz/a	PRE	A		0 a	0 a	0 a	0 a
5	PREFIX	5.29	EC	1.65 lb ai/a	40 fl oz/a	PRE	A		0 a	0 a	0 a	0 a
6	NONTREATED								0 a	0 a	0 a	0 a
LSD (P=.05)							0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation							0.0	0.0	0.0	0.0	0.0	0.0
CV							0.0	0.0	0.0	0.0	0.0	0.0
Replicate F							0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)							1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F							0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)							1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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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							14 DA-A	28 DA-A	42 DA-A	14 DA-A	28 DA-A	42 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Other Rate	Other Rate	Growth Unit	Stage	Appl Code		
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A		0 a	0 a
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A		0 a	0 a
3	DAWN ALERT	2 AS 3 ME		0.375	lb ai/a	24	fl oz/a	PRE	A		0 a	0 a
				0.50	lb ai/a	21.3	fl oz/a	PRE	A			
4	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A		0 a	0 a
5	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A		0 a	0 a
6	NONTREATED										0 a	0 a
LSD (P=.05)							0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation							0.0	0.0	0.0	0.0	0.0	0.0
CV							0.0	0.0	0.0	0.0	0.0	0.0
Replicate F							0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)							1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F							0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)							1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							AMBTR	AMBTR	AMBTR	AMATA	AMATA	AMATA
							6-13-12 Control Percent	6-27-12 Control Percent	7-11-12 Control Percent	6-13-12 Control Percent	6-27-12 Control Percent	7-11-12 Control Percent
							21 DA-A	35 DA-A	49 DA-A	21 DA-A	35 DA-A	49 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Other Rate	Other Rate	Growth Unit	Stage	Appl Code		
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A		15 bc	11 b
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A		20 ab	16 ab
3	DAWN ALERT	2 AS 3 ME		0.375	lb ai/a	24	fl oz/a	PRE	A		26 a	23 a
				0.50	lb ai/a	21.3	fl oz/a	PRE	A		11 a	18 a
4	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A		15 a	15 a
5	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A		10 c	11 b
6	NONTREATED										3 a	20 a
											15 a	15 a
											8 a	8 a
											0 d	0 c
											0 a	0 c
											0 c	0 c
											0 c	0 a
LSD (P=.05)							9.3	8.9	12.1	7.5	7.5	8.9
Standard Deviation							6.1	5.9	8.1	4.9	5.0	5.9
CV							40.38	51.78	133.37	39.55	53.26	109.65
Replicate F							1.796	4.527	2.540	2.500	0.599	0.433
Replicate Prob(F)							0.1912	0.0189	0.0956	0.0991	0.6256	0.7324
Treatment F							9.044	6.633	1.479	9.000	5.591	1.252
Treatment Prob(F)							0.0004	0.0019	0.2544	0.0004	0.0042	0.3343

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							ABUTH	ABUTH	ABUTH	IPOHE	IPOHE	IPOHE
							6-13-12 Control Percent	6-27-12 Control Percent	7-11-12 Control Percent	6-13-12 Control Percent	6-27-12 Control Percent	7-11-12 Control Percent
							21 DA-A	35 DA-A	49 DA-A	21 DA-A	35 DA-A	49 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Other Rate	Other Rate	Growth Unit	Stage	Appl Code		
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A		10 c	10 bc
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A		15 bc	6 bc
3	DAWN ALERT	2 AS 3 ME		0.375	lb ai/a	24	fl oz/a	PRE	A		38 a	25 a
				0.50	lb ai/a	21.3	fl oz/a	PRE	A		18 a	18 a
4	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A		15 bc	15 ab
5	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A		10 ab	5 bc
6	NONTREATED										3 bc	0 a
											0 a	0 a
LSD (P=.05)							8.3	11.5	7.9	9.3	7.4	3.1
Standard Deviation							5.5	7.6	5.3	6.1	4.9	2.0
CV							32.86	62.1	90.35	67.05	83.79	489.9
Replicate F							3.333	0.399	1.000	4.265	1.977	1.000
Replicate Prob(F)							0.0481	0.7555	0.4199	0.0230	0.1608	0.4199
Treatment F							21.222	5.338	6.360	4.941	4.465	1.000
Treatment Prob(F)							0.0001	0.0051	0.0023	0.0072	0.0108	0.4509

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Trial Comments

1. Protocol: Cheminova (HGLXMAFOMME1203).
2. Ratings: CI as overall/chlorosis/necrosis/stunting at 14, 28, and 42 DAT.
WC at 21, 35, and 49 DAT.
3. Yield.
4. Rainfall following the PRE application was 0.28 inch 8 days later and 0.75 inch 19 days later.
5. Not harvested, too weedy.