

Scepter Tank-Mixes for Control of Volunteer Corn in Roundup Ready Xtend Soybeans.

Trial ID: 16-10B-E90 Location: Belleville Res. Center Trial Year: 2016  
 Investigator: Karla L. Gage, Ph.D.

**Trial Status:** F one-year/final  
**Initiation Date:** 6-8-16  
**Completion Date:** 8-3-16

**Trial Location**

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

**Upper Right:** 38.51596 -89.84149

**Latitude of LL Corner** °: 38.51629 N  
**Longitude of LL Corner** °: 89.84132 W  
**Altitude of LL Corner, Unit:** 435.00 FT  
**Angle y-axis to North** °: 180.00  
**GPS Precision:** G GPS for trial site

**Objectives:**  
 Evaluate the performance of Scepter as a postemergence herbicide in Roundup Ready soybeans against volunteer Roundup Ready corn.

**Contacts**

**Study Director:** Karla Gage, Ph.D. **Title:** Assistant Professor of Weed Science  
**Organization:** Southern Illinois University Carbondale  
**Address:** 1205 Lincoln Drive MC 4415 **Phone No.:** 618-453-7679  
**City+State/Prov:** Carbondale, IL  
**Postal Code:** 62901 **E-mail:** kgage@siu.edu  
**Country:** USA

**Crop Description**

**Crop 1:** GLXMA Glycine max Soybean  
**Variety:** AG38X6 **BBCH Scale:** BSOY  
**Description:** RR2X

**Planting Date:** 6-8-16  
**Planting Method:** SEEDED

**Planting Rate, Unit:** 140000 S/A  
**Depth, Unit:** 1 IN  
**Row Spacing, Unit:** 30 IN  
**Soil Temperature, Unit:** 70 F  
**Soil Moisture:** NORMAL

**Pest Description**

**Pest 1 Type:** W **Code:** ZEAMX Zea mays L.  
**Common Name:** corn, volunteer  
**Description:** Roundup Ready corn

**Site and Design**

**Treated Plot Width:** 7.5 FT **Total Plot Width:** 7.5 FT **Site Type:** FIELD  
**Treated Plot Length:** 30 FT **Total Plot Length:** 30 FT **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	2015

**Maintenance**

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

**Soil Description**

**Description Name:** 10B\_2013  
**% OM:** 2.8 **Texture:** SIL silt loam  
**pH:** 6.4 **Soil Name:** Pierron  
**CEC:** 9

