

Zidua Postemergence in Soybean.

Trial ID: 11-DSO-ZiduaPOST 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 residual control of glyphosate-resistant waterhemp from Zidua applied postemergence compared with competitive standards.

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
 Application Date: 6-4-11
 Time of Day: 11:30
 Application Method: Spray
 Application Timing: VEPOST
 Application Placement: BROFOL
 Applied By: LAH
 Air Temperature, Unit: 97 F
 % Relative Humidity: 35
 Wind Velocity, Unit: 2 MPH
 Wind Direction: NW
 Dew Presence (Y/N): N
 Soil Temperature, Unit: 83 F
 Soil Moisture: NORMAL
 % Cloud Cover: 0

4-6-11
 Crop stage at application: VC
 Height Min, Max (inch): 1 5

Pest Stage At Each Application

Application Date: 6-4-11
 Weed Code: AMATA
 Stage Majority (leaves): 4
 Stage Min, Max: coty 7
 Height Majority: 1 IN
 Height Min, Max: 0.5 1
 Density, Unit: 0.1 FT2

Application Equipment

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

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Pest Code																			
Crop Code																			
Rating Date																			
Rating Data Type																			
Rating Unit																			
Rating Timing																			
Trt-Eval Interval																			

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	10-22-11 Moisture Percent	10-22-11 Test wt. lb/bu	10-22-11 Yield bu/A	6-9-11 Injury Percent	6-18-11 Injury Percent	7-2-11 Injury Percent	7-30-11 Injury Percent								
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	VEPOST	A	15.1	ab	54.2	a	38	ab	1	d	0	c	0	b	0	a	
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A															
2	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	VEPOST	A	14.9	b	54.3	a	47	a	18	c	17	b	2	b	0	a	
2	EXTREME	2.17	SL	0.81	lb ae/a	3	pt/a	VEPOST	A															
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A															
3	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	VEPOST	A	15.1	ab	54.2	a	46	a	23	b	17	b	2	b	0	a	
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	VEPOST	A															
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A															
4	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	VEPOST	A	15.0	ab	54.3	a	45	a	14	c	16	b	0	b	0	a	
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	VEPOST	A															
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A															
5	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	VEPOST	A	15.5	a	54.0	a	36	b	29	a	20	a	12	a	0	a	
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	VEPOST	A															
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A															
6	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	VEPOST	A	15.0	ab	54.3	a	41	ab	26	ab	17	b	0	b	0	a	
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	VEPOST	A															
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A															
LSD (P=.05)										0.61	0.37	8.3	3.3	2.0	6.8	0.0								
Replicate F										1.065	0.764	2.769	6.386	3.496	0.294	0.000								
Replicate Prob(F)										0.3808	0.4912	0.1104	0.0163	0.0706	0.7514	1.0000								
Treatment F										1.272	1.132	2.821	90.406	123.442	4.412	0.000								
Treatment Prob(F)										0.3480	0.4041	0.0765	0.0001	0.0001	0.0221	1.0000								

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

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										AMATA-HR	AMATA-HR	AMATA-HR
										6-18-11	7-2-11	7-30-11
										Control	Control	Control
										Percent	Percent	Percent
										14 DA-A	28 DA-A	56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	VEPOST	A	73	b	22
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A			
2	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	VEPOST	A	99	a	80
2	EXTREME	2.17	SL	0.81	lb ae/a	3	pt/a	VEPOST	A			
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A			
3	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	VEPOST	A	99	a	87
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	VEPOST	A			
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A			
4	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	VEPOST	A	99	a	86
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	VEPOST	A			
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A			
5	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	VEPOST	A	99	a	86
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	VEPOST	A			
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A			
6	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	VEPOST	A	99	a	77
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	VEPOST	A			
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	VEPOST	A			
LSD (P=.05)										2.2	4.5	12.1
Replicate F										0.778	1.440	0.424
Replicate Prob(F)										0.4853	0.2820	0.6655
Treatment F										218.489	139.435	43.699
Treatment Prob(F)										0.0001	0.0001	0.0001

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

Trial Comments

1. Protocol: BASF.
2. Ratings: CI 5-7 DA-A; CI/WC at 14, 28, and 56 DA-A.
3. Yield, plan to destroy grain in some plots.
4. Application timing; VEPOST to be sprayed at first observation of waterhemp (1 inch or less).
5. 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.
6. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Rainfall for the week prior to planting was 1.2 inch.
Rainfall following planting and prior to the VEPOST application was 2.18 inch.
Rainfall (weekly totals) following the VEPOST application for the the next six weeks were 0.07, 1.87, 0.87, 4.13, 1.7, and 1.99 inch.
8. Harvested 10-22-11, (2) 30 inch rows by 26.5 ft.