

## Adjuvant Screen for Control of Volunteer Roundup Ready Corn - Precision Labs.

Trial ID: 08-WU12-WM50 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: 06-23-08

Objectives: Evaluate experimental adjuvant combinations for herbicide tank-mixtures used for control of volunteer Roundup Ready corn in soybean.

Crop 1: GLXMA Soybean Variety: AG 4405 RR  
 Planting Method: SEEDED Planting Date: 06-23-08  
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN  
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: ZEAMX Zea mays L. corn, volunteer  
 Pest 2 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common  
 Pest 3 Type: W Code: SETFA Setaria faberi Herrm. foxtail, giant  
 Pest 4 Type: W Code: IPOLA Ipomoea lacunosa L. morningglory, pitted

Plot Width, Unit: 10 FT Site Type: FIELD  
 Plot Length, Unit: 30 FT Tillage Type: REDUCED-TILL  
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year  
 1. ZEAMD 2007

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

% OM: 2.8 Texture: SILT LOAM  
 pH: 6.7  
 CEC: 10 Fert. Level: P1: 92 LB/A, K: 334 LB/A

## Application Description

A  
 Application Date: 07-15-08  
 Time of Day: 9:30  
 Application Method: Spray  
 Application Timing: 12-18"CN  
 Application Placement: BROFOL  
 Applied By: DKT  
 Air Temperature, Unit: 88 F  
 % Relative Humidity: 54  
 Wind Velocity, Unit: 2 MPH  
 Dew Presence (Y/N): N  
 Soil Temperature, Unit: 91 F  
 Soil Moisture: NORMAL  
 % Cloud Cover: 0

07-15-08  
 Crop stage at application: V2  
 Height Min, Max (inch): 6 8

## Pest Stage At Each Application

Application Date: 07-15-08  
 Weed Code: ZEAMX  
 Stage Majority (leaves): 5  
 Stage Min, Max: 4 6  
 Height Majority: 15 IN  
 Height Min, Max: 14 18  
 Density, Unit: 2 FT2  
 Weed Code: AMATA  
 Stage Majority (leaves): 7  
 Stage Min, Max: 4 8  
 Height Majority: 5 IN  
 Height Min, Max: 1 7  
 Density, Unit: 3 FT2  
 Weed Code: SETFA  
 Stage Majority (leaves): 5  
 Stage Min, Max: 3 8  
 Height Majority: 9 IN  
 Height Min, Max: 4 12  
 Density, Unit: 0.5 FT2  
 Weed Code: IPOLA  
 Stage Majority (leaves): 9  
 Stage Min, Max: 3 14  
 Height Majority: 6 IN  
 Height Min, Max: 3 7  
 Density, Unit: 3 FT2

## 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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										ZEAMX	ZEAMX	AMATA	AMATA	SETFA	SETFA	
										GLXMA	GLXMA	07-29-08	08-12-08	07-29-08	08-12-08	
										Injury	Injury	Control	Control	Control	Control	
										Percent	Percent	Percent	Percent	Percent	Percent	
										14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl								
No.	Name	Conc	Type	Unit	Rate	Rate	Stage	Code								
1	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN A	0 a	0 a	97 a	90 a	89 c	70 b	99 a	99 a
1	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN A								
1	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN A								
1	COC-PL	100	SL	0.5	% v/v	0.5	% v/v	12-18"CN A								
1	AMS	100	SG	1	% w/w	1	% w/w	12-18"CN A								
2	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN A	0 a	0 a	94 a	75 bc	90 bc	77 b	99 a	99 a
2	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN A								
2	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN A								
2	PX 71500	100	SL	0.5	% v/v	0.5	% v/v	12-18"CN A								
3	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN A	0 a	0 a	87 a	60 d	94 ab	88 a	99 a	99 a
3	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN A								
3	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN A								
3	PX 71501	100	SL	0.5	% v/v	0.5	% v/v	12-18"CN A								
4	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN A	0 a	0 a	43 b	23 e	92 abc	94 a	99 a	99 a
4	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN A								
4	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN A								
4	PX 08012	100	SL	0.5	% v/v	0.5	% v/v	12-18"CN A								
5	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN A	0 a	0 a	94 a	72 c	93 abc	92 a	99 a	99 a
5	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN A								
5	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN A								
5	PX 08012	100	SL	1	% v/v	1	% v/v	12-18"CN A								
6	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN A	0 a	0 a	55 b	25 e	95 a	94 a	99 a	99 a
6	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN A								
6	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN A								
6	PX 74802	100	SL	0.125	% v/v	0.125	% v/v	12-18"CN A								
6	AMS	100	SG	1	% w/w	1	% w/w	12-18"CN A								
7	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN A	0 a	0 a	53 b	23 e	96 a	93 a	99 a	99 a
7	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN A								
7	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN A								
7	PEN-A-TRATE II	100	SL	0.25	% v/v	0.25	% v/v	12-18"CN A								
7	AMS	100	SG	1	% w/w	1	% w/w	12-18"CN A								
8	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN A	0 a	0 a	97 a	81 ab	95 a	86 a	99 a	99 a
8	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN A								
8	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN A								
8	EXCHANGE	100	SL	0.375	% v/v	0.375	% v/v	12-18"CN A								
8	AMS	100	SG	1	% w/w	1	% w/w	12-18"CN A								
9	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN A	0 a	0 a	96 a	83 ab	93 ab	87 a	99 a	99 a
9	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN A								
9	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN A								
9	PX 40801	100	SL	0.375	% v/v	0.375	% v/v	12-18"CN A								
9	AMS	100	SG	1	% w/w	1	% w/w	12-18"CN A								
10	NONTREATED								0 a	0 a	0 c	0 f	0 d	0 c	0 b	0 b
LSD (P=.05)									0.0	0.0	13.3	9.1	4.3	8.6	0.0	0.0
Replicate F									0.000	0.000	1.396	1.357	0.068	0.599	0.000	0.000
Replicate Prob(F)									1.0000	1.0000	0.2732	0.2826	0.9344	0.5598	1.0000	1.0000
Treatment F									0.000	0.000	53.393	110.667	410.609	96.050	0.000	0.000
Treatment Prob(F)									1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

