

Southern Illinois University

Preemergence Weed Control in Soybean with Sipcam Products - Site 2.

Trial ID: 13-1-MW40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final Initiation Date: 7-12-13 Completion Date: 11-11-13		Trial Location
City: Belleville Country: USA State/Prov.: Illinois IL Postal Code: 62221		

Objectives:
Evaluate the performance of Stalwart tank mixtures and experimental Sipcam products for preemergence weed control in soybean.

Study Director: Bryan Young Organization: Southern Illinois University Address: 1205 Lincoln Drive - AG 176 - MC 4415 City+State/Prov: Carbondale IL Postal Code: 62901 Country: USA		Title: Professor Phone No.: 618-453-7679 Mobile No.: 618-713-6471 E-mail: bgyoung@siu.edu
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Crop 1: GLXMA Glycine max Soybean Variety: AG3832 BBCH Scale: BSOY Description: RR2Y		Crop Description Planting Date: 7-12-13 Planting Method: SEEDED Planting Rate, Unit: 75 LB/A Depth, Unit: 1 IN Row Spacing, Unit: 30 IN
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Pest 1 Type: W Code: GGGAN Common Name: grasses, annual Description: Mixture of SETFA and PANDI		Pest Description
Pest 2 Type: W Code: AMBTR Ambrosia trifida L. Common Name: ragweed, giant		
Pest 3 Type: W Code: AMATA Amaranthus rudis Sauer Common Name: waterhemp, common		
Pest 4 Type: W Code: ABUTH Abutilon theophrasti Medik. Common Name: velvetleaf		

Treated Plot Width: 7.5 FT Total Plot Width: 10 FT Treated Plot Length: 31 FT Total Plot Length: 31 FT		Site and Design Site Type: FIELD Experimental Unit: 1 PLOT Tillage Type: REDTIL reduced-till Study Design: RACOB� Randomized Complete Block (RCB)
Replications: 4 Untreated Arrangement: INCLUDED single control randomized in each block		
No.	Previous Crop	Year
1.	ZEAMD	2012

Maintenance	
No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

% OM: 2.5 Texture: SIL silt loam pH: 6 Soil Name: Winfield CEC: 6		Soil Description
Additional Measured Elements		
Element	Quantity	Unit
P1	58	lb/A
K	286	lb/A

Overall Moisture Conditions: ABONOR Closest Weather Station: ICN - Belleville IL		Moisture and Weather Conditions Distance, Unit: 0.5 MI
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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-30-13					7	DAY	61	86	F
2.	7-2-13	2.08	IN	RAIN	rain	2	DAY			
3.	7-7-13					7	DAY	62	94	F
4.	7-10-13	0.2	IN	RAIN	rain	1	DAY			
5.	7-14-13					7	DAY	64	94	F
6.	7-15-13	0.03	IN	RAIN	rain	1	DAY			
7.	7-20-13	0.59	IN	RAIN	rain	1	DAY			
8.	7-21-13					7	DAY	56	91	F
9.	7-26-13	0.03	IN	RAIN	rain	1	DAY			
10.	7-28-13					7	DAY	52	87	F
11.	7-30-13	0.46	IN	RAIN	rain	1	DAY			
12.	8-2-13	0.13	IN	RAIN	rain	1	DAY			
13.	8-4-13					7	DAY	62	87	F
14.	8-8-13	0.14	IN	RAIN	rain	2	DAY			
15.	8-12-13	0.56	IN	RAIN	rain	1	DAY			
16.	8-25-13					7	DAY	62	100	F
17.	8-31-13	0.74	IN	RAIN	rain	1	DAY			
18.	9-1-13					7	DAY	57	92	F
19.	9-8-13	0.26	IN	RAIN	rain	1	DAY			

Application Description

	A
Application Date:	7-13-13
Appl. Start Time:	19:30
Appl. Stop Time:	19:45
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RJW
Air Temperature, Unit:	75 F
% Relative Humidity:	69
Wind Velocity, Unit:	4 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	76 F
Soil Moisture:	NORMAL
% Cloud Cover:	20
Next Moisture Occurred On:	7-20-13
Time to Next Moisture, Unit:	7 DAY

