

Southern Illinois University

Winfield Solutions Adjuvant by Nozzle Evaluation with Dicamba.

Trial ID: 13-FagerS-WinATVdica Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final Initiation Date: 6-24-13 Completion Date: 7-22-13	Trial Location City: Murphysboro Country: USA State/Prov.: Illinois IL Postal Code: 62966
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Objectives:
Evaluate the influence of Winfield Solutions adjuvant and nozzles on efficacy with dicamba.

Study Director: Bryan Young Organization: Southern Illinois University Address: 1205 Lincoln Drive - AG 176 - MC 4415 City+State/Prov: Carbondale IL Postal Code: 62901 Country: USA	Title: Professor Phone No.: 618-453-7679 Mobile No.: 618-713-6471 E-mail: bgyoung@siu.edu
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Crop 1: NONE - Non-crop Variety: NON-CROP Planting Method: NA	Crop Description
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Pest 1 Type: W Code: AMATA <i>Amaranthus rudis</i> Sauer Common Name: waterhemp, common Description: glyphosate-resistant waterhemp	Pest Description
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Treated Plot Width: 6.67 FT Total Plot Width: 10 FT Treated Plot Length: 30 FT Total Plot Length: 30 FT Replications: 3 Untreated Arrangement: INCLUDED single control randomized in each block	Site and Design Site Type: FIELD Experimental Unit: 1 PLOT Tillage Type: NOTILL no-till Study Design: RACOB L Randomized Complete Block (RCB)
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No.	Previous Crop	Year
1.	NON-CROP	2012

Maintenance <table border="1"> <thead> <tr> <th>No.</th> <th>Maintenance Product Name</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A</td> </tr> </tbody> </table>	No.	Maintenance Product Name	1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A
No.	Maintenance Product Name			
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A			

% OM: 1.87 Texture: SIL silt loam pH: 5.5 Soil Name: Alvin CEC: 7.06	Soil Description
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Additional Measured Elements		
Element	Quantity	Unit
P1	172	lb/A
K	446	lb/A

Overall Moisture Conditions: NORMAL Closest Weather Station: SOUTHERN IL AIRPORT (93810)	Moisture and Weather Conditions Distance, Unit: 3.5 MI
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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-1-13	1.67	IN	RAIN	rain	2	DAY			
2.	6-3-13					7	DAY	50	82	F
3.	6-10-13	0.13	IN	RAIN	rain	5	DAY			
4.	6-10-13					7	DAY	57	93	F
5.	6-17-13	0.36	IN	RAIN	rain	2	DAY			
6.	6-17-13					7	DAY	61	92	F
7.	6-22-13	0.34	IN	RAIN	rain	2	DAY			
8.	6-24-13					7	DAY	64	93	F
9.	6-26-13	1.25	IN	RAIN	rain	2	DAY			
10.	6-30-13	0.3	IN	RAIN	rain	2	DAY			
11.	7-1-13					7	DAY	57	88	F
12.	7-2-13	1.16	IN	RAIN	rain	2	DAY			
13.	7-8-13					7	DAY	59	92	F
14.	7-14-13	0.05	IN	RAIN	rain	5	DAY			
15.	7-15-13					7	DAY	68	93	F
16.	7-20-13	1.24	IN	RAIN	rain	2	DAY			

Application Description

	A
Application Date:	6-24-13
Appl. Start Time:	7:00
Appl. Stop Time:	7:45
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	72 F
% Relative Humidity:	90
Wind Velocity, Unit:	6 MPH
Wind Direction:	S
Dew Presence (Y/N):	N
Soil Temperature, Unit:	81 F
Soil Moisture:	NORMAL
% Cloud Cover:	50
Next Moisture Occurred On:	6-26-13
Time to Next Moisture, Unit:	2 DAY

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
Stage Majority, Percent:	8
Stage Minimum, Percent:	4
Stage Maximum, Percent:	20
Height, Unit:	4 IN
Height Minimum, Maximum:	2 6
Density, Unit:	20 FT2

Winfield Solutions Adjuvant by Nozzle Evaluation with Dicamba.

