

Sharpen Preplant PPO Combinations.

Trial ID: 10-YRC-SharpPPO Location: Young Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Murphysboro IL 62966 USA
 Trial Status: FINAL Initiation Date: 05-28-10

Objectives: Evaluate the crop safety and weed control provided by Sharpen combined with other PPO-inhibiting herbicides.

Crop 1: GLXMA Soybean Variety: AG 4005 Description: RR
 Planting Method: SEEDS Planting Date: 06-05-10
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant
 Pest 2 Type: W Code: ERICA Conyza canadensis (L.) Crong. horseweed
 Pest Description: glyphosate-resistant marestalk
 Pest 3 Type: W Code: AMASS Amaranthus species amaranthus species

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. GLXMA 2009

Field Prep./Maintenance: N 120 LB/A, P205 0 LB/A, K20 0 LB/A

% OM: 2.2 Texture: VERY FINE SANDY LOAM
 pH: 6.2 Soil Name: ALVIN
 CEC: 9 Fert. Level: P1 82 LB/A, K 91 LB/A

Application Description

A
 Application Date: 05-28-10
 Time of Day: 17:00
 Application Method: Spray
 Application Timing: 7DBP
 Application Placement: BROFOL
 Applied By: DKP NVH
 Air Temperature, Unit: 86 F
 % Relative Humidity: 51
 Wind Velocity, Unit: 3 MPH
 Wind Direction: NE
 Dew Presence (Y/N): N
 Soil Temperature, Unit: 82 F
 Soil Moisture: ABONOR
 % Cloud Cover: 0

