

Comparison of "Full Load" Glyphosate Formulations in Roundup Ready
Corn - Waterhemp.

Project Code: 03-52-M70 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final **Updated:** 9-3-03

Objective:

Compare the performance of glyphosate formulations that do not require additional surfactant (full load) in Roundup Ready soybean.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. AMBTR	ragweed, giant	Ambrosia trifida L.
3. AMATA	waterhemp, common	Amaranthus rudis Sauer

Crop 1:	ZEAMX corn, field	Variety:	DKC 60-17 RR
Planting Method:	Seeded	Planting Date:	6-5-03
Rate:	28000 S/A	Depth:	1.5 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:	GLXMA, 2002				

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K20 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:	7-2-03
Time of Day:	9:30
Application Method:	Spray
Application Timing:	6-8"W
Applic. Placement:	BROFOL
Air Temp., Unit:	74
% Relative Humidity:	80
Wind Velocity, Unit:	0 MPH

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage:	ZEAMX V5
Height, Unit:	14 IN

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code:	SETFA
Stage(leaves):	4-8
Height(inches):	6-12
Density:	High
Weed 2 Code:	AMBTR
Stage(leaves):	8-12
Height(inches):	6-14
Density:	Medium
Weed 3 Code:	AMATA
Stage(leaves):	6-10
Height(inches):	4-8
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:

Not harvested.

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Weed Code		SETFA	SETFA	AMBTR	AMBTR	AMATA	AMATA
Crop Code		GLXMA					
Rating Data Type		Injury	Control	Control	Control	Control	Control
Rating Unit		Percent	Percent	Percent	Percent	Percent	Percent
Rating Date		7-16-03	7-16-03	7-30-03	7-16-03	7-30-03	7-16-03
Trt-Eval Interval		14 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code							
1	NONTREATED									0	0	0	0	0	0	0
2	ROUNDUP ULTRA MAX	3.7	SL	0.188	LB AE/A	6.5	FL OZ/A	6"W	A	0	83	82	27	20	60	43
3	ROUNDUP W-MAX	4.5	SL	0.188	LB AE/A	5.35	FL OZ/A	6"W	A	0	90	87	40	27	57	40
4	TOUCHDOWN	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	85	80	30	30	50	40
5	TOUCHDOWN TOTAL	4.17	SC	0.188	LB AE/A	5.77	FL OZ/A	6"W	A	0	85	82	37	27	50	43
6	GLYPHOMAX PLUS	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	92	90	47	43	63	57
7	GLYPHOMAX HC	4	SL	0.188	LB AE/A	6	FL OZ/A	6"W	A	0	83	80	30	27	47	37
8	CLEAROUT 41 PLUS	3	L	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	85	77	33	27	47	40
9	GLY STAR PLUS	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	83	75	23	20	47	37
10	ROUNDUP ULTRA MAX	3.7	SL	0.188	LB AE/A	6.5	FL OZ/A	6"W	A	0	93	87	43	43	60	50
10	AMS	100	DRY	2.0	% W/W	2	% W/W	6"W	A							
11	ROUNDUP W-MAX	4.5	SL	0.188	LB AE/A	5.35	FL OZ/A	6"W	A	0	95	90	47	50	67	60
11	AMS	100	DRY	2.0	% W/W	2	% W/W	6"W	A							
12	TOUCHDOWN	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	92	90	37	33	50	47
12	AMS	100	DRY	2.0	% W/W	2	% W/W	6"W	A							
13	TOUCHDOWN TOTAL	4.17	SC	0.188	LB AE/A	5.77	FL OZ/A	6"W	A	0	92	87	30	27	53	50
13	AMS	100	DRY	2.0	% W/W	2	% W/W	6"W	A							
14	GLYPHOMAX PLUS	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	90	88	43	40	50	55
14	AMS	100	DRY	2.0	% W/W	2	% W/W	6"W	A							
15	GLYPHOMAX HC	4	SL	0.188	LB AE/A	6	FL OZ/A	6"W	A	0	93	85	50	40	65	53
15	AMS	100	DRY	2.0	% W/W	2	% W/W	6"W	A							
16	CLEAROUT 41 PLUS	3	L	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	90	92	47	50	63	57
16	AMS	100	DRY	2.0	% W/W	2	% W/W	6"W	A							
17	GLY STAR PLUS	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	93	87	47	50	67	70
17	AMS	100	DRY	2.0	% W/W	2	% W/W	6"W	A							
18	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	FL OZ/A	6"W	A	0	99	99	93	95	99	99
LSD (P=.05)										0.0	7.1	9.3	11.2	16.3	14.1	13.3

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code
Replicate F		0.000		1.000		1.440		11.876	4.879
Replicate Prob(F)		1.0000		0.3784		0.2510		0.0001	0.0137
Treatment F		0.000		77.643		42.430		21.724	11.944
Treatment Prob(F)		1.0000		0.0001		0.0001		0.0001	0.0001

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Trial Comments

1. Protocol: SIU (BGY).
2. Ratings: CI and WC 14 and 28 DAT.
3. DA-A = days after 6-8"W application.