

Efficacy of Preemergence Herbicides in Reduced-Till Soybean - Cheminova.

Trial ID: 10-ARC-5-W140

Location: Agronomy Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
City State Zip Country: Carbondale IL 62901 USA
Trial Status: FINAL **Initiation Date:** 05-13-10

Objectives: Evaluate the efficacy and selectivity of Alert, CHA-019 and CHA-021 applied preemergence in reduced-till soybeans.

Crop 1: GLXMA Soybean **Variety:** P94Y20 **Description:** RR
Planting Method: SEEDED **Planting Date:** 05-13-10
Rate, Unit: 75 LB/A **Depth, Unit:** 1.0 IN
Row Spacing, Unit: 30 IN

Pest 1 Type: W **Code:** SETFA Setaria faberi Herrm. foxtail, giant
Pest 2 Type: W **Code:** AMBEL Ambrosia artemisiifolia L. ragweed, common
Pest 3 Type: W **Code:** IPOHE Ipomoea hederacea (L.) Jacq. morningglory, ivyleaf
Pest 4 Type: W **Code:** AMBTR Ambrosia trifida L. ragweed, giant

Plot Width, Unit: 10 FT **Site Type:** FIELD
Plot Length, Unit: 24 FT **Tillage Type:** REDUCED-TILL
Replications: 4 **Study Design:** Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2009

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 0 LB/A

% OM: 1.8 **Texture:** SILT LOAM
pH: 6.8 **Soil Name:** ST0Y
CEC: 7.8 **Fert. Level:** P1: 58 LB/A, K: 287 LB/A

Application Description

Application Date: 05-14-10
Time of Day: 15:00
Application Method: Spray
Application Timing: PRE
Application Placement: BROS0I
Applied By: DKT
Air Temperature, Unit: 74 F
% Relative Humidity: 50
Wind Velocity, Unit: 2 MPH
Wind Direction: NW
Dew Presence (Y/N): N
Soil Temperature, Unit: 75 F
Soil Moisture: ABONOR
% Cloud Cover: 90

Crop stage at application: 05-14-10
 NA

Pest Stage At Each Application

Application Date: 05-14-10
Weed Code: SETFA
Stage Majority (leaves): NA
Weed Code: AMBEL
Stage Majority (leaves): NA
Weed Code: IPOHE
Stage Majority (leaves): NA
Weed Code: AMBTR
Stage Majority (leaves): NA

Application Equipment

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

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Pest Code										SETFA			SETFA	SETFA	
Crop Code										GLXMA	GLXMA	GLXMA	06-02-10	06-18-10	07-02-10
Rating Date										05-26-10	06-09-10	06-18-10	Control	Control	Control
Rating Data Type										Injury	Injury	Injury	Percent	Percent	Percent
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										14 DA-A	28 DA-A	35 DA-A	21 DA-A	35 DA-A	49 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	ALERT	3	ME	0.375 lb ai/a	16 fl oz/a			PRE	A	0 a	0 a	0 a	98 a	98 a	97 a
2	ALERT	3	ME	0.5 lb ai/a	21.3 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
3	ALERT	3	ME	0.75 lb ai/a	32 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
4	ALERT	3	ME	1.0 lb ai/a	42.7 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
5	CHA-019	4.5	ME	0.75 lb ai/a	21.3 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
6	CHA-019	4.5	ME	1.13 lb ai/a	32 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
7	CHA-021	4	ME	1.0 lb ai/a	32 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
8	CHA-021	4	ME	1.5 lb ai/a	48 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
9	ALERT	3	ME	0.5 lb ai/a	21.3 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	98 a	98 a
9	DAWN	2	AS	0.25 lb ai/a	16 fl oz/a			PRE	A						
10	ALERT	3	ME	0.5 lb ai/a	21.3 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	97 a	98 a
10	DAWN	2	AS	0.375 lb ai/a	24 fl oz/a			PRE	A						
11	ALERT	3	ME	0.75 lb ai/a	32 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
11	DAWN	2	AS	0.25 lb ai/a	16 fl oz/a			PRE	A						
12	ALERT	3	ME	0.75 lb ai/a	32 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
12	DAWN	2	AS	0.375 lb ai/a	24 fl oz/a			PRE	A						
13	METRIBUZIN	4	AS	0.375 lb ai/a	12 fl oz/a			PRE	A	0 a	0 a	0 a	81 b	80 b	75 b
14	DAWN	2	AS	0.375 lb ai/a	24 fl oz/a			PRE	A	0 a	0 a	0 a	98 a	92 a	88 a
15	COMMAND	3	ME	0.5 lb ai/a	21.3 fl oz/a			PRE	A	0 a	0 a	0 a	99 a	99 a	99 a
16	NONTREATED									0 a	0 a	0 a	0 c	0 c	0 c
LSD (P=.05)										0.0	0.0	0.0	3.1	10.1	11.1
Replicate F										0.000	0.000	0.000	0.908	0.815	0.982
Replicate Prob(F)										1.0000	1.0000	1.0000	0.4446	0.4924	0.4097
Treatment F										0.000	0.000	0.000	521.118	49.414	40.698
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001	0.0000

