

Southern Illinois University

Alert Preemergence in Soybean.

Trial ID: 12-22-S80

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: 5-19-12

Trial Location

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

Objectives:

Determine the spectrum of weed control with tank-mixtures of Alert plus Dawn applied preemergence in soybean.

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: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-19-12
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:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 3 Type: W **Code:** CHEAL - Chenopodium album L.
Common Name: lambsquarters, common

Pest 4 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 5 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 26 FT
Plot Area, Unit: 260 FT² **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOB� 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 100 LB/A

Soil Description

% OM: 2.1 **Texture:** SIL SILT LOAM
pH: 6.5 **Soil Name:** CASEYVILLE
CEC: 8

Additional Measured Elements

Element	Quantity	Unit
P1	80	LB/A
K	369	LB/A

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Moisture and Weather Conditions

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

Application Description

	A
Application Date:	5-19-12
Time of Day:	17:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RJW
Air Temperature, Unit:	86 F
% Relative Humidity:	40
Wind Velocity, Unit:	8 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	63 F
Soil Moisture:	BELNOR
% Cloud Cover:	40
Next Rain Occurred On:	5-21-12

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:	SETFA W DESC
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	NA
Pest 3 Code, Type, Scale:	CHEAL W DESC
Stage Majority, Percent:	NA
Pest 4 Code, Type, Scale:	IPOHE W DESC
Stage Majority, Percent:	NA
Pest 5 Code, Type, Scale:	ABUTH 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 5-26-12 Chlorosis Percent 7 DA-A	GLXMA 6-2-12 Chlorosis Percent 14 DA-A	GLXMA 6-16-12 Chlorosis Percent 28 DA-A	GLXMA 5-26-12 Necrosis Percent 7 DA-A	GLXMA 6-2-12 Necrosis Percent 14 DA-A	GLXMA 6-16-12 Necrosis Percent 28 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	0.50 lb ai/a		21.3 floz/a		PRE	A	0 a	0 a	0 a	0 a
2	ALERT	3	ME	0.75 lb ai/a		32 floz/a		PRE	A	0 a	0 a	0 a	0 a
3	ALERT	3	ME	1.0 lb ai/a		42.7 floz/a		PRE	A	0 a	0 a	0 a	0 a
4	ALERT DAWN	3 2	ME AS	0.50 lb ai/a 0.375 lb ai/a		21.3 floz/a 24 floz/a		PRE PRE	A A	0 a	0 a	0 a	0 a
5	ALERT DAWN	3 2	ME AS	0.75 lb ai/a 0.375 lb ai/a		32 floz/a 24 floz/a		PRE PRE	A A	0 a	0 a	0 a	0 a
6	DUAL II MAGNUM	7.64	EC	1.0 lb ai/a		16.8 floz/a		PRE	A	0 a	0 a	0 a	0 a
7	PREFIX	5.29	EC	1.32 lb ai/a		32 floz/a		PRE	A	0 a	0 a	0 a	0 a
8	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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								6-9-12 Control Percent	6-23-12 Control Percent	7-7-12 Control Percent	6-9-12 Control Percent	6-23-12 Control Percent	7-7-12 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	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	ALERT	3	ME	0.50 lb ai/a		21.3 floz/a		PRE	A	50 cd	38 b	30 c	30 c	8 cd	3 c
2	ALERT	3	ME	0.75 lb ai/a		32 floz/a		PRE	A	65 bc	73 a	63 b	56 b	15 bcd	13 bc
3	ALERT	3	ME	1.0 lb ai/a		42.7 floz/a		PRE	A	90 a	90 a	84 a	80 a	5 cd	3 c
4	ALERT DAWN	3 2	ME AS	0.50 lb ai/a 0.375 lb ai/a		21.3 floz/a 24 floz/a		PRE PRE	A A	80 ab	76 a	61 b	60 b	33 a	31 a
5	ALERT DAWN	3 2	ME AS	0.75 lb ai/a 0.375 lb ai/a		32 floz/a 24 floz/a		PRE PRE	A A	83 a	81 a	70 ab	58 b	31 a	27 a
6	DUAL II MAGNUM	7.64	EC	1.0 lb ai/a		16.8 floz/a		PRE	A	40 d	23 b	18 c	28 c	18 abc	23 ab
7	PREFIX	5.29	EC	1.32 lb ai/a		32 floz/a		PRE	A	58 c	40 b	31 c	38 c	24 ab	23 ab
8	NONTREATED									0 e	0 c	0 d	0 d	0 d	0 c
LSD (P=.05)										16.5	19.4	17.4	16.6	15.7	13.8
Standard Deviation										11.2	13.2	11.8	11.3	10.7	9.4
CV										19.28	25.11	26.52	25.85	64.5	62.28
Replicate F										4.280	2.038	4.009	1.909	0.046	0.776
Replicate Prob(F)										0.0166	0.1394	0.0211	0.1590	0.9867	0.5202
Treatment F										26.886	23.784	24.134	19.485	5.081	6.881
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0017	0.0003

