

Comparison of "Full Load" Glyphosate Formulations in Roundup Ready Soybean.

Project Code: 03-21S-MME60 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. XANST	cocklebur, common	Xanthium strumarium L.
3. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
4. ABUTH	velvetleaf	Abutilon theophrasti Medicus
5. IPOHE	morningglory, ivyleaf	Ipomoea hederacea (L.) Jacq.

Crop 1:	GLXMA soybean	Variety:	Asgrow 4403 RR
Planting Method:	Seeded	Planting Date:	6-5-03
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	30 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2002				

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Name:	Ebbert	% OM:	1.4	pH:	5.7	CEC:	14
Texture:	Silt loam	Fert. Level:	P1: 97 LB/A, K: 291 LB/A				

APPLICATION DESCRIPTION

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Application Date:	7-9-03
Time of Day:	6:30
Application Method:	Spray
Application Timing:	6-8"W
Applic. Placement:	BROFOL
Air Temp., Unit:	92 F
% Relative Humidity:	44
Wind Velocity, Unit:	0 MPH
Soil Moisture:	NORMAL
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

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Crop 1 Code, Stage:	GLXMA V2
Height, Unit:	5 IN

WEED STAGE AT EACH APPLICATION

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Weed 1 Code:	SETFA
Stage(leaves):	3-6
Height(inches):	4-8
Density:	High
Weed 2 Code:	XANST
Stage(leaves):	3-5
Height(inches):	3-8
Density:	Medium
Weed 3 Code:	AMBEL
Stage(leaves):	4-6
Height(inches):	4-6
Density:	Low

Weed 4 Code: ABUTH
Stage(leaves): 2-5
Height(inches): 4-6
Density: Low

Weed 5 Code: IPOHE
Stage(leaves): 2-5
Height(inches): 3-6
Density: Low

APPLICATION EQUIPMENT

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

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA Injury Percent 7-23-03 14 DA-A	GLXMA Injury Percent 8-6-03 28 DA-A	SETFA Control Percent 7-23-03 14 DA-A	SETFA Control Percent 8-6-03 28 DA-A	XANST Control Percent 7-23-03 14 DA-A	XANST Control Percent 8-6-03 28 DA-A	AMBEL Control Percent 7-23-03 14 DA-A	AMBEL Control Percent 8-6-03 28 DA-A	ABUTH Control Percent 7-23-03 14 DA-A	ABUTH Control Percent 8-6-03 28 DA-A	IPOHE Control Percent 7-23-03 14 DA-A	IPOHE Control Percent 8-6-03 28 DA-A
1	NONTREATED									0	0	0	0	0	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	0	82	77	57	53	53	47	27	20	33	30
3	ROUNDUP W-MAX	4.5	SL	0.188	LB AE/A	5.35	FL OZ/A	6"W	A	0	0	83	78	63	60	50	45	30	32	30	28
4	TOUCHDOWN	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	0	81	75	57	53	50	50	28	27	30	25
5	TOUCHDOWN TOTAL	4.17	SC	0.188	LB AE/A	5.77	FL OZ/A	6"W	A	0	0	84	75	63	58	50	47	33	28	30	25
6	GLYPHOMAX PLUS	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	0	85	84	65	60	57	55	40	37	35	32
7	GLYPHOMAX HC	4	SL	0.188	LB AE/A	6	FL OZ/A	6"W	A	0	0	82	82	62	57	45	42	23	23	25	23
8	CLEAROUT 41 PLUS	3	L	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	0	84	80	58	55	43	38	23	20	28	25
9	GLY STAR PLUS	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	0	77	72	53	48	43	40	27	22	30	27
10	ROUNDUP ULTRA MAX AMS	3.7	SL	0.188	LB AE/A	6.5	FL OZ/A	6"W	A	0	0	96	95	91	88	55	57	45	43	40	38
		100	DRY	2.0	% W/W	2	% W/W	6"W	A												
11	ROUNDUP W-MAX AMS	4.5	SL	0.188	LB AE/A	5.35	FL OZ/A	6"W	A	0	0	97	95	92	92	62	65	52	53	40	42
		100	DRY	2.0	% W/W	2	% W/W	6"W	A												
12	TOUCHDOWN AMS	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	0	94	93	85	81	68	72	45	42	42	40
		100	DRY	2.0	% W/W	2	% W/W	6"W	A												
13	TOUCHDOWN TOTAL AMS	4.17	SC	0.188	LB AE/A	5.77	FL OZ/A	6"W	A	0	0	96	96	93	93	75	75	63	62	42	40
		100	DRY	2.0	% W/W	2	% W/W	6"W	A												
14	GLYPHOMAX PLUS AMS	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	0	96	97	96	97	65	67	50	52	42	42
		100	DRY	2.0	% W/W	2	% W/W	6"W	A												
15	GLYPHOMAX HC AMS	4	SL	0.188	LB AE/A	6	FL OZ/A	6"W	A	0	0	96	97	96	96	67	72	62	63	43	40
		100	DRY	2.0	% W/W	2	% W/W	6"W	A												
16	CLEAROUT 41 PLUS AMS	3	L	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	0	97	97	80	80	60	63	50	50	40	40
		100	DRY	2.0	% W/W	2	% W/W	6"W	A												
17	GLY STAR PLUS AMS	3	SL	0.188	LB AE/A	8	FL OZ/A	6"W	A	0	0	96	95	89	91	63	60	52	52	42	42
		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	0	99	99	99	99	96	95	55	57	43	42
LSD (P=.05)										0.0	0.0	5.6	5.9	11.1	11.6	13.2	14.7	10.0	12.0	10.4	9.7

Weed Code			SETFA	SETFA	XANST	XANST	AMBEL	AMBEL	ABUTH	ABUTH	IPOHE	IPOHE
Crop Code	GLXMA	GLXMA										
Rating Data Type	Injury	Injury	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	7-23-03	8-6-03	7-23-03	8-6-03	7-23-03	8-6-03	7-23-03	8-6-03	7-23-03	8-6-03	7-23-03	8-6-03
Trt-Eval Interval	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code										
	Replicate F			0.000		0.000				0.155	1.692	1.495	2.512	2.518	4.403	1.880	6.427	2.031	0.124
	Replicate Prob(F)			1.0000		1.0000				0.8573	0.1993	0.2386	0.0961	0.0955	0.0199	0.1681	0.0043	0.1468	0.8837
	Treatment F			0.000		0.000				134.701	124.960	40.473	40.047	17.248	15.550	22.138	17.609	8.384	10.307
	Treatment Prob(F)			1.0000		1.0000				0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	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.