

Gly-N-Go Study.

Trial ID: 09-5B

Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 06-30-09

Objectives: Evaluate a dry formulation of glyphosate and its adjuvant system
 for crop response and weed control.

Crop 1: GLXMA Soybean Variety: AG 4404 Description: RR/STS
 Planting Method: SEEDS Planting Date: 06-30-09
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: GGGAN grasses, annual
 Pest 2 Type: W Code: CYPES Cyperus esculentus L. nutsedge, yellow
 Pest 3 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf
 Pest 4 Type: W Code: XANST Xanthium strumarium L. cocklebur, common
 Pest 5 Type: W Code: AMBEL Ambrosia artemisiifolia L. ragweed, common
 Pest 6 Type: W Code: IPOHE Ipomoea hederacea (L.) Jacq. morningglory, ivyleaf

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 26 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. TRAZW 2008

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

% OM: 1.6 Texture: SILT LOAM
 pH: 6.1 Soil Name: WINFIELD
 CEC: 7 Fert. Level: P1 93 LB/A, K 429 LB/A

Application Description

A

Application Date: 08-03-09
 Time of Day: 9:45
 Application Method: Spray
 Application Timing: 8"W
 Application Placement: BROFOL
 Applied By: NVH
 Air Temperature, Unit: 75 F
 % Relative Humidity: 92
 Wind Velocity, Unit: 5 MPH
 Wind Direction: S
 Dew Presence (Y/N): N
 Soil Moisture: NORMAL
 % Cloud Cover: 35

Crop stage at application: 08-03-09 V4-V5
 Height Min, Max (inch): 8 10

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Pest Stage At Each Application

Application Date: 08-03-09

Weed Code: GGGAN

Stage Majority (leaves): 6

Stage Min, Max: 3 8

Height Majority: 8 IN

Height Min, Max: 4 10

Density, Unit: 0.1 FT2

Weed Code: CYPES

Stage Majority (leaves): 6

Stage Min, Max: 3 8

Height Majority: 8 IN

Height Min, Max: 6 14

Density, Unit: 0.8 FT2

Weed Code: ABUTH

Stage Majority (leaves): 2

Stage Min, Max: 1 3

Height Majority: 3 IN

Height Min, Max: 1 4

Density, Unit: 3 FT2

Weed Code: XANST

Stage Majority (leaves): 5

Stage Min, Max: 2 8

Height Majority: 7 IN

Height Min, Max: 3 10

Density, Unit: 0.3 FT2

Weed Code: AMBEL

Stage Majority (leaves): 6

Stage Min, Max: 4 8

Height Majority: 6 IN

Height Min, Max: 2 8

Density, Unit: 0.5 FT2

Weed Code: IPOHE

Stage Majority (leaves): 7

Stage Min, Max: 4 13

Height Majority: 6 IN

Height Min, Max: 4 9

Density, Unit: 0.01 FT2

Application Equipment

Appl. Equipment: CO2 sprayer

Operating Pressure: 30 PSI

Nozzle Type: Flat fan

Nozzle Size: XR 8002

Boom Length, Unit: 7.5 FT

Spray Volume, Unit: 15 GPA

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Pest Code								
Crop Code								
Rating Date	GLXMA	GLXMA	GGGAN	GGGAN	CYPES	CYPES		
Rating Data Type	08-17-09	08-31-09	08-17-09	08-31-09	08-17-09	08-31-09		
Rating Unit	Injury	Injury	Control	Control	Control	Control		
Rating Timing	Percent	Percent	Percent	Percent	Percent	Percent		
Trt-Eval Interval	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A		

Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl
No.	Name	Conc	Type	Rate	Rate	Rate	Stage	Code

LSD (P=.05)		0.0	0.0	0.8	0.8	6.2	8.8
Replicate F		0.000	0.000	2.235	1.505	3.598	4.236
Replicate Prob(F)		1.0000	1.0000	0.1235	0.2373	0.0389	0.0233
Treatment F		0.000	0.000	7833.498	6942.406	17.703	27.753
Treatment Prob(F)		1.0000	1.0000	0.0001	0.0001	0.0001	0.0001