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Pest Code	CHEAL	CHEAL	CHEAL	IPOHE	IPOHE	IPOHE
Crop Code						
Rating Date	6-9-12	6-23-12	7-7-12	6-9-12	6-23-12	7-7-12
Rating Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing						
Trt-Eval Interval	21 DA-A	35 DA-A	49 DA-A	21 DA-A	35 DA-A	49 DA-A
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate	Other Rate	Other Rate	Growth Unit Stage
1 ALERT	3 ME	0.50 lb ai/a	21.3 floz/a	PRE	A	10 c
2 ALERT	3 ME	0.75 lb ai/a	32 floz/a	PRE	A	23 c
3 ALERT	3 ME	1.0 lb ai/a	42.7 floz/a	PRE	A	23 b
4 ALERT DAWN	3 ME	0.50 lb ai/a	21.3 floz/a	PRE	A	0 a
	2 AS	0.375 lb ai/a	24 floz/a	PRE	A	0 a
5 ALERT DAWN	3 ME	0.75 lb ai/a	32 floz/a	PRE	A	5 a
	2 AS	0.375 lb ai/a	24 floz/a	PRE	A	3 a
6 DUAL II MAGNUM	7.64 EC	1.0 lb ai/a	16.8 floz/a	PRE	A	0 a
7 PREFIX	5.29 EC	1.32 lb ai/a	32 floz/a	PRE	A	0 a
8 NONTREATED						0 a
LSD (P=.05)	13.7	19.2	21.0	5.1	2.6	2.6
Standard Deviation	9.1	13.1	14.3	3.5	1.8	1.8
CV	16.1	25.63	30.27	276.03	565.69	565.69
Replicate F	0.799	1.244	0.781	0.000	1.000	1.000
Replicate Prob(F)	0.5135	0.3188	0.5177	1.0000	0.4123	0.4123
Treatment F	95.618	33.172	19.805	1.200	1.000	1.000
Treatment Prob(F)	0.0001	0.0001	0.0001	0.3454	0.4586	0.4586

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								ABUTH	ABUTH	ABUTH
								6-9-12 Control Percent	6-23-12 Control Percent	7-7-12 Control Percent
								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	0.50 lb ai/a		21.3 floz/a		PRE	A	40 b
2	ALERT	3	ME	0.75 lb ai/a		32 floz/a		PRE	A	53 ab
3	ALERT	3	ME	1.0 lb ai/a		42.7 floz/a		PRE	A	60 a
4	ALERT DAWN	3 2	ME AS	0.50 lb ai/a 0.375 lb ai/a		21.3 floz/a 24 floz/a		PRE PRE	A A	50 ab
5	ALERT DAWN	3 2	ME AS	0.75 lb ai/a 0.375 lb ai/a		32 floz/a 24 floz/a		PRE PRE	A A	57 a
6	DUAL II MAGNUM	7.64	EC	1.0 lb ai/a		16.8 floz/a		PRE	A	23 c
7	PREFIX	5.29	EC	1.32 lb ai/a		32 floz/a		PRE	A	7 d
8	NONTREATED									0 d
LSD (P=.05)								16.4	15.4	31.4
Standard Deviation								10.4	10.1	20.7
CV								28.68	21.67	37.96
Replicate F								0.574	0.327	0.240
Replicate Prob(F)								0.6449	0.8061	0.8670
Treatment F								20.265	48.509	14.070
Treatment Prob(F)								0.0001	0.0001	0.0001

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Trial Comments

1. Protocol: Cheminova (HGLXMACLOM1201).
2. Ratings: CI at 7, 14, and 28 DAT, rate CI overall/chlorosis/necrosis/stunting.
WC at 21, 35, and 49 DAT.
3. Yield.
4. Rainfall following the PRE application was 0.18 inch 2 days later, 0.28 inch 12 days later
and 0.75 inch 23 days later.
5. Not harvested, too weedy.