

Glyphosate plus Ultra Blazer Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-BlazerAdj
 Location: De Soto, IL

Investigator: Bryan Young

General Trial Information	
Study Director: Bryan Young	Title: Professor
Investigator: Bryan Young	Title: Professor
Trial Status: F - one-year/final	
Initiation Date: 4-29-12	
Trial Location	
City: De Soto	
State/Prov.: IL	
Postal Code: 62924	
Country: USA	

Objectives: Evaluate the efficacy of experimental adjuvants for combinations of Touchdown HiTech plus Ultra Blazer on glyphosate-resistant waterhemp.

Personnel	
Study Director: Bryan Young	Title: Professor
Investigator: Bryan Young	Title: Professor
Affiliation: Southern Illinois University	
Address: 1205 Lincoln Drive - AG 176 - MC 4415	
Location: Carbondale IL	
Postal Code: 62901	E-mail: bgyoung@siu.edu
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Crop Description	
Crop 1: GLXMA Glycine max Soybean	Description: RR2Y
Variety: AG3832	Planting Date: 4-29-12
BBCH Scale: BSOY	Rate, Unit: 155000 S/A
Planting Method: SEEDED Seeded	
Depth, Unit: 2 IN	
Row Spacing, Unit: 30 IN	

Pest Description	
Pest 1 Type: W	Code: AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common	
Description: glyphosate-resistant waterhemp	

Site and Design	
Plot Width, Unit: 10 FT	Site Type: FIELD field
Plot Length, Unit: 30 FT	
Plot Area, Unit: 300 FT2	Tillage Type: REDTIL reduced-till
Replications: 3	Study Design: RACOB L Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance	
No.	Maintenance Treatment Name
1.	N 27 LB/A, P205 69 LB/A, K20 90 LB/A

Soil Description		
% Sand: 15.4	% OM: 2.15	
% Silt: 64.7	pH: 6.9	
% Clay: 19.9	CEC: 12.4	
Texture: SIL SILT LOAM		
Soil Name: OKAW		
Additional Measured Elements		
Element	Quantity	Unit
P1	94	LB/A
K	468	LB/A

Moisture and Weather Conditions	
Overall Moisture Conditions:	BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810)	Distance, Unit: 1.5 MI

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Application Description

	A
Application Date:	6-2-12
Time of Day:	8:00
Application Method:	Spray
Application Timing:	6-8"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	60 F
% Relative Humidity:	70
Wind Velocity, Unit:	1 MPH
Wind Direction:	SW
Dew Presence (Y/N):	Y yes
Soil Temperature, Unit:	64 F
Soil Moisture:	BELNOR
% Cloud Cover:	95
Next Rain Occurred On:	6-4-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	V3
Stage Minimum, Percent:	V2
Stage Maximum, Percent:	V3
Height, Unit:	8 IN
Height Minimum, Maximum:	6 8

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	10
Stage Minimum, Percent:	2
Stage Maximum, Percent:	20
Height, Unit:	5 IN
Height Minimum, Maximum:	0.5 16
Density, Unit:	20 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Southern Illinois University