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

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Pest Code Crop Code Rating Date Rating Data Type Rating Unit Rating Timing Trt-Eval Interval									AMBEL	AMBEL	AMBEL	IPOHE	IPOHE	IPOHE
									06-02-10 Control Percent	06-18-10 Control Percent	07-02-10 Control Percent	06-02-10 Control Percent	06-18-10 Control Percent	07-02-10 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	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	ALERT	3	ME	0.375 lb ai/a	16 fl oz/a			PRE	A	75 f	54 d	44 c	21 d	11 bc
2	ALERT	3	ME	0.5 lb ai/a	21.3 fl oz/a			PRE	A	80 ef	53 d	43 c	24 cd	15 abc
3	ALERT	3	ME	0.75 lb ai/a	32 fl oz/a			PRE	A	87 cd	69 cd	65 b	28 cd	10 bc
4	ALERT	3	ME	1.0 lb ai/a	42.7 fl oz/a			PRE	A	92 bc	90 ab	91 a	25 cd	14 abc
5	CHA-019	4.5	ME	0.75 lb ai/a	21.3 fl oz/a			PRE	A	96 ab	93 a	92 a	28 cd	10 bc
6	CHA-019	4.5	ME	1.13 lb ai/a	32 fl oz/a			PRE	A	99 a	98 a	96 a	28 cd	14 abc
7	CHA-021	4	ME	1.0 lb ai/a	32 fl oz/a			PRE	A	96 ab	94 a	93 a	18 d	9 bc
8	CHA-021	4	ME	1.5 lb ai/a	48 fl oz/a			PRE	A	99 a	97 a	96 a	26 cd	11 bc
9	ALERT	3	ME	0.5 lb ai/a	21.3 fl oz/a			PRE	A	98 ab	97 a	96 a	39 c	18 ab
9	DAWN	2	AS	0.25 lb ai/a	16 fl oz/a			PRE	A					
10	ALERT	3	ME	0.5 lb ai/a	21.3 fl oz/a			PRE	A	98 a	97 a	97 a	58 b	19 ab
10	DAWN	2	AS	0.375 lb ai/a	24 fl oz/a			PRE	A					
11	ALERT	3	ME	0.75 lb ai/a	32 fl oz/a			PRE	A	98 a	96 a	95 a	58 b	14 abc
11	DAWN	2	AS	0.25 lb ai/a	16 fl oz/a			PRE	A					
12	ALERT	3	ME	0.75 lb ai/a	32 fl oz/a			PRE	A	99 a	98 a	97 a	58 b	16 ab
12	DAWN	2	AS	0.375 lb ai/a	24 fl oz/a			PRE	A					
13	METRIBUZIN	4	AS	0.375 lb ai/a	12 fl oz/a			PRE	A	83 de	75 bc	71 b	19 d	10 bc
14	DAWN	2	AS	0.375 lb ai/a	24 fl oz/a			PRE	A	99 a	99 a	98 a	74 a	29 a
15	COMMAND	3	ME	0.5 lb ai/a	21.3 fl oz/a			PRE	A	87 cd	66 cd	55 bc	30 cd	13 bc
16	NONTREATED									0 g	0 e	0 d	0 e	0 c
LSD (P=.05)										5.4	17.2	18.9	15.6	15.4
Replicate F										0.473	0.252	0.367	3.964	0.012
Replicate Prob(F)										0.7025	0.8594	0.7774	0.0137	0.9981
Treatment F										167.106	19.851	18.533	12.203	1.237
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.2815
														0.5610

