

Glyphosate plus Cobra Tank-Mixtures for Waterhemp Control.

Project Code: 07-50W-MS50 Location: Belleville Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 1-23-08

Objective:

Determine if tank-mixing Cobra with glyphosate can improve the consistency of waterhemp control.

- | Weed Code | Common Name | Scientific Name |
|-----------|-------------------------|------------------------|
| 1. | AMATA waterhemp, common | Amaranthus rudis Sauer |
| 2. | AMBTR ragweed, giant | Ambrosia trifida L. |

Crop 1:	GLXMA soybean	Variety:	Asgrow 4404 RR/STS
Planting Method:	Seeded	Planting Date:	6-3-07
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	27 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2006				
Field Prep./Maintenance:	N 0 LB/A, P205 0 LB/A, K20 100 LB/A				

Soil Name:	Weir	% OM:	2.2	pH:	6.5	CEC:	11
Texture:	Silt loam	Fert. Level:	P1: 97 LB/A, K: 296 LB/A				

APPLICATION DESCRIPTION

	A	B	C
Application Date:	6-4-07	6-27-07	7-11-07
Time of Day:	8:00	8:00	8:30
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	4-6"WH	2WA"B"
Applic. Placement:	BROSIOI	BROFOL	BROFOL
Air Temp., Unit:	70 F	78 F	72 F
% Relative Humidity:	92	92	92
Wind Velocity, Unit:	5-7 MPH	0 MPH	2-4 MPH
Dew Presence (Y/N):		Y	
Soil Moisture:	NORMAL	ABONOR	NORMAL
% Cloud Cover:	0	80	0

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	GLXMA NA	GLXMA V2	GLXMA V4
Height, Unit:	NA NA	4-6 IN	17 IN

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code:		AMATA	AMATA
Stage(leaves):		4-10	2-6
Height(inches):		4-8	1-4
Density:		High	Low
Weed 2 Code:		AMBTR	AMBTR
Stage(leaves):		6-8	2-8
Height(inches):		4-8	1-6
Density:		Medium	Low

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

NOTES:

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	GLXMA Injury Percent	GLXMA Injury Percent	AMATA Control Percent	AMATA Control Percent	AMBTR Control Percent	AMBTR Control Percent				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	14 DA-B	28 DA-B				
1	NONTREATED									0 d	0 c				
2	FIRSTRATE	84 WG		0.0315 lb ai/a		0.6 oz/a	PRE	A		0 d	0 c				
2	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a	4-6"WH	B		97 a	92 c				
2	AMS	100 DRY		2.5 lb ai/a		2.5 lb/a	4-6"WH	B		97 a	97 a				
3	FIRSTRATE	84 WG		0.0315 lb ai/a		0.6 oz/a	PRE	A		9 c	1 b				
3	COBRA	2 EC		0.0625 lb ai/a		4 fl oz/a	4-6"WH	B		99 a	98 a				
3	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a	4-6"WH	B		98 a	98 a				
3	AMS	100 DRY		2.5 lb ai/a		2.5 lb/a	4-6"WH	B		98 a	97 a				
4	FIRSTRATE	84 WG		0.0315 lb ai/a		0.6 oz/a	PRE	A		11 b	3 a				
4	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a	4-6"WH	B		99 a	98 a				
4	COBRA	2 EC		0.094 lb ai/a		6 fl oz/a	4-6"WH	B		98 a	98 a				
4	AMS	100 DRY		2.5 lb ai/a		2.5 lb/a	4-6"WH	B		98 a	98 a				
5	FIRSTRATE	84 WG		0.0315 lb ai/a		0.6 oz/a	PRE	A		16 a	3 a				
5	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a	4-6"WH	B		99 a	98 a				
5	COBRA	2 EC		0.125 lb ai/a		8 fl oz/a	4-6"WH	B		98 a	98 a				
5	AMS	100 DRY		2.5 lb ai/a		2.5 lb/a	4-6"WH	B		98 a	98 a				
6	FIRSTRATE	84 WG		0.0315 lb ai/a		0.6 oz/a	PRE	A		0 d	0 c				
6	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a	4-6"WH	B		98 a	88 d				
6	RESOURCE	0.86 EC		0.0134 lb ai/a		2 fl oz/a	4-6"WH	B		96 a	96 a				
6	AMS	100 DRY		2.5 lb ai/a		2.5 lb/a	4-6"WH	B		96 a	96 a				
7	FIRSTRATE	84 WG		0.0315 lb ai/a		0.6 oz/a	PRE	A		0 d	0 c				
7	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a	4-6"WH	B		97 a	99 a				
7	AMS	100 DRY		2.5 lb ai/a		2.5 lb/a	4-6"WH	B		98 a	98 a				
7	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a	2WA"B"	C		98 a	98 a				
7	AMS	100 DRY		2.5 lb ai/a		2.5 lb/a	2WA"B"	C		98 a	98 a				
8	FIRSTRATE	84 WG		0.0315 lb ai/a		0.6 oz/a	PRE	A		0 d	0 c				
8	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a	4-6"WH	B		99 a	94 b				
8	RESOURCE	0.86 EC		0.027 lb ai/a		4 fl oz/a	4-6"WH	B		97 a	96 a				
8	AMS	100 DRY		2.5 lb ai/a		2.5 lb/a	4-6"WH	B		96 a	96 a				
9	FIRSTRATE	84 WG		0.0315 lb ai/a		0.6 oz/a	PRE	A		0 d	0 c				
10	FIRSTRATE	84 WG		0.0315 lb ai/a		0.6 oz/a	PRE	A		0 d	0 c				
10	FLEXSTAR	1.88 EC		0.176 lb ai/a		12 fl oz/a	4-6"WH	B		98 a	98 a				
10	ROUNDUP ORIG MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a	4-6"WH	B		98 a	98 a				
10	AMS	100 DRY		2.5 lb ai/a		2.5 lb/a	4-6"WH	B		98 a	98 a				
LSD (P=.05)										1.6	0.6	1.8	2.5	5.8	3.5
Replicate F										0.435	1.000	0.269	0.203	0.532	0.411
Replicate Prob(F)										0.6536	0.3874	0.7671	0.8183	0.5965	0.6689
Treatment F										118.181	35.000	4619.256	2302.567	280.911	946.019
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)

Trial Comments

1. Protocol: Valent (MD64.04).
2. Ratings:CI/WC at 14 + 28 da POST.
3. DA-B = Days after 4-6"WH application.
 Ratings on 7-11-07 at 14 days after the 4-6"WH (B) application were also prior to the 2WA"B" (C) application and 37 days after the PRE (A) application.
 Ratings on 7-25-07 at 28 days after the 4-6"WH (B) application were also 14 days after the 2WA"B" (C) application and 51 days after the PRE (A) application.
4. Following the PRE application only 0.08 inches of rainfall was recorded during the next 20 days.