**Additional Measured Elements**

Element	Quantity	Unit
P1	80	lb/A
K	335	lb/A

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Overall Moisture Conditions: NORMAL						Moisture and Weather Conditions				
Closest Weather Station: ICN - Belleville IL						Distance, Unit: 0.5 MI				
No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-16					7	DAY	32	75	F
2.	4-6-16	0.49	IN	RAIN	rain	1	DAY			
3.	4-8-16					7	DAY	28	71	F
4.	4-10-16	0.97	IN	RAIN	rain	2	DAY			
5.	4-15-16					7	DAY	48	81	F
6.	4-20-16	0.45	IN	RAIN	rain	3	DAY			
7.	4-22-16					7	DAY	47	85	F
8.	4-26-16	1.74	IN	RAIN	rain	2	DAY			
9.	4-29-16					7	DAY	46	75	F
10.	4-29-16	1.94	IN	RAIN	rain	2	DAY			
11.	5-4-16	0.02	IN	RAIN	rain	1	DAY			
12.	5-6-16					7	DAY	44	87	F
13.	5-7-16	0.07	IN	RAIN	rain	1	DAY			
14.	5-9-16	2.12	IN	RAIN	rain	5	DAY			
15.	5-13-16					7	DAY	41	76	F
16.	5-16-16	1.06	IN	RAIN	rain	2	DAY			
17.	5-20-16					7	DAY	51	83	F
18.	5-20-16	0.06	IN	RAIN	rain	1	DAY			
19.	5-25-16	0.68	IN	RAIN	rain	3	DAY			
20.	5-27-16					7	DAY	62	88	F
21.	5-31-16	0.03	IN	RAIN	rain	2	DAY			
22.	6-3-16					7	DAY	55	89	F
23.	6-3-16	0.01	IN	RAIN	rain	1	DAY			
24.	6-4-16	0.72	IN	RAIN	rain	1	DAY			
25.	6-10-16					7	DAY	65	96	F
26.	6-13-16	0.03	IN	RAIN	rain	1	DAY			
27.	6-17-16					7	DAY	67	97	F
28.	6-21-16	0.01	IN	RAIN	rain	1	DAY			
29.	6-24-16					7	DAY	57	95	F
30.	6-25-16	0.02	IN	RAIN	rain	1	DAY			
31.	6-30-16	0.03	IN	RAIN	rain	1	DAY			
32.	7-1-16					7	DAY	60	91	F
33.	7-1-16	2.26	IN	RAIN	rain	4	DAY			
34.	7-6-16	0.32	IN	RAIN	rain	3	DAY			
35.	7-8-16					7	DAY	67	93	F
36.	7-13-16	0.49	IN	RAIN	rain	2	DAY			
37.	7-15-16					7	DAY	68	93	F
38.	7-17-16	0.02	IN	RAIN	rain	1	DAY			
39.	7-19-16	1.47	IN	RAIN	rain	2	DAY			
40.	7-25-16	0.1	IN	RAIN	rain	1	DAY			
41.	7-29-16					7	DAY	69	91	F
42.	7-31-16	0.52	IN	RAIN	rain	3	DAY			
43.	8-3-16	0.75	IN	RAIN	rain	1	DAY			
44.	8-5-16					7	DAY	66	93	F
45.	8-5-16	0.06	IN	RAIN	rain	1	DAY			

**Comment:**  
Rainfall was recorded on station and provided by Illinois Climate Network.  
Air temperature was recorded at Scott Air Force Base 2.5 miles north and provided by NOAA's National Centers for Environmental Information.  
Air temperatures given are summarized as weekly high and low, detailed weather data is available on request.

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## Application Description

	A	B
Application Date:	6-24-16	6-24-16
Appl. Start Time:	11:45	11:50
Appl. Stop Time:	11:50	12:00
Application Method:	Spray	Spray
Application Timing:	6"VC	6"VC
Application Placement:	BROFOL	BROFOL
Applied By:	RLS	RLS
Air Temperature, Unit:	87 F	87 F
% Relative Humidity:	52	52
Wind Velocity, Unit:	3 MPH	3 MPH
Wind Direction:	W	W
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	80 F	80 F
Soil Moisture:	BELNOR	BELNOR
% Cloud Cover:	5	5
Next Moisture Occurred On:	6-30-16	6-30-16
Time to Next Moisture, Unit:	6 DAY	6 DAY

## Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	V2	V2
Stage Minimum, Percent:	V1	V1
Stage Maximum, Percent:	V2	V2
Height, Unit:	4 IN	4 IN
Height Minimum, Maximum:	3 4	3 4

## Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ZEAMX W	ZEAMX W
Stage Majority, Percent:	V5	V5
Stage Minimum, Percent:	V4	V4
Stage Maximum, Percent:	V5	V5
Height, Unit:	7 IN	7 IN
Height Minimum, Maximum:	6 9	6 9
Density, Unit:	0.7 FT2	0.7 FT2

## Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	TTI
Nozzle Size:	8002	11002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