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

Efficacy of Preemergence Herbicides in Reduced-Till Soybean - Cheminova.

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Location: Agronomy Res. Center

Pest Code	AMBTR	AMBTR	AMBTR
Crop Code			
Rating Date	06-02-10	06-18-10	07-02-10
Rating Data Type	Control	Control	Control
Rating Unit	Percent	Percent	Percent
Rating Timing			
Trt-Eval Interval	21 DA-A	35 DA-A	49 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	ALERT	3	ME	0.375	lb ai/a	16	fl oz/a	PRE	A	25 e	18 e	16 cd
2	ALERT	3	ME	0.5	lb ai/a	21.3	fl oz/a	PRE	A	25 e	16 ef	11 cd
3	ALERT	3	ME	0.75	lb ai/a	32	fl oz/a	PRE	A	27 de	12 ef	10 cd
4	ALERT	3	ME	1.0	lb ai/a	42.7	fl oz/a	PRE	A	16 e	8 ef	4 cd
5	CHA-019	4.5	ME	0.75	lb ai/a	21.3	fl oz/a	PRE	A	21 e	15 ef	9 cd
6	CHA-019	4.5	ME	1.13	lb ai/a	32	fl oz/a	PRE	A	48 c	16 ef	11 cd
7	CHA-021	4	ME	1.0	lb ai/a	32	fl oz/a	PRE	A	38 cd	38 d	21 c
8	CHA-021	4	ME	1.5	lb ai/a	48	fl oz/a	PRE	A	23 e	14 ef	6 cd
9	ALERT	3	ME	0.5	lb ai/a	21.3	fl oz/a	PRE	A	76 b	71 bc	72 b
9	DAWN	2	AS	0.25	lb ai/a	16	fl oz/a	PRE	A			
10	ALERT	3	ME	0.5	lb ai/a	21.3	fl oz/a	PRE	A	99 a	98 a	98 a
10	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	PRE	A			
11	ALERT	3	ME	0.75	lb ai/a	32	fl oz/a	PRE	A	87 ab	69 c	69 b
11	DAWN	2	AS	0.25	lb ai/a	16	fl oz/a	PRE	A			
12	ALERT	3	ME	0.75	lb ai/a	32	fl oz/a	PRE	A	98 a	95 a	95 a
12	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	PRE	A			
13	METRIBUZIN	4	AS	0.375	lb ai/a	12	fl oz/a	PRE	A	16 e	15 ef	11 cd
14	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	PRE	A	98 a	87 ab	83 ab
15	COMMAND	3	ME	0.5	lb ai/a	21.3	fl oz/a	PRE	A	28 de	21 de	10 cd
16	NONTREATED									0 f	0 f	0 d
LSD (P=.05)										11.8	16.4	18.9
Replicate F										1.925	0.242	0.152
Replicate Prob(F)										0.1402	0.8663	0.9278
Treatment F										67.746	35.242	29.598
Treatment Prob(F)										0.0001	0.0001	0.0001

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

Trial Comments

1. Protocol: Cheminova (HGLXMACLOM100).
2. Ratings: CI 7, 14 + 28 DA-A as chlorosis, stunting, necrosis, or other symptoms.
WC 21, 35 + 49 DA-A.
Target AMATA, CHEAL, and AMBSS but rate other weeds as well.
3. Crop injury rating at 7 DA-A was not possible as the crop had not yet emerged.
4. Not harvested.