

Comparison of Deposition/AMS Premixes with Glyphosate.

01-52-E50

OBJECTIVE: Determine the efficacy of glyphosate on waterhemp when applied with various deposition/AMS spray additives.

SUMMARY: No soybean injury was observed from any treatment. The addition of a deposition agent or AMS premix to Roundup Ultra Max did not affect common waterhemp control at 14 or 56 days after treatment. The addition AMS at 1% w/w or Dryve to Roundup Ultra Max increased common waterhemp control slightly (4 to 5%) at 28 days after treatment. Soybean yield was similar in all herbicide treated plots.

HERBICIDE / ADJUVANTS

ROUNDUP ULTRA MAX 3.7 SL
AMS 100 DRY
AMS 20/10 100 DRY
AMS 2000 100 DRY
AMSOL PLUS 100 LIQ
ARRAY 100 DRY
BORDER XTRA 8L 100 LIQ
BORDER XTRA DF 100 DRY
DOUBLE DOWN 100 LIQ
DRYVE 100 DRY

WEEDS

foxtail, giant
waterhemp, common

CROP

soybean

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Comparison of Deposition/AMS Premixes with Glyphosate.

Project Code: 01-52-E50 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University**City State Zip Country:** Belleville IL 62221 USA
Trial Status: Final **Initiation Date:** 5-8-01**Objective:**

Determine the efficacy of glyphosate on waterhemp when applied with various deposition/AMS spray additives.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. AMATA	waterhemp, common	Amaranthus rudis Sauer

Crop 1:	GLXMA soybean	Variety:	B-T 371CR
Planting Method:	Seeded	Planting Date:	5-10-01
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	25 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2000				
Field Prep./Maintenance:	N 0 LB/A, P2O5 0 LB/A, K2O 150 LB/A				

Soil Name:	Weir	% OM:	1.9	pH:	7.1	CEC:	12
Texture:	Silt loam	Fert. Level:	P1: 97 LB/A, K: 282 LB/A				

APPLICATION DESCRIPTION

A

Application Date:	6-18-01
Time of Day:	10:30
Application Method:	Spray
Application Timing:	6"W
Applic. Placement:	BROFOL
Air Temp., Unit:	88 F
% Relative Humidity:	46
Wind Velocity, Unit:	2-5 MPH
Dew Presence (Y/N):	N
Soil Moisture:	BELNOR
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage:	GLXMA V3
Height, Unit:	4-6 IN

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code:	SETFA
Stage (leaves):	3-4
Height (inches):	4-8
Density:	High
Weed 2 Code:	AMATA
Stage (leaves):	6-10
Height (inches):	2-8
Density:	High

APPLICATION EQUIPMENT

A

Appl. Equipment: CO2 sprayer
Operating Pressure: 40 PSI
Nozzle Type: Flat fan
Nozzle Size: DG 110015
Boom Length, Unit: 7.5 FT
Spray Volume, Unit: 10 GPA

NOTES: HARVESTED 10-22-01, 2 ROWS X 22 FT.

Comparison of Deposition/AMS Premixes with Glyphosate.

Project Code: 01-52-E50 Location: Belleville Research Center

Weed Code	GLXMA	GLXMA	GLXMA	GLXMA	SETFA	SETFA	SETFA	AMATA	AMATA	AMATA
Crop Code	Yield	Injury	Injury	Injury	Control	Control	Control	Control	Control	Control
Rating Data Type	bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	10-22-01	7-2-01	7-16-01	8-13-01	7-2-01	7-16-01	8-13-01	7-2-01	7-16-01	8-13-01
Rating Date	14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A	14 DA-A
Trt-Eval Interval										

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	Yield	Injury	Injury	Injury	Control	Control	Control	Control	Control	Control	
1	NONTREATED									6	0	0	0	0	0	0	0	0	0	0
2	ROUNDUP ULTRA MAX	3.7	SL	0.375	LB AE/A	0.8	PT/A	6"W	A	48	0	0	0	87	80	70	88	69	62	
3	ROUNDUP ULTRA MAX 3 AMS	3.7 100	SL DRY	0.375 1.02	LB AE/A % W/W	0.8 8.5	PT/A LB/100 GAL	6"W 6"W	A A	47	0	0	0	89	85	73	88	76	65	
4	ROUNDUP ULTRA MAX 4 AMS	3.7 100	SL DRY	0.375 2.04	LB AE/A % W/W	0.8 17	PT/A LB/100 GAL	6"W 6"W	A A	47	0	0	0	89	84	73	91	72	64	
5	ROUNDUP ULTRA MAX 5 AMS 2000	3.7 100	SL DRY	0.375 2.04	LB AE/A % W/W	0.8 17	PT/A LB/100 GAL	6"W 6"W	A A	48	0	0	0	89	85	73	88	73	60	
6	ROUNDUP ULTRA MAX 6 AMS 20/10	3.7 100	SL DRY	0.375 1.2	LB AE/A % W/W	0.8 10	PT/A LB/100 GAL	6"W 6"W	A A	49	0	0	0	91	85	72	91	73	63	
7	ROUNDUP ULTRA MAX 7 AMSOL PLUS	3.7 100	SL LIQ	0.375 5.0	LB AE/A % V/V	0.8 5	PT/A GAL/100 GAL	6"W 6"W	A A	44	0	0	0	90	83	72	89	68	63	
8	ROUNDUP ULTRA MAX 8 DOUBLE DOWN	3.7 100	SL LIQ	0.375 2.5	LB AE/A % V/V	0.8 2.5	PT/A GAL/100 GAL	6"W 6"W	A A	48	0	0	0	90	84	72	91	74	65	
9	ROUNDUP ULTRA MAX 9 ARRAY	3.7 100	SL DRY	0.375 1.08	LB AE/A % W/W	0.8 9	PT/A LB/100 GAL	6"W 6"W	A A	47	0	0	0	90	86	73	89	73	68	
10	ROUNDUP ULTRA MAX 10 DRYVE	3.7 100	SL DRY	0.375 1.08	LB AE/A % W/W	0.8 9	PT/A LB/100 GAL	6"W 6"W	A A	49	0	0	0	90	86	73	90	75	62	
11	ROUNDUP ULTRA MAX 11 BORDER XTRA 8L	3.7 100	SL LIQ	0.375 2.5	LB AE/A % V/V	0.8 2.5	PT/A %V/V	6"W 6"W	A A	47	0	0	0	90	84	68	89	70	58	
12	ROUNDUP ULTRA MAX 12 BORDER XTRA DF	3.7 100	SL DRY	0.375 2.16	LB AE/A % W/W	0.8 18	PT/A LB/100 GAL	6"W 6"W	A A	48	0	0	0	91	86	73	89	70	62	
13	NONTREATED									2	0	0	0	0	0	0	0	0	0	0
LSD (P=.05)										5.7	0.0	0.0	0.0	3.1	3.5	5.2	2.7	4.1	5.2	
Replicate F										6.766	0.000	0.000	0.000	0.935	1.356	5.521	1.000	1.455	0.743	
Replicate Prob(F)										0.0047	1.0000	1.0000	1.0000	0.4065	0.2768	0.0107	0.3827	0.2533	0.4862	
Treatment F										71.796	0.000	0.000	0.000	1003.121	716.201	232.124	1278.762	366.872	175.700	
Treatment Prob(F)										0.0001	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	

Comparison of Deposition/AMS Premixes with Glyphosate.

Project Code: 01-52-E50 Location: Belleville Research Center

Trial Comments

1. Protocol: United Suppliers (trt 1-9); Precision (trt 11 + 12).
2. DA-A = days after 6"W application.