Trial ID: 13-FagerS-WinATVdica Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young**Application Equipment**

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Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								AMATA-HR 7-1-13 Control Percent 7 DA-A	AMATA-HR 7-8-13 Control Percent 14 DA-A	AMATA-HR 7-22-13 Control Percent 28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
1	XR 11003 at 43.5 PSI - 9 MPH 10 GPA - FINE CLARITY	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	64 a
2	XR 11003 at 43.5 PSI - 9 MPH 10 GPA - FINE CLARITY AG 02013	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	65 a
		100	SL	4 fl oz/a		4 fl oz/a		4-6"W	A	67 bc
3	XR 11004 at 40 PSI - 12 MPH 10 GPA - MEDIUM CLARITY	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	65 a
4	XR 11004 at 40 PSI - 12 MPH 10 GPA - MEDIUM CLARITY AG 02013	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	67 bc
		100	SL	4 fl oz/a		4 fl oz/a		4-6"W	A	71 abc
5	XR 11004 at 40 PSI - 12 MPH 10 GPA - MEDIUM CLARITY	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	63 a
6	XR 11004 at 40 PSI - 12 MPH 10 GPA - MEDIUM CLARITY AG 02013	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	68 abc
		100	SL	4 fl oz/a		4 fl oz/a		4-6"W	A	70 abc
7	AIXR 11004 at 50 PSI - 13.3 MPH 10 GPA - VERY COARSE CLARITY	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	66 a
8	AIXR 11004 at 50 PSI - 13.3 MPH 10 GPA - VERY COARSE CLARITY AG 02013	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	70 ab
		100	SL	4 fl oz/a		4 fl oz/a		4-6"W	A	74 a
9	AIXR 11004 at 50 PSI - 13.3 MPH 10 GPA - VERY COARSE CLARITY	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	66 a
10	AIXR 11004 at 50 PSI - 13.3 MPH 10 GPA - VERY COARSE CLARITY AG 02013	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	67 bc
		100	SL	4 fl oz/a		4 fl oz/a		4-6"W	A	69 abc
11	AI 11004 at 50 PSI - 13.3 MPH 10 GPA - EXTRA COARSE CLARITY	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	72 ab
12	AI 11004 at 50 PSI - 13.3 MPH 10 GPA - EXTRA COARSE CLARITY AG 02013	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	65 a
		100	SL	4 fl oz/a		4 fl oz/a		4-6"W	A	68 abc
13	TTI 11004 at 50 PSI - 13.3 MPH 10 GPA - ULTRA COARSE CLARITY	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	65 a
14	TTI 11004 at 50 PSI - 13.3 MPH 10 GPA - ULTRA COARSE CLARITY AG 02013	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	69 abc
		100	SL	4 fl oz/a		4 fl oz/a		4-6"W	A	67 bc
15	TTI 11004 at 50 PSI - 13.3 MPH 10 GPA - ULTRA COARSE CLARITY	4	SL	0.375 lb ae/a		12 fl oz/a		4-6"W	A	64 a
		100	SL	4 fl oz/a		4 fl oz/a		4-6"W	A	71 ab
16	11 NONTREATED									70 abc
17	11 NONTREATED									0 b
18	11 NONTREATED									0 d
19	11 NONTREATED									0 d
LSD (P=.05)								6.5	4.8	6.8
Standard Deviation								3.8	2.8	4.0
CV								6.46	4.5	6.39
Replicate F								0.315	0.911	2.164
Replicate Prob(F)								0.7331	0.4181	0.1410
Treatment F								79.209	165.040	82.246
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: Winfield Solutions.
2. WC at 7, 14, and 28 DA-A.
3. Nozzle type and size, spray pressure, and application speed are per treatment, see treatment list.
4. Mix size is 2.5 gallons, mix a single 2.5 gallon can for treatments 1, 3, 5, 7, and 9,
and another 2.5 gallon can for treatments 2, 4, 6, 8, and 10.
Change nozzles, PSI and speed per treatment using same 2.5 gallon can.
5. No yield.
6. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Not harvested (non-crop).