

Cobra and Pyroxasulfone Postemergence in Soybean.

Trial ID: 12-DSO-CobraPOST
 Location: De Soto, IL

Investigator: Bryan Young

General Trial Information	
Study Director: Bryan Young	Title: Professor
Investigator: Bryan Young	
Trial Status: F - one-year/final	
Initiation Date: 4-29-12	
Trial Location	
City: De Soto	
State/Prov.: IL	
Postal Code: 62924	
Country: USA	

Objectives: Evaluate the efficacy of Cobra, pyroxasulfone and the combination on waterhemp from postemergence applications in soybean.
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Personnel	
Study Director: Bryan Young	Title: Professor
Investigator: Bryan Young	
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	Description: RR2Y
Variety: AG3832	Planting Date: 4-29-12
BBCH Scale: BSOY	Rate, Unit: 155000 S/A
Planting Method: SEEDED Seeded	
Depth, Unit: 2 IN	
Row Spacing, Unit: 30 IN	

Pest Description	
Pest 1 Type: W Code: AMATA - Amaranthus rudis Sauer	
Common Name: waterhemp, common	
Description: glyphosate-resistant waterhemp	

Site and Design	
Plot Width, Unit: 10 FT	Site Type: FIELD field
Plot Length, Unit: 30 FT	
Plot Area, Unit: 300 FT2	Tillage Type: NOTILL no-till
Replications: 3	Study Design: RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMX	2011

Maintenance	
No.	Maintenance Treatment Name
1.	N 27 LB/A, P205 69 LB/A, K20 90 LB/A

Soil Description	
% Sand: 14	% OM: 2.12
% Silt: 67	pH: 6.9
% Clay: 19	CEC: 12.7
Texture: SIL SILT LOAM	
Soil Name: OKAW	

Additional Measured Elements		
Element	Quantity	Unit
P1	112	LB/A
K	386	LB/A

Moisture and Weather Conditions	
Overall Moisture Conditions: BELNOR below normal	
Closest Weather Station: SOUTHERN IL AIRPORT (93810)	Distance, Unit: 1.5 MI

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Application Description

	A	B
Application Date:	5-20-12	6-2-12
Time of Day:	8:30	9:00
Application Method:	Spray	Spray
Application Timing:	2-3"WH	4-6"WH
Application Placement:	BROFOL	BROFOL
Applied By:	JRK	RJW
Air Temperature, Unit:	80 F	60 F
% Relative Humidity:	64	70
Wind Velocity, Unit:	2 MPH	4 MPH
Wind Direction:	SW	SW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	71 F	64 F
Soil Moisture:	BELNOR	BELNOR
% Cloud Cover:	0	90
Next Rain Occurred On:	5-20-12	6-4-12

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	V2	V3
Stage Majority, Percent:	V1	V2
Stage Minimum, Percent:	V2	V3
Height, Unit:	6 IN	8 IN
Height Minimum, Maximum:	4 6	6 8

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	4	10
Stage Minimum, Percent:	Coty	2
Stage Maximum, Percent:	6	16
Height, Unit:	2 IN	5 IN
Height Minimum, Maximum:	0.5 4	0.5 10
Density, Unit:	1 FT2	20 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	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