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

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Location: Agronomy Res. Center

Pest Code		IPOLA	IPOLA
Crop Code			
Rating Date		07-29-08	08-12-08
Rating Data Type		Control	Control
Rating Unit		Percent	Percent
Rating Timing			
Trt-Eval Interval		14 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
1	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN	A	95 a	87 a
1	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN	A		
1	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN	A		
1	COC-PL	100	SL	0.5	% v/v	0.5	% v/v	12-18"CN	A		
1	AMS	100	SG	1	% w/w	1	% w/w	12-18"CN	A		
2	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN	A	97 a	88 a
2	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN	A		
2	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN	A		
2	PX 71500	100	SL	0.5	% v/v	0.5	% v/v	12-18"CN	A		
3	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN	A	94 a	78 b
3	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN	A		
3	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN	A		
3	PX 71501	100	SL	0.5	% v/v	0.5	% v/v	12-18"CN	A		
4	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN	A	93 a	88 a
4	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN	A		
4	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN	A		
4	PX 08012	100	SL	0.5	% v/v	0.5	% v/v	12-18"CN	A		
5	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN	A	96 a	87 a
5	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN	A		
5	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN	A		
5	PX 08012	100	SL	1	% v/v	1	% v/v	12-18"CN	A		
6	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN	A	94 a	92 a
6	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN	A		
6	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN	A		
6	PX 74802	100	SL	0.125	% v/v	0.125	% v/v	12-18"CN	A		
6	AMS	100	SG	1	% w/w	1	% w/w	12-18"CN	A		
7	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN	A	93 a	87 a
7	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN	A		
7	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN	A		
7	PEN-A-TRATE II	100	SL	0.25	% v/v	0.25	% v/v	12-18"CN	A		
7	AMS	100	SG	1	% w/w	1	% w/w	12-18"CN	A		
8	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN	A	96 a	87 a
8	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN	A		
8	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN	A		
8	EXCHANGE	100	SL	0.375	% v/v	0.375	% v/v	12-18"CN	A		
8	AMS	100	SG	1	% w/w	1	% w/w	12-18"CN	A		
9	ROUNDUP P-MAX	4.5	SL	0.387	lb ae/a	11	fl oz/a	12-18"CN	A	95 a	85 ab
9	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	12-18"CN	A		
9	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	12-18"CN	A		
9	PX 40801	100	SL	0.375	% v/v	0.375	% v/v	12-18"CN	A		
9	AMS	100	SG	1	% w/w	1	% w/w	12-18"CN	A		
10	NONTREATED									0 b	0 c
LSD (P=.05)										5.2	7.3
Replicate F										0.275	5.443
Replicate Prob(F)										0.7627	0.0142
Treatment F										296.941	126.211
Treatment Prob(F)										0.0001	0.0001

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

## Trial Comments

1. Protocol: Precision Labs.
2. Ratings: CI/WC at 14 + 28 DAT.
3. Volunteer corn was planted 6-23-08 and was DKC 61-73 RR.
4. At the Agronomy Research Center in Carbondale the above normal rainfall in May 2008 delayed corn and soybean planting.
5. DA-A = Days after the 12-18"CN application.
6. Not harvested.