

Cadet Tank-Mixtures with Glyphosate in Soybean.

Trial ID: 08-10C-MW40 Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu  
 City State Zip Country: Belleville IL 62221 USA  
 Trial Status: FINAL Initiation Date: 06-18-08

Objectives: Evaluate Cadet herbicide as a tank-mix partner for glyphosate in soybean for improved weed control.

Crop 1: GLXMA Soybean Variety: AG 4404 RR/STS  
 Planting Method: SEEDED Planting Date: 06-18-08  
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN  
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: SETFA Setaria faberi Herrm. foxtail, giant  
 Pest 2 Type: W Code: CYPES Cyperus esculentus L. nutsedge, yellow  
 Pest 3 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf  
 Pest 4 Type: W Code: AMBEL Ambrosia artemisiifolia L. ragweed, common  
 Pest 5 Type: W Code: IPOSS Ipomoea sp. morningglory, species

Plot Width, Unit: 10 FT Site Type: FIELD  
 Plot Length, Unit: 24 FT Tillage Type: REDUCED-TILL  
 Replications: 3 Study Design: Randomized Complete Block

## Prior Crops, Year

1. GLXMA 2007

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 150 LB/A

% OM: 2.1 Texture: SILT LOAM  
 pH: 5.6 Soil Name: PIERRON  
 CEC: 12 Fert. Level: P1 80 LB/A, K 435 LB/A

## Application Description

A

Application Date: 07-11-08  
 Time of Day: 9:15  
 Application Method: Spray  
 Application Timing: POST  
 Application Placement: BROFOL  
 Applied By: DKT  
 Air Temperature, Unit: 78 F  
 % Relative Humidity: 92  
 Wind Velocity, Unit: 4 MPH  
 Dew Presence (Y/N): N  
 Soil Temperature, Unit: 86 F  
 Soil Moisture: ABONOR

07-11-08  
 Crop stage at application: V2  
 Height Min, Max (inch): 6 8

## Pest Stage At Each Application

Application Date: 07-11-08  
 Weed Code: SETFA  
 Stage Majority (leaves): 3  
 Stage Min, Max: 2 5  
 Height Majority: 5 IN  
 Height Min, Max: 2 6  
 Density, Unit: 1 FT2  
 Weed Code: CYPES  
 Stage Majority (leaves): 6  
 Stage Min, Max: 3 8  
 Height Majority: 6 IN  
 Height Min, Max: 4 8  
 Density, Unit: 0.1 FT2  
 Weed Code: ABUTH  
 Stage Majority (leaves): 4  
 Stage Min, Max: 2 4  
 Height Majority: 6 IN  
 Height Min, Max: 1 8  
 Density, Unit: 2 FT2  
 Weed Code: AMBEL  
 Stage Majority (leaves): 4  
 Stage Min, Max: 2 6  
 Height Majority: 4 IN  
 Height Min, Max: 1 6  
 Density, Unit: 1 FT2  
 Weed Code: IPOSS  
 Stage Majority (leaves): 6  
 Stage Min, Max: 2 12  
 Height Majority: 3 IN  
 Height Min, Max: 1 5  
 Density, Unit: 1 FT2

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**Application Equipment**

<b>Appl. Equipment:</b>	CO2 sprayer
<b>Operating Pressure:</b>	30 PSI
<b>Nozzle Type:</b>	Flat fan
<b>Nozzle Size:</b>	XR 8002
<b>Boom Length, Unit:</b>	7.5 FT
<b>Spray Volume, Unit:</b>	15 GPA

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Pest Code						SETFA	SETFA	CYPES	CYPES	ABUTH	ABUTH						
Crop Code						GLXMA	GLXMA										
Rating Date						07-14-08	07-29-08	07-18-08	07-29-08	07-18-08	07-29-08						
Rating Data Type						Injury	Injury	Control	Control	Control	Control						
Rating Unit						Percent	Percent	Percent	Percent	Percent	Percent						
Rating Timing																	
Trt-Eval Interval						3 DA-A	14 DA-A	7 DA-A	14 DA-A	7 DA-A	14 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 d	0 a	0 b	0 c	0 b	0 c	0 b	
2	CADET	0.91	EC	0.00284	lb ai/a	0.4	fl oz/a	POST	A	7 b	0 a	99 a	96 ab	91 a	90 a	99 a	
2	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	POST	A								
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A								
3	CADET	0.91	EC	0.00356	lb ai/a	0.5	fl oz/a	POST	A	10 a	0 a	99 a	93 b	90 a	90 a	99 a	
3	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	POST	A								
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A								
4	RESOURCE	0.86	EC	0.0202	lb ai/a	3	fl oz/a	POST	A	5 c	0 a	99 a	95 ab	91 a	88 a	99 a	
4	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	POST	A								
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A								
5	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	POST	A	0 d	0 a	99 a	93 b	83 b	88 a	93 b	
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A								
6	ROUNDUP P-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	A	0 d	0 a	99 a	99 a	88 a	90 a	98 a	
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A								
LSD (P=.05)										0.0	0.0	0.0	5.7	4.4	8.7	2.2	4.7
Replicate F										0.000	0.000	0.000	0.126	0.565	0.212	1.702	0.190
Replicate Prob(F)										1.0000	1.0000	1.0000	0.8832	0.5895	0.8132	0.2421	0.8302
Treatment F										0.000	0.000	0.000	489.809	713.532	187.079	3583.292	779.189
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001

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

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Pest Code	AMBEL	AMBEL	IPOSS	IPOSS
Crop Code				
Rating Date	07-18-08	07-29-08	07-18-08	07-29-08
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Timing				
Trt-Eval Interval	7 DA-A	14 DA-A	7 DA-A	14 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 d	0 c	0 d	0 d
2	CADET	0.91	EC	0.00284	lb ai/a	0.4	fl oz/a	POST	A	93 c	85 b	88 a	40 c
2	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	POST	A				
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
3	CADET	0.91	EC	0.00356	lb ai/a	0.5	fl oz/a	POST	A	95 bc	95 ab	88 a	40 c
3	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	POST	A				
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
4	RESOURCE	0.86	EC	0.0202	lb ai/a	3	fl oz/a	POST	A	96 b	98 a	89 a	78 a
4	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	POST	A				
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
5	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	POST	A	99 a	95 ab	67 c	55 b
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
6	ROUNDUP P-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	A	99 a	99 a	79 b	83 a
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	A				
LSD (P=.05)										2.6	9.6	1.9	12.8
Replicate F										0.800	0.642	0.957	2.269
Replicate Prob(F)										0.4823	0.5511	0.4239	0.1658
Treatment F										2400.646	172.987	3396.651	59.797
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

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

## Trial Comments

1. Protocol: FMC.
2. Ratings: CI at 3-7 and 14 DAT; WC at 7 + 14-21 DAT.
3. POST application target the following weeds / weed sizes;  
Velvetleaf / 8-12 inch,  
Lambsquarters, Waterhemp, Ragweed, and Morningglory / 2-6 inch.
4. DA-A = Days after POST application. IPOSS = Morningglory species including IPOHE and IPOLA.
5. Blanket PRE application of Dual II Magnum (0.75 pt/A) to be applied 10 feet wide to the entire study area on 6-18-08.
6. At the Belleville Research Center the above normal rainfall in spring 2008 (no more than four consecutive rain-free days between March 22 and June 15) delayed corn and soybean planting until mid-June.  
Following the PRE application on June 18, rainfall was 0.29 inch 2 days later and 0.35 inch 9 days later.
7. Not harvested.