Southern Illinois University

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Pest Code							GLXMA	GLXMA	GLXMA	AMATA-HR	AMATA-HR	AMATA-HR
Crop Code							Injury	Injury	Injury	Control	Control	Control
Rating Date							Percent	Percent	Percent	Percent	Percent	Percent
Rating Type												
Rating Unit												
Rating Timing												
Trt-Eval Interval							7 DAT	14 DAT	21 DAT	14 DAT	21 DAT	28 DAT
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Unit	Growth Stage	Appl Code				
1	NONTREATED								0 g	0 f	0 e	0 e
2	COBRA COC (PRIME OIL)	2 EC 100 SL		0.156 lb ai/a 0.83 % v/v	10 fl oz/a 1 pt/a		2-3"WH A 2-3"WH A		28 bc	16 cde	7 bcd	97 a
3	COBRA COC (PRIME OIL)	2 EC 100 SL		0.188 lb ai/a 0.83 % v/v	12 fl oz/a 1 pt/a		2-3"WH A 2-3"WH A		30 bc	17 bcd	3 de	97 a
4	COBRA V-10206 COC (PRIME OIL)	2 EC 85 WG 100 SL		0.156 lb ai/a 0.08 lb ai/a 0.83 % v/v	10 fl oz/a 1.5 oz/a 1 pt/a		2-3"WH A 2-3"WH A 2-3"WH A		31 b	21 ab	10 ab	97 a
5	COBRA V-10206 COC (PRIME OIL)	2 EC 85 WG 100 SL		0.188 lb ai/a 0.096 lb ai/a 0.83 % v/v	12 fl oz/a 1.8 oz/a 1 pt/a		2-3"WH A 2-3"WH A 2-3"WH A		36 a	24 a	13 a	98 a
6	PREFIX COC (PRIME OIL)	5.29 EC 100 SL		0.99 lb ai/a 0.83 % v/v	1.5 pt/a 1 pt/a		2-3"WH A 2-3"WH A		19 ef	19 bc	10 ab	97 a
7	COBRA COC (PRIME OIL)	2 EC 100 SL		0.156 lb ai/a 0.83 % v/v	10 fl oz/a 1 pt/a		4-6"WH B 4-6"WH B		26 bcd	19 bc	6 cd	89 b
8	COBRA COC (PRIME OIL)	2 EC 100 SL		0.188 lb ai/a 0.83 % v/v	12 fl oz/a 1 pt/a		4-6"WH B 4-6"WH B		27 bcd	18 bc	6 bcd	84 bc
9	COBRA V-10206 COC (PRIME OIL)	2 EC 85 WG 100 SL		0.156 lb ai/a 0.08 lb ai/a 0.83 % v/v	10 fl oz/a 1.5 oz/a 1 pt/a		4-6"WH B 4-6"WH B 4-6"WH B		27 bcd	16 cde	5 cd	87 b
10	COBRA V-10206 COC (PRIME OIL)	2 EC 85 WG 100 SL		0.188 lb ai/a 0.096 lb ai/a 0.83 % v/v	12 fl oz/a 1.8 oz/a 1 pt/a		4-6"WH B 4-6"WH B 4-6"WH B		26 cd	17 bcd	5 cd	88 b
11	PREFIX COC (PRIME OIL)	5.29 EC 100 SL		0.99 lb ai/a 0.83 % v/v	1.5 pt/a 1 pt/a		4-6"WH B 4-6"WH B		16 f	13 de	4 cd	80 c
12	COBRA RESOURCE COC (PRIME OIL) NIS (ACTIVATOR 90) N-PAK AMS	2 EC 0.86 EC 100 SL 100 SL 3.4 SL		0.156 lb ai/a 0.027 lb ai/a 0.83 % v/v 0.25 % v/v 4.9 % v/v	10 fl oz/a 4 fl oz/a 1 pt/a 0.25 % v/v 2.5 lb ai/a		4-6"WH B 4-6"WH B 4-6"WH B 4-6"WH B 4-6"WH B		23 de	16 cde	6 bcd	84 bc
13	COBRA RESOURCE COC (PRIME OIL) NIS (ACTIVATOR 90) N-PAK AMS	2 EC 0.86 EC 100 SL 100 SL 3.4 SL		0.188 lb ai/a 0.0403 lb ai/a 0.83 % v/v 0.25 % v/v 4.9 % v/v	12 fl oz/a 6 fl oz/a 1 pt/a 0.25 % v/v 2.5 lb ai/a		4-6"WH B 4-6"WH B 4-6"WH B 4-6"WH B 4-6"WH B		28 bc	19 bc	8 bc	87 b
14	CADET NIS (ACTIVATOR 90)	0.91 EC 100 SL		0.0064 lb ai/a 0.25 % v/v	0.9 fl oz/a 0.25 % v/v		4-6"WH B 4-6"WH B		17 f	11 e	3 de	57 d
LSD (P=.05)							4.8	4.7	3.9	6.2	9.0	11.0
Standard Deviation							2.8	2.8	2.3	3.7	5.4	6.6
CV							11.92	17.4	37.26	4.49	6.83	9.12
Replicate F							6.319	0.511	0.120	1.631	0.026	0.416
Replicate Prob(F)							0.0058	0.6056	0.8875	0.2150	0.9746	0.6638
Treatment F							28.919	12.000	6.319	148.515	69.543	46.581
Treatment Prob(F)							0.0001	0.0001	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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Trial Comments

1. Protocol: Valent (V10206 MD 64.01).
2. Ratings: CI at 7 and 14 DAT; WC at 14, 21, and 28 DAT.
3. Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
Rainfall following application A was on the same day, 8 hours after application.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. DAT = Days after either application A or B.
Ratings at 7 days after the 2-3"WH and 4-6"WH applications were on 5-27-12 and 6-9-12, respectively.
Ratings at 14 days after the 2-3"WH and 4-6"WH applications were on 6-3-12 and 6-16-12, respectively.
Ratings at 21 days after the 2-3"WH and 4-6"WH applications were on 6-10-12 and 6-23-12, respectively.
Ratings at 28 days after the 2-3"WH and 4-6"WH applications were on 6-17-12 and 6-30-12, respectively.
6. Not harvested.