

Cadet Postemergence in Soybean.

Trial ID: 11-DSO-Cadet Location: De Soto, IL

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: De Soto IL 62924 USA
 Trial Status: FINAL Initiation Date: 5-20-11

Objectives: Evaluate glyphosate-resistant waterhemp control with Cadet programs postemergence in soybean.

Crop 1: GLXMA Soybean Variety: AG 4005 Description: RR
 Planting Method: SEEDED Planting Date: 5-20-11
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

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

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 30 FT Tillage Type: NO-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2010

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

% Sand: 15.4 % OM: 2.4 Texture: SILT LOAM
 % Silt: 64.7 pH: 6.1 Soil Name: OKAW
 % Clay: 19.9 CEC: 10.5 Fert. Level: P1 53 LB/A, K 352 LB/A

Application Description

	A	B
Application Date:	6-12-11	7-5-11
Time of Day:	13:15	10:15
Application Method:	Spray	Spray
Application Timing:	2-4"W	3-4"RG
Application Placement:	BROFOL	BROFOL
Applied By:	LAH	CME
Air Temperature, Unit:	83 F	84 F
% Relative Humidity:	40	59
Wind Velocity, Unit:	2 MPH	2 MPH
Wind Direction:	N	N
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	86 F	80 F
Soil Moisture:	BELNOR	NORMAL
% Cloud Cover:	65	40

	12-6-11	5-7-11
Crop stage at application:	V1-V2	R2
Height Min, Max (inch):	5 10	19 23

Pest Stage At Each Application

	6-12-11	7-5-11
Application Date:	6-12-11	7-5-11
Weed Code:	AMATA	AMATA
Stage Majority (leaves):	6	10
Stage Min, Max:	coty 42	coty 20
Height Majority:	3 IN	3.5 IN
Height Min, Max:	0.5 13	0.5 16
Density, Unit:	10 FT2	2 FT2

Application Equipment

	CO2 sprayer	CO2 sprayer
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

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Pest Code	GLXMA	GLXMA	GLXMA	GLXMA
Crop Code	6-19-11	7-3-11	7-12-11	7-26-11
Rating Date	Injury	Injury	Injury	Injury
Rating Data Type	Percent	Percent	Percent	Percent
Rating Unit				
Rating Timing				
Trt-Eval Interval	7 DA-A	21 DA-A	7 DA-B	21 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	2-4"W	A	9 c	0 a	0 a	0 a
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A				
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
2	FLEXSTAR	1.88	EC	0.091	lb ai/a	6.2	fl oz/a	2-4"W	A	11 b	0 a	0 a	0 a
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A				
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
3	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	2-4"W	A	0 e	0 a	0 a	0 a
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A				
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
3	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	3-4"RG	B				
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
4	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	A	14 a	0 a	0 a	0 a
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A				
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A	0 e	0 a	2 a	0 a
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
5	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	3-4"RG	B				
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
6	EXTREME	2.17	SL	0.81	lb ai/a	3	pt/a	2-4"W	A	5 d	0 a	0 a	0 a
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A	0 e	0 a	0 a	0 a
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
8	NONTREATED									0 e	0 a	0 a	0 a
LSD (P=.05)										1.4	0.0	1.8	0.0
Replicate F										4.000	0.000	1.000	0.000
Replicate Prob(F)										0.0423	1.0000	0.3927	1.0000
Treatment F										152.393	0.000	1.000	0.000
Treatment Prob(F)										0.0001	1.0000	0.4706	1.0000

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

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Location: De Soto, IL

Pest Code	Crop Code	Rating Date	Rating Data Type	Rating Unit	Rating Timing	Trt-Eval Interval	AMATA-HR						
							6-19-11 Control Percent	7-3-11 Control Percent	7-12-11 Control Percent	7-26-11 Control Percent			
Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	7 DA-A	21 DA-A	7 DA-B	21 DA-B
1	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	2-4"W	A	89 b	79 e	84 c	84 b
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A				
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
2	FLEXSTAR	1.88	EC	0.091	lb ai/a	6.2	fl oz/a	2-4"W	A	97 a	90 ab	97 ab	97 a
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A				
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
3	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	2-4"W	A	85 c	86 bcd	98 a	98 a
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A				
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
3	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	3-4"RG	B				
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
4	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	2-4"W	A	98 a	95 a	96 ab	96 a
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A				
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A	84 c	87 bc	98 a	98 a
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
5	FLEXSTAR	1.88	EC	0.235	lb ai/a	16	fl oz/a	3-4"RG	B				
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
6	EXTREME	2.17	SL	0.81	lb ai/a	3	pt/a	2-4"W	A	82 cd	82 cde	95 ab	94 ab
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W	A	79 d	81 de	89 bc	89 ab
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W	A				
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"RG	B				
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"RG	B				
8	NONTREATED									0 e	0 f	0 d	0 c
LSD (P=.05)										3.6	6.1	8.1	10.6
Replicate F										1.233	3.577	0.585	0.127
Replicate Prob(F)										0.3212	0.0556	0.5703	0.8816
Treatment F										702.197	234.945	156.659	92.393
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/WC at 7 and 21 DA-A; CI/WC at 7 and 21 DA-B.
3. Blanket application of Roundup WeatherMax (22 fl oz/A) + 2,4-D LV4 (1 pt/A) + NPAK AMS (2.5 %v/v) was applied to all plots on 4-2-11.
Blanket burndown application of Gramoxone Inteon (3.5 pt/A) plus COC (1% v/v) was applied to all plots on 5-20-11.
4. Application B is at 3-4"RG following the A application but not sooner than 21 DA-A (rate A before spraying B).
5. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).