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							GLXMA 6-16-12 Injury Percent	GLXMA 6-30-12 Injury Percent	AMATA-HR 6-16-12 Control Percent	AMATA-HR 6-30-12 Control Percent		
							14 DA-A	28 DA-A	14 DA-A	28 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	TOUCHDOWN HI-TECH ULTRA BLAZER	5 SL 2 EC		0.56 lb ae/a 0.25 lb ai/a	14.3 fl oz/a 1 pt/a		6-8"W 6-8"W	A A	7 c	4 abc	32 e	60 d
2	TOUCHDOWN HI-TECH ULTRA BLAZER N-PAK AMS	5 SL 2 EC 100 SL		0.56 lb ae/a 0.25 lb ai/a 2.5 % v/v	14.3 fl oz/a 1 pt/a 2.5 % v/v		6-8"W 6-8"W 6-8"W	A A A	7 c	3 bc	33 de	59 d
3	TOUCHDOWN HI-TECH ULTRA BLAZER CLASS ACT NG	5 SL 2 EC 100 SL		0.56 lb ae/a 0.25 lb ai/a 2.5 % v/v	14.3 fl oz/a 1 pt/a 2.5 % v/v		6-8"W 6-8"W 6-8"W	A A A	12 ab	5 ab	42 bcd	71 ab
4	TOUCHDOWN HI-TECH ULTRA BLAZER CLASS ACT NG AG 02013	5 SL 2 EC 100 SL 100 SL		0.56 lb ae/a 0.25 lb ai/a 2.5 % v/v 4 fl oz/a	14.3 fl oz/a 1 pt/a 2.5 % v/v 4 fl oz/a		6-8"W 6-8"W 6-8"W 6-8"W	A A A A	11 b	3 c	43 bc	70 ab
5	TOUCHDOWN HI-TECH ULTRA BLAZER AG 8034	5 SL 2 EC 100 SL		0.56 lb ae/a 0.25 lb ai/a 2 % v/v	14.3 fl oz/a 1 pt/a 2 % v/v		6-8"W 6-8"W 6-8"W	A A A	10 b	3 c	40 cde	70 ab
6	TOUCHDOWN HI-TECH ULTRA BLAZER AG 8034 AG 02013	5 SL 2 EC 100 SL 100 SL		0.56 lb ae/a 0.25 lb ai/a 2 % v/v 4 fl oz/a	14.3 fl oz/a 1 pt/a 2 % v/v 4 fl oz/a		6-8"W 6-8"W 6-8"W 6-8"W	A A A A	11 b	4 abc	41 cd	69 abc
7	TOUCHDOWN HI-TECH ULTRA BLAZER SUPERB HC AG 8034	5 SL 2 EC 100 SL 100 SL		0.56 lb ae/a 0.25 lb ai/a 1 pt/a 2 % v/v	14.3 fl oz/a 1 pt/a 0.83 % v/v 2 % v/v		6-8"W 6-8"W 6-8"W 6-8"W	A A A A	11 b	4 abc	54 a	72 a
8	TOUCHDOWN HI-TECH ULTRA BLAZER SUPERB HC AG 8034	5 SL 2 EC 100 SL 100 SL		0.56 lb ae/a 0.25 lb ai/a 0.5 % v/v 2 % v/v	14.3 fl oz/a 1 pt/a 0.5 % v/v 2 % v/v		6-8"W 6-8"W 6-8"W 6-8"W	A A A A	12 ab	5 ab	42 bcd	66 bc
9	TOUCHDOWN HI-TECH ULTRA BLAZER SUPERB HC AG 8034 INTERLOCK	5 SL 2 EC 100 SL 100 SL 100 SL		0.56 lb ae/a 0.25 lb ai/a 0.5 % v/v 2 % v/v 4 fl oz/a	14.3 fl oz/a 1 pt/a 0.5 % v/v 2 % v/v 4 fl oz/a		6-8"W 6-8"W 6-8"W 6-8"W 6-8"W	A A A A A	11 b	4 abc	37 cde	68 abc
10	TOUCHDOWN HI-TECH ULTRA BLAZER DESTINY HC AG 8034	5 SL 2 EC 100 SL 100 SL		0.56 lb ae/a 0.25 lb ai/a 1 pt/a 2 % v/v	14.3 fl oz/a 1 pt/a 0.83 % v/v 2 % v/v		6-8"W 6-8"W 6-8"W 6-8"W	A A A A	14 a	6 a	50 ab	71 a
11	TOUCHDOWN HI-TECH ULTRA BLAZER DESTINY HC AG 8034	5 SL 2 EC 100 SL 100 SL		0.56 lb ae/a 0.25 lb ai/a 0.5 % v/v 2 % v/v	14.3 fl oz/a 1 pt/a 0.5 % v/v 2 % v/v		6-8"W 6-8"W 6-8"W 6-8"W	A A A A	10 b	4 abc	37 cde	64 cd
12	TOUCHDOWN HI-TECH ULTRA BLAZER DESTINY HC AG 02013	5 SL 2 EC 100 SL 100 SL		0.56 lb ae/a 0.25 lb ai/a 0.5 % v/v 4 fl oz/a	14.3 fl oz/a 1 pt/a 0.5 % v/v 4 fl oz/a		6-8"W 6-8"W 6-8"W 6-8"W	A A A A	11 b	4 abc	38 cde	66 bc

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Code	GLXMA	GLXMA	AMATA-HR	AMATA-HR
Crop Code	6-16-12	6-30-12	6-16-12	6-30-12
Rating Date	Injury	Injury	Control	Control
Rating Type	Percent	Percent	Percent	Percent
Rating Unit				
Rating Timing				
Trt-Eval Interval	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 Unit	Rate Rate Unit Stage Code		
13 NONTREATED	0 d	0 d	0 f	0 e
LSD (P=.05)	2.4	2.3	8.8	5.2
Standard Deviation	1.4	1.3	5.2	3.1
CV	14.68	37.79	13.89	4.96
Replicate F	1.946	0.301	1.582	0.000
Replicate Prob(F)	0.1647	0.7428	0.2262	1.0000
Treatment F	17.335	3.247	18.115	115.459
Treatment Prob(F)	0.0001	0.0068	0.0001	0.0001

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Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC 14 and 28 DAT.
3. Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. Not harvested.