

Southern Illinois University

Roundup plus Clarity Nozzle by Adjuvant Study.

Trial ID: 12-FagerS-NozzleAdj
 Location: Murphysboro, IL

Investigator: Bryan Young

General Trial Information	
Study Director: Bryan Young	Title: Professor
Investigator: Bryan Young	
Trial Status: F - one-year/final	
Initiation Date: 8-30-12	
Trial Location	
City: Murphysboro	
State/Prov.: IL	
Postal Code: 62966	
Country: USA	

Objectives:
 Evalaute efficacy of glyphosate plus dicamba on glyphosate-resistant waterhemp as influenced by spray nozzles and adjuvants.

Personnel	
Study Director: Bryan Young	Title: Professor
Investigator: Bryan Young	
Affiliation: Southern Illinois University	
Address: 1205 Lincoln Drive - AG 176 - MC 4415	
Location: Carbondale IL	
Postal Code: 62901	E-mail: bgyoung@siu.edu
Phone No.: 618-453-7679	Mobile No.: 618-713-6471

Crop Description
Crop 1: NONE - Non-crop

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	
Plot Length, Unit: 30 FT		
Plot Area, Unit: 300 FT2	Tillage Type: NOTILL no-till	
Replications: 3	Study Design: RACOB L Randomized Complete Block (RCB)	
No.	Previous Crop	Year
1.	NONE	2011

Maintenance	
No.	Maintenance Treatment Name
1.	N 0 LB/A, P205 0 LB/A, K20 0 LB/A

Soil Description		
% OM: 1.87	Texture: SIL SILT LOAM	
pH: 5.5	Soil Name: ALVIN	
CEC: 7.06		
Additional Measured Elements		
Element	Quantity	Unit
P1	172	LB/A
K	446	LB/A

Moisture and Weather Conditions
Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

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Application Description

	A
Application Date:	8-30-12
Time of Day:	8:30
Application Method:	Spray
Application Timing:	6-8"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	82 F
% Relative Humidity:	69
Wind Velocity, Unit:	2 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	80 F
Soil Moisture:	BELNOR
% Cloud Cover:	0
Next Rain Occurred On:	8-31-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	12
Stage Minimum, Percent:	4
Stage Maximum, Percent:	25
Height, Unit:	8 IN
Height Minimum, Maximum:	1 13

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT

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Pest Code								AMATA-HR	AMATA-HR	AMATA-HR			
Crop Code													
Rating Date								9-6-12	9-13-12	9-27-12			
Rating Type								Control	Control	Control			
Rating Unit								Percent	Percent	Percent			
Rating Timing													
Trt-Eval Interval								7 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	XR 11004 at 40 PSI - 10 GPA - 12 MPH ROUNDUP POWERMAX CLARITY AMS	4.5 SL 4 SL 100 SG		1 lb ae/a 0.5 lb ae/a 1 % w/w		28.4 fl oz/a 16 fl oz/a 1 % w/w		6-8"W 6-8"W 6-8"W	A A A	81 c	88 a	86 a	
2	AIXR 11004 at 40 PSI - 10 GPA - 12 MPH ROUNDUP POWERMAX CLARITY AMS	4.5 SL 4 SL 100 SG		1 lb ae/a 0.5 lb ae/a 1 % w/w		28.4 fl oz/a 16 fl oz/a 1 % w/w		6-8"W 6-8"W 6-8"W	A A A	77 c	86 a	86 a	
3	AI 11004 at 40 PSI - 10 GPA - 12 MPH ROUNDUP POWERMAX CLARITY AMS	4.5 SL 4 SL 100 SG		1 lb ae/a 0.5 lb ae/a 1 % w/w		28.4 fl oz/a 16 fl oz/a 1 % w/w		6-8"W 6-8"W 6-8"W	A A A	83 bc	88 a	90 a	
4	TTI 11004 at 40 PSI - 10 GPA - 12 MPH ROUNDUP POWERMAX CLARITY AMS	4.5 SL 4 SL 100 SG		1 lb ae/a 0.5 lb ae/a 1 % w/w		28.4 fl oz/a 16 fl oz/a 1 % w/w		6-8"W 6-8"W 6-8"W	A A A	80 c	86 a	88 a	
5	TTI 11004 at 40 PSI - 10 GPA - 12 MPH ROUNDUP POWERMAX CLARITY AMS DIRECT	4.5 SL 4 SL 100 SG 30 SL		1 lb ae/a 0.5 lb ae/a 1 % w/w 0.0234 % v/v		28.4 fl oz/a 16 fl oz/a 1 % w/w 3 fl oz/100 gal		6-8"W 6-8"W 6-8"W 6-8"W	A A A A	90 a	92 a	92 a	
6	AI 11006 at 65 PSI - 15 GPA - 15 MPH ROUNDUP POWERMAX CLARITY AMS DIRECT	4.5 SL 4 SL 100 SG 30 SL		1 lb ae/a 0.5 lb ae/a 1 % w/w 0.0234 % v/v		28.4 fl oz/a 16 fl oz/a 1 % w/w 3 fl oz/100 gal		6-8"W 6-8"W 6-8"W 6-8"W	A A A A	88 ab	92 a	92 a	
7	NONTREATED										0 d	0 b	0 b
LSD (P=.05)								6.9	6.6	6.6			
Standard Deviation								3.9	3.7	3.7			
CV								5.43	4.9	4.88			
Replicate F								0.152	0.456	0.313			
Replicate Prob(F)								0.8604	0.6444	0.7369			
Treatment F								202.022	244.614	245.983			
Treatment Prob(F)								0.0001	0.0001	0.0001			

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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Trial Comments

1. Protocol: SIU.
2. Ratings: WC at 7, 14, and 28 DAT.
Photos as appropriate.
3. Spray nozzles, GPA, PSI and speed are per treatemt, see treatment list.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. Not harvested, non-crop.