

Southern Illinois University

Winfield Solutions Burndown Weed Control.

Trial ID: 13-FagerS-AGH11021 Location: Murphysboro, IL Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final Initiation Date: 5-2-13 Completion Date: 5-30-13	Trial Location City: Murphysboro Country: USA State/Prov.: Illinois IL Postal Code: 62966
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Objectives: Evaluate glyphosate-resistant horseweed control from AGH 11021.

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	Contacts 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: ERICA <i>Conyza canadensis</i> (L.) Crong. Common Name: horseweed Description: glyphosate-resistant marestail Pest 2 Type: W Code: VERAR <i>Veronica arvensis</i> L. Common Name: speedwell, corn	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.	GLXMA	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 <table border="1"> <thead> <tr> <th>Element</th> <th>Quantity</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>P1</td> <td>172</td> <td>lb/A</td> </tr> <tr> <td>K</td> <td>446</td> <td>lb/A</td> </tr> </tbody> </table>	Element	Quantity	Unit	P1	172	lb/A	K	446	lb/A
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.	4-1-13					7	DAY	26	75	F
2.	4-8-13					7	DAY	32	81	F
3.	4-10-13	0.85	IN	RAIN	rain	2	DAY			
4.	4-15-13					7	DAY	32	83	F
5.	4-18-13	2.16	IN	RAIN	rain	1	DAY			
6.	4-22-13					7	DAY	32	72	F
7.	4-24-13	0.55	IN	RAIN	rain	2	DAY			
8.	4-27-13	0.37	IN	RAIN	rain	2	DAY			
9.	4-29-13					7	DAY	41	81	F
10.	5-3-13	1.33	IN	RAIN	rain	3	DAY			
11.	5-5-13	0.75	IN	RAIN	rain	2	DAY			
12.	5-6-13					7	DAY	41	80	F
13.	5-10-13	0.17	IN	RAIN	rain	3	DAY			
14.	5-13-13					7	DAY	37	87	F
15.	5-16-13	0.23	IN	RAIN	rain	2	DAY			
16.	5-20-13					7	DAY	43	85	F
17.	5-21-13	0.91	IN	RAIN	rain	1	DAY			
18.	5-27-13					7	DAY	59	86	F
19.	5-31-13	0.7	IN	RAIN	rain	3	DAY			

Application Description

	A
Application Date:	5-2-13
Appl. Start Time:	10:30
Appl. Stop Time:	11:00
Application Method:	Spray
Application Timing:	6-8"MT
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	75 F
% Relative Humidity:	56
Wind Velocity, Unit:	4 MPH
Wind Direction:	W
Dew Presence (Y/N):	N
Soil Temperature, Unit:	60 F
Soil Moisture:	NORMAL
% Cloud Cover:	40
Next Moisture Occurred On:	5-2-13
Time to Next Moisture, Unit:	12 HR

Crop Stage At Each Application

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

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Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W
Stage Majority, Percent:	18
Stage Minimum, Percent:	