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

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									ABUTH	ABUTH	XANST	XANST	AMBEL	AMBEL
Pest Code									08-17-09	08-31-09	08-17-09	08-31-09	08-17-09	08-31-09
Crop Code									Control	Control	Control	Control	Control	Control
Rating Date									Percent	Percent	Percent	Percent	Percent	Percent
Rating Data Type														
Rating Unit														
Rating Timing														
Trt-Eval Interval									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	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	DEIONIZED WATER									78 ab	72 de	99 a	99 a	98 ab 99 a
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					
1	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A					
2	DEIONIZED WATER									82 a	87 ab	99 a	99 a	99 a 99 a
2	GLY	95	SG	0.8	lb ai/a	13.5	oz/a	8"W	A					
2	N GO	100	SL	1	% v/v	1	% v/v	8"W	A					
3	DEIONIZED WATER									66 de	63 f	99 a	99 a	96 ab 98 ab
3	ROUNDUP POWERMAX	4.5	SL	0.49	lb ae/a	14	fl oz/a	8"W	A					
3	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A					
3	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A					
4	DEIONIZED WATER									75 bc	78 cd	99 a	99 a	99 a 99 a
4	GLY	95	SG	0.53	lb ai/a	8.9	oz/a	8"W	A					
4	N GO	100	SL	1	% v/v	1	% v/v	8"W	A					
5	DEIONIZED WATER									44 hi	45 g	99 a	99 a	81 de 89 de
5	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	8"W	A					
5	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A					
5	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A					
6	DEIONIZED WATER									48 h	47 g	99 a	99 a	91 bc 96 abc
6	BUCCANEER PLUS	3	SL	0.28	lb ae/a	12	fl oz/a	8"W	A					
6	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A					
6	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A					
7	DEIONIZED WATER									43 hi	43 g	98 b	98 b	83 de 90 de
7	GLY	95	SG	0.3	lb ai/a	5.05	oz/a	8"W	A					
7	N GO	100	SL	0.5	% v/v	0.5	% v/v	8"W	A					
8	DEIONIZED WATER									58 fg	62 f	99 a	99 a	85 cd 93 bcd
8	GLY	95	SG	0.3	lb ai/a	5.05	oz/a	8"W	A					
8	N GO	100	SL	1	% v/v	1	% v/v	8"W	A					
9	HARD WATER (1000 PPM)									72 cd	78 cd	99 a	99 a	96 ab 98 ab
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					
9	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A					
10	HARD WATER (1000 PPM)									83 a	94 a	99 a	99 a	99 a 99 a
10	GLY	95	SG	0.8	lb ai/a	13.5	oz/a	8"W	A					
10	N GO	100	SL	1	% v/v	1	% v/v	8"W	A					
11	HARD WATER (1000 PPM)									64 ef	61 f	99 a	99 a	98 ab 99 a
11	ROUNDUP POWERMAX	4.5	SL	0.49	lb ae/a	14	fl oz/a	8"W	A					
11	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A					
11	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A					
12	HARD WATER (1000 PPM)									74 bc	85 bc	99 a	99 a	98 ab 98 a
12	GLY	95	SG	0.53	lb ai/a	8.9	oz/a	8"W	A					
12	N GO	100	SL	1	% v/v	1	% v/v	8"W	A					
13	HARD WATER (1000 PPM)									42 i	43 g	99 a	99 a	80 de 92 cd
13	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	8"W	A					
13	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A					
13	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A					
14	HARD WATER (1000 PPM)									40 i	48 g	96 c	98 c	70 f 87 e
14	BUCCANEER PLUS	3	SL	0.28	lb ae/a	12	fl oz/a	8"W	A					
14	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A					
14	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A					
15	HARD WATER (1000 PPM)									45 hi	45 g	98 b	98 bc	77 ef 87 e
15	GLY	95	SG	0.3	lb ai/a	5.05	oz/a	8"W	A					
15	N GO	100	SL	0.5	% v/v	0.5	% v/v	8"W	A					
16	HARD WATER (1000 PPM)									57 g	66 ef	99 a	99 a	94 ab 96 ab
16	GLY	95	SG	0.3	lb ai/a	5.05	oz/a	8"W	A					
16	N GO	100	SL	1	% v/v	1	% v/v	8"W	A					
17	NONTREATED									0 j	0 h	0 d	0 d	0 g 0 f

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Pest Code	ABUTH	ABUTH	XANST	XANST	AMBEL	AMBEL
Crop Code						
Rating Date	08-17-09	08-31-09	08-17-09	08-31-09	08-17-09	08-31-09
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing						
Trt-Eval Interval	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 Rate	Rate Unit	Other Rate	Other Rate	Unit	Growth Stage	Appl Code
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LSD (P=.05)				6.0	7.5	1.2			0.7	7.4	4.4
Replicate F				0.172	2.919	0.653			1.134	5.900	2.930
Replicate Prob(F)				0.8429	0.0685	0.5272			0.3344	0.0066	0.0679
Treatment F				103.285	76.104	3579.633			11074.096	86.234	231.414
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)