Crop Stage At Each Application

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

Pest Stage At Each Application

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

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Trial ID: 13-1-MW40 Location: Belleville Res. Center Trial Year: 2013
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	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TTI
Nozzle Size:	11002
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 11-11-13 Moisture Percent	GLXMA 11-11-13 Test wt. lb/bu	GLXMA 11-11-13 Yield bu/A	GLXMA 7-27-13 Injury Percent	GLXMA 8-10-13 Injury Percent	GLXMA 8-24-13 Injury Percent		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	SA-0370102	100	SL	2.5 pt/a	2.5 pt/a		PRE	A	15.6 a	56.1 b	18 b	5 de	3 c	2 cd
2	STALWART SA-0330101	8 EC 100	SL	1 lb ai/a 10 fl oz/a	1 pt/a 10 fl oz/a		PRE PRE	A A	15.0 a	56.1 b	16 b	20 a	16 a	16 a
3	SA-0070116	100	SL	3.5 pt/a	3.5 pt/a		PRE	A	15.5 a	56.1 b	25 a	7 cd	4 bc	3 bc
4	STALWART SA-0400101	8 EC 100	WG	1 lb ai/a 2 oz/a	1 pt/a 2 oz/a		PRE PRE	A A	15.3 a	56.0 b	30 a	9 b	6 b	5 b
5	SA-0370103	100	SL	2.5 pt/a	2.5 pt/a		PRE	A	15.2 a	56.2 ab	14 bc	2 ef	1 d	0 d
6	SA-0070115	100	SL	3.5 pt/a	3.5 pt/a		PRE	A	15.3 a	56.0 b	19 b	8 bc	3 c	5 b
7	NONTREATED								14.3 a	56.4 a	9 c	0 f	0 d	0 d
LSD (P=.05)							0.97	0.26	5.8	2.7	1.6	2.0		
Standard Deviation							0.65	0.17	3.9	1.8	1.1	1.4		
CV							4.31	0.31	21.06	24.9	22.91	32.65		
Replicate F							0.524	1.927	0.841	4.096	5.937	4.522		
Replicate Prob(F)							0.6712	0.1613	0.4893	0.0222	0.0053	0.0156		
Treatment F							1.556	2.799	12.894	53.288	101.084	68.360		
Treatment Prob(F)							0.2171	0.0420	0.0001	0.0001	0.0001	0.0001		

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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Pest Code								GGGAN	GGGAN	GGGAN	AMBTR	AMBTR	AMBTR
Crop Code								7-27-13	8-10-13	8-24-13	7-27-13	8-10-13	8-24-13
Rating Date								Control	Control	Control	Control	Control	Control
Rating Type								Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit													
Rating Timing													
Trt-Eval Interval								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 Stage	Appl Code				
1	SA-0370102	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	99 a	98 b	97 c	49 c
2	STALWART SA-0330101	8	EC	1	lb ai/a	1	pt/a	PRE	A	99 a	98 b	97 c	64 b
		100	SL	10	fl oz/a	10	fl oz/a	PRE	A				65 b
													49 bc
3	SA-0070116	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	99 a	99 a	98 b	71 b
													68 b
													63 b
4	STALWART SA-0400101	8	EC	1	lb ai/a	1	pt/a	PRE	A	99 a	98 b	97 c	86 a
		100	WG	2	oz/a	2	oz/a	PRE	A				87 a
													80 a
5	SA-0370103	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	99 a	98 b	98 c	25 d
													25 d
													10 d
6	SA-0070115	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	99 a	99 a	99 a	66 b
													63 bc
													55 b
7	NONTREATED									0 a	0 c	0 d	0 e
													0 e
													0 d
LSD (P=.05)								0.0	0.7	0.7	12.2	11.7	14.8
Standard Deviation								0.0	0.5	0.5	8.2	7.9	10.0
CV								0.0	0.56	0.6	15.95	15.37	23.62
Replicate F								0.000	1.000	1.667	1.102	1.080	3.822
Replicate Prob(F)								1.0000	0.4155	0.2097	0.3738	0.3825	0.0280
Treatment F								0.000	24411.950	21793.574	52.414	55.388	32.500
Treatment Prob(F)								1.0000	0.0001	0.0001	0.0001	0.0001	0.0001

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Pest Code								AMATA	AMATA	AMATA	ABUTH	ABUTH	ABUTH
Crop Code								7-27-13	8-10-13	8-24-13	7-27-13	8-10-13	8-24-13
Rating Date								Control	Control	Control	Control	Control	Control
Rating Type								Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit													
Rating Timing													
Trt-Eval Interval								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 Stage	Appl Code				
1	SA-0370102	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	95 b	93 c	84 b	87 c
2	STALWART SA-0330101	8	EC	1	lb ai/a	1	pt/a	PRE	A	99 a	99 a	98 a	97 ab
		100	SL	10	fl oz/a	10	fl oz/a	PRE	A				97 a
3	SA-0070116	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	99 a	99 a	96 a	97 ab
4	STALWART SA-0400101	8	EC	1	lb ai/a	1	pt/a	PRE	A	99 a	99 a	99 a	99 a
		100	WG	2	oz/a	2	oz/a	PRE	A				98 a
5	SA-0370103	100	SL	2.5	pt/a	2.5	pt/a	PRE	A	97 a	96 b	95 a	66 d
6	SA-0070115	100	SL	3.5	pt/a	3.5	pt/a	PRE	A	99 a	98 ab	95 a	89 bc
7	NONTREATED									0 c	0 d	0 c	0 e
											0 b		0 b
LSD (P=.05)										2.2	2.0	4.6	8.8
Standard Deviation										1.5	1.4	3.1	6.0
CV										1.8	1.65	3.79	7.8
Replicate F										2.437	2.365	0.947	2.823
Replicate Prob(F)										0.0980	0.1051	0.4389	0.0681
Treatment F										2394.621	2850.535	552.245	141.908
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

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Trial Comments

1. Protocol: Sipcam (2013-5-IL).
2. Ratings: CI/WC 14, 28, and 42 DA-A.
3. Yield, destroy grain.
4. Following the PRE application the first rainfall event, beginning 7 days later, was 0.59 inch over 1 day.
5. GGGAN = Annual grasses including 50% SETFA (giant foxtail) and 50% PANDI (fall panicum).
6. Harvested 11-11-13, (2) 30 inch rows by 28 ft.