05-28-10
 Crop stage at application: NA

Pest Stage At Each Application

Application Date: 05-28-10
 Weed Code: AMBTR
 Stage Majority (leaves): 10
 Stage Min, Max: COTY 20
 Height Majority: 10 IN
 Height Min, Max: 5 24
 Density, Unit: 1 FT2
 Weed Code: ERICA
 Stage Majority (leaves): 8
 Stage Min, Max: 3 30
 Height Majority: 3 IN
 Height Min, Max: 0.5 14
 Density, Unit: 0.2 FT2
 Weed Code: AMASS
 Stage Majority (leaves): 4
 Stage Min, Max: COTY 12
 Height Majority: 3 IN
 Height Min, Max: 0.5 6
 Density, Unit: 6 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	GLXMA 06-19-10 Injury Percent	GLXMA 07-10-10 Injury Percent	AMBTR 06-04-10 Control Percent	AMBTR 06-19-10 Control Percent	AMBTR 07-10-10 Control Percent
							14 DAP	35 DAP	7 DA-A	14 DAP	35 DAP
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
1	NONTREATED									0 a	0 a
2	SHARPEN	2.85 SC		0.0223	lb ai/a	1 fl oz/a		7DBP	A	0 a	0 a
2	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22 fl oz/a		7DBP	A	96 a	96 a
2	MSO (DESTINY)	100 SL		1	% v/v	1 % v/v		7DBP	A	86 ab	
2	AMS	100 SG		2	% w/w	17 lb/100 gal		7DBP	A		
3	SHARPEN	2.85 SC		0.0445	lb ai/a	2 fl oz/a		7DBP	A	0 a	0 a
3	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22 fl oz/a		7DBP	A	96 a	97 a
3	MSO (DESTINY)	100 SL		1	% v/v	1 % v/v		7DBP	A	88 ab	
3	AMS	100 SG		2	% w/w	17 lb/100 gal		7DBP	A		
4	SHARPEN	2.85 SC		0.0223	lb ai/a	1 fl oz/a		7DBP	A	0 a	0 a
4	SPARTAN 4F	4 SC		0.25	lb ai/a	8 fl oz/a		7DBP	A	96 a	96 a
4	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22 fl oz/a		7DBP	A	85 ab	
4	MSO (DESTINY)	100 SL		1	% v/v	1 % v/v		7DBP	A		
4	AMS	100 SG		2	% w/w	17 lb/100 gal		7DBP	A		
5	SHARPEN	2.85 SC		0.0223	lb ai/a	1 fl oz/a		7DBP	A	0 a	0 a
5	VALOR SX	51 WG		0.064	lb ai/a	2 oz/a		7DBP	A	97 a	97 a
5	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22 fl oz/a		7DBP	A	83 ab	
5	MSO (DESTINY)	100 SL		1	% v/v	1 % v/v		7DBP	A		
5	AMS	100 SG		2	% w/w	17 lb/100 gal		7DBP	A		
6	SHARPEN	2.85 SC		0.0223	lb ai/a	1 fl oz/a		7DBP	A	0 a	0 a
6	VALOR XLT	40.3 WG				3.5 oz/a		7DBP	A	95 a	97 a
6	VALOR SX	51 WG		0.0653	lb ai/a			7DBP	A	91 a	
6	CLASSIC	25 WG		0.0227	lb ai/a			7DBP	A		
6	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22 fl oz/a		7DBP	A		
6	MSO (DESTINY)	100 SL		1	% v/v	1 % v/v		7DBP	A		
6	AMS	100 SG		2	% w/w	17 lb/100 gal		7DBP	A		
7	SHARPEN	2.85 SC		0.0223	lb ai/a	1 fl oz/a		7DBP	A	0 a	0 a
7	AUTHORITY FIRST	70 WG		0.14	lb ai/a	3.2 oz/a		7DBP	A	96 a	96 a
7	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22 fl oz/a		7DBP	A	88 ab	
7	MSO (DESTINY)	100 SL		1	% v/v	1 % v/v		7DBP	A		
7	AMS	100 SG		2	% w/w	17 lb/100 gal		7DBP	A		
8	SHARPEN	2.85 SC		0.0223	lb ai/a	1 fl oz/a		7DBP	A	0 a	0 a
8	AUTHORITY MTZ	45 WG		0.28	lb ai/a	10 oz/a		7DBP	A	97 a	93 a
8	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22 fl oz/a		7DBP	A	65 c	
8	MSO (DESTINY)	100 SL		1	% v/v	1 % v/v		7DBP	A		
8	AMS	100 SG		2	% w/w	17 lb/100 gal		7DBP	A		
9	SHARPEN	2.85 SC		0.0223	lb ai/a	1 fl oz/a		7DBP	A	0 a	0 a
9	PREFIX	5.29 EC		1.49	lb ai/a	2.25 pt/a		7DBP	A	97 a	97 a
9	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22 fl oz/a		7DBP	A	92 a	
9	MSO (DESTINY)	100 SL		1	% v/v	1 % v/v		7DBP	A		
9	AMS	100 SG		2	% w/w	17 lb/100 gal		7DBP	A		
10	SHARPEN	2.85 SC		0.0223	lb ai/a	1 fl oz/a		7DBP	A	0 a	0 a
10	BOUNDARY	6.5 EC		1.22	lb ai/a	1.5 pt/a		7DBP	A	98 a	97 a
10	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22 fl oz/a		7DBP	A	80 b	
10	MSO (DESTINY)	100 SL		1	% v/v	1 % v/v		7DBP	A		
10	AMS	100 SG		2	% w/w	17 lb/100 gal		7DBP	A		
11	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22 fl oz/a		7DBP	A	0 a	0 a
11	MSO (DESTINY)	100 SL		1	% v/v	1 % v/v		7DBP	A	30 c	60 b
11	AMS	100 SG		2	% w/w	17 lb/100 gal		7DBP	A	27 d	
12	2,4-D LV 4	3.8 EC		0.475	lb ai/a	16 fl oz/a		7DBP	A	0 a	0 a
12	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22 fl oz/a		7DBP	A	33 b	96 a
12	MSO (DESTINY)	100 SL		1	% v/v	1 % v/v		7DBP	A	67 c	
12	AMS	100 SG		2	% w/w	17 lb/100 gal		7DBP	A		
LSD (P=.05)							0.0	0.0	3.2	5.0	9.3
Replicate F							0.000	0.000	4.551	5.237	4.151
Replicate Prob(F)							1.0000	1.0000	0.0222	0.0138	0.0295
Treatment F							0.000	0.000	1011.279	286.476	82.698
Treatment Prob(F)							1.0000	1.0000	0.0001	0.0001	0.0001

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

Sharpen Preplant PPO Combinations.