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Location: Belleville Res. Center

Pest Code		IPOHE	IPOHE
Crop Code			
Rating Date		08-17-09	08-31-09
Rating Data Type		Control	Control
Rating Unit		Percent	Percent
Rating Timing			
Trt-Eval Interval		14 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
1	DEIONIZED WATER									55 bcd	65 a-d
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A		
1	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A		
2	DEIONIZED WATER									68 a	74 a
2	GLY	95	SG	0.8	lb ai/a	13.5	oz/a	8"W	A		
2	N GO	100	SL	1	% v/v	1	% v/v	8"W	A		
3	DEIONIZED WATER									50 c-g	60 c-g
3	ROUNDUP POWERMAX	4.5	SL	0.49	lb ae/a	14	fl oz/a	8"W	A		
3	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A		
3	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A		
4	DEIONIZED WATER									60 b	66 abc
4	GLY	95	SG	0.53	lb ai/a	8.9	oz/a	8"W	A		
4	N GO	100	SL	1	% v/v	1	% v/v	8"W	A		
5	DEIONIZED WATER									43 gh	50 h
5	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	8"W	A		
5	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A		
5	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A		
6	DEIONIZED WATER									45 fgh	53 fgh
6	BUCCANEER PLUS	3	SL	0.28	lb ae/a	12	fl oz/a	8"W	A		
6	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A		
6	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A		
7	DEIONIZED WATER									47 e-h	55 e-h
7	GLY	95	SG	0.3	lb ai/a	5.05	oz/a	8"W	A		
7	N GO	100	SL	0.5	% v/v	0.5	% v/v	8"W	A		
8	DEIONIZED WATER									48 d-g	56 d-h
8	GLY	95	SG	0.3	lb ai/a	5.05	oz/a	8"W	A		
8	N GO	100	SL	1	% v/v	1	% v/v	8"W	A		
9	HARD WATER (1000 PPM)									57 bc	68 abc
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A		
9	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A		
10	HARD WATER (1000 PPM)									57 bc	72 ab
10	GLY	95	SG	0.8	lb ai/a	13.5	oz/a	8"W	A		
10	N GO	100	SL	1	% v/v	1	% v/v	8"W	A		
11	HARD WATER (1000 PPM)									52 c-f	62 c-f
11	ROUNDUP POWERMAX	4.5	SL	0.49	lb ae/a	14	fl oz/a	8"W	A		
11	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A		
11	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A		
12	HARD WATER (1000 PPM)									53 b-e	63 b-e
12	GLY	95	SG	0.53	lb ai/a	8.9	oz/a	8"W	A		
12	N GO	100	SL	1	% v/v	1	% v/v	8"W	A		
13	HARD WATER (1000 PPM)									48 d-g	50 h
13	ROUNDUP POWERMAX	4.5	SL	0.28	lb ae/a	8	fl oz/a	8"W	A		
13	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A		
13	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A		
14	HARD WATER (1000 PPM)									40 h	52 gh
14	BUCCANEER PLUS	3	SL	0.28	lb ae/a	12	fl oz/a	8"W	A		
14	NIS	100	SL	0.25	% v/v	0.25	% v/v	8"W	A		
14	LIQUID AMS	100	SL	1	% v/v	1	% v/v	8"W	A		
15	HARD WATER (1000 PPM)									40 h	55 e-h
15	GLY	95	SG	0.3	lb ai/a	5.05	oz/a	8"W	A		
15	N GO	100	SL	0.5	% v/v	0.5	% v/v	8"W	A		
16	HARD WATER (1000 PPM)									47 e-h	65 a-d
16	GLY	95	SG	0.3	lb ai/a	5.05	oz/a	8"W	A		
16	N GO	100	SL	1	% v/v	1	% v/v	8"W	A		
17	NONTREATED									0 i	0 i

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Location: Belleville Res. Center

Pest Code		IPOHE	IPOHE
Crop Code			
Rating Date		08-17-09	08-31-09
Rating Data Type		Control	Control
Rating Unit		Percent	Percent
Rating Timing			
Trt-Eval Interval		14 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code
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LSD (P=.05)									6.9	9.6
Replicate F									0.339	0.078
Replicate Prob(F)									0.7149	0.9251
Treatment F									35.325	24.146
Treatment Prob(F)									0.0001	0.0001

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

Trial Comments

1. Protocol: MEY.
2. Ratings: CI/WC at 14 + 28 DAT.
3. Mixing instructions: Use DI water and hard water, see treatment list
4. GGGAN = Annual grasses including SETFA (giant foxtail) and PANDI (fall panicum).
5. Not harvested.