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Pest Code	Crop Code	Rating Date	Rating Type	Rating Unit	Rating Timing	Trt-Eval Interval	GLXMA 7-1-16 Injury Percent 7 DA-B 7 DA-A	GLXMA 7-8-16 Injury Percent 14 DA-B 14 DA-A	GLXMA 7-22-16 Injury Percent 28 DA-B 28 DA-A	GLXMA 7-8-16 STDRED Percent 14 DA-B 14 DA-A	ZEAMX 7-8-16 Control Percent 14 DA-B 14 DA-A	ZEAMX 7-22-16 Control Percent 28 DA-B 28 DA-A	ZEAMX 8-5-16 Control Percent 42 DA-B 42 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	NONTREATED									0	0	0	0
2	SCEPTER	70	WG	0.061	lb ai/a	1.4	oz/a	6-8"VC A		16 a	10 a	6 b	7 a
	ROUNDUP POWERMAX	4.5	SL	0.98	lb ae/a	28	fl oz/a	6-8"VC A					
	MSO	100	SL	0.5	% v/v	0.5	% v/v	6-8"VC A					
	AMS - LIQUID	100	SL	2.5	% v/v	2.5	% v/v	6-8"VC A					
3	SELECT MAX	0.97	EC	0.121	lb ai/a	16	fl oz/a	6-8"VC A		21 a	18 a	11 a	8 a
	SCEPTER	70	WG	0.061	lb ai/a	1.4	oz/a	6-8"VC A					
	ROUNDUP POWERMAX	4.5	SL	0.98	lb ae/a	28	fl oz/a	6-8"VC A					
	MSO	100	SL	0.5	% v/v	0.5	% v/v	6-8"VC A					
	AMS - LIQUID	100	SL	2.5	% v/v	2.5	% v/v	6-8"VC A					
4	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	6-8"VC A		25 a	19 a	11 a	9 a
	SCEPTER	70	WG	0.061	lb ai/a	1.4	oz/a	6-8"VC A					
	MSO	100	SL	0.5	% v/v	0.5	% v/v	6-8"VC A					
	AMS - LIQUID	100	SL	2.5	% v/v	2.5	% v/v	6-8"VC A					
5	SCEPTER	70	WG	0.061	lb ai/a	1.4	oz/a	6-8"VC B		21 a	19 a	10 ab	10 a
	ROUNDUP POWERMAX	4.5	SL	0.98	lb ae/a	28	fl oz/a	6-8"VC B					
	DICAMBA DGA	4	SL	0.5	lb ae/a	1	pt/a	6-8"VC B					
	MSO	100	SL	0.5	% v/v	0.5	% v/v	6-8"VC B					
LSD	P=.05									6.8	10.7	3.8	5.2
	Standard Deviation									4.3	6.7	2.4	3.3
	CV									20.39	41.03	24.71	39.9
	Replicate F									1.686	1.219	3.182	10.952
	Replicate Prob(F)									0.2389	0.3580	0.0775	0.0023
	Treatment F									2.829	1.594	3.909	0.615
	Treatment Prob(F)									0.0989	0.2581	0.0486	0.6224

Means followed by same letter or symbol 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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Trial Comments

1. Protocol: AMVAC (16C05H064).
2. Ratings:  
CI as overall, 7, 14, and 28 DA-A+B; note symptoms.  
WC 14, 28, and 42 DA-A+B; note leaning and ear production.
3. Yield not requested, do not sell grain.
4. Report data in ARM by 8-31-16.  
Complete weather data.  
Provide plot layout and GPS of SW and NE corners.  
SW corner GPS = 38.51596, -89.84149  
NE corner GPS = 38.51629, -89.84132  
Plot were arranged in 4 horizontal blocks, 1 replication per block.  
See ARM file for exact randomization.
5. Plant volunteer RR corn between soybean rows.  
Application A uses XR 8002 and application B uses TTI 11002, apply on the same day.
6. Photos requested.
7. Rainfall following the 6"VC applications A+B was 2.61 inch over 9 days beginning 6 days later.
8. Crop injury 7 DA-A+B was chlorosis and necrosis. Crop injury at 14 and 28 DA-A+B was stunt.  
Additionally, soybean stand establishment was poor throughout the field, with many pockets of significantly delayed emergence. A stand reduction (STRED) rating was taken 07-08-16 to quantify this reduction.
9. Stalk leaning was present in plot 102 (this was the only survivor, no ears); other plots in treatments 4 and 5 contained some short, thin stalks, but no ear production.
10. Not harvested.