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Pest Code	ERICA-HR	ERICA-HR	ERICA-HR	AMASS	AMASS	AMASS
Crop Code	06-04-10	06-19-10	07-10-10	06-04-10	06-19-10	07-10-10
Rating Date	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit						
Rating Timing						
Trt-Eval Interval	7 DA-A	14 DAP	35 DAP	7 DA-A	14 DAP	35 DAP

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 d	0 d	0 d	0 e	0 g
2	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	7DBP	A	99 a	99 a	99 a	98 ab	94 c	48 e
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
2	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	7DBP	A						
2	AMS	100	SG	2	% w/w	17	lb/100 gal	7DBP	A						
3	SHARPEN	2.85	SC	0.0445	lb ai/a	2	fl oz/a	7DBP	A	99 a	99 a	99 a	99 a	96 bc	73 d
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
3	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	7DBP	A						
3	AMS	100	SG	2	% w/w	17	lb/100 gal	7DBP	A						
4	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	7DBP	A	99 a	99 a	99 a	99 a	98 ab	96 a
4	SPARTAN 4F	4	SC	0.25	lb ai/a	8	fl oz/a	7DBP	A						
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
4	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	7DBP	A						
4	AMS	100	SG	2	% w/w	17	lb/100 gal	7DBP	A						
5	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	7DBP	A	98 a	99 a	99 a	99 a	99 a	96 a
5	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	7DBP	A						
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
5	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	7DBP	A						
5	AMS	100	SG	2	% w/w	17	lb/100 gal	7DBP	A						
6	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	7DBP	A	98 a	97 ab	99 a	99 a	99 a	97 a
6	VALOR XLT	40.3	WG			3.5	oz/a	7DBP	A						
6	VALOR SX	51	WG	0.0653	lb ai/a			7DBP	A						
6	CLASSIC	25	WG	0.0227	lb ai/a			7DBP	A						
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
6	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	7DBP	A						
6	AMS	100	SG	2	% w/w	17	lb/100 gal	7DBP	A						
7	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	7DBP	A	98 a	96 ab	92 ab	99 a	99 a	85 bc
7	AUTHORITY FIRST	70	WG	0.14	lb ai/a	3.2	oz/a	7DBP	A						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
7	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	7DBP	A						
7	AMS	100	SG	2	% w/w	17	lb/100 gal	7DBP	A						
8	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	7DBP	A	98 a	96 ab	92 ab	99 a	98 ab	97 a
8	AUTHORITY MTZ	45	WG	0.28	lb ai/a	10	oz/a	7DBP	A						
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
8	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	7DBP	A						
8	AMS	100	SG	2	% w/w	17	lb/100 gal	7DBP	A						
9	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	7DBP	A	98 a	99 a	99 a	99 a	99 a	93 ab
9	PREFIX	5.29	EC	1.49	lb ai/a	2.25	pt/a	7DBP	A						
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
9	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	7DBP	A						
9	AMS	100	SG	2	% w/w	17	lb/100 gal	7DBP	A						
10	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	7DBP	A	99 a	99 a	99 a	99 a	99 a	77 cd
10	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	7DBP	A						
10	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
10	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	7DBP	A						
10	AMS	100	SG	2	% w/w	17	lb/100 gal	7DBP	A						
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	25 c	70 c	60 c	94 c	86 d	20 f
11	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	7DBP	A						
11	AMS	100	SG	2	% w/w	17	lb/100 gal	7DBP	A						
12	2,4-D LV 4	3.8	EC	0.475	lb ai/a	16	fl oz/a	7DBP	A	37 b	93 b	86 b	96 bc	88 d	27 f
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
12	MSO (DESTINY)	100	SL	1	% v/v	1	% v/v	7DBP	A						
12	AMS	100	SG	2	% w/w	17	lb/100 gal	7DBP	A						

LSD (P=.05) 8.2 4.9 8.9 2.2 3.0 10.3

Replicate F	2.352	1.832	2.060	1.479	4.568	1.541
Replicate Prob(F)	0.1186	0.1837	0.1513	0.2497	0.0219	0.2365
Treatment F	167.805	298.040	92.522	1413.109	763.961	97.938
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)

Sharpen Preplant PPO Combinations.

Trial ID: 10-YRC-SharpPPO

Location: Young Res. Center

Trial Comments

1. Protocol: BASF; FMC, Valent, Syngenta.
2. Ratings: CI/WC at 14 and 35 DAP; rate soybean injury more often if injury is significant and persists.
3. Blanket burndown application of glyphosate (3.0 lbae/A) plus NIS (0.5% v/v) plus AMS solution (5% v/v) was applied 5-9-10.
Blanket POST application of Roundup Powermax (22 fl oz/A) plus N-Pak AMS (5% v/v) to be applied after the final rating.
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
AMASS = Amaranth species including AMATA (common waterhemp) and AMARE (redroot pigweed).
DAP = Days after planting.
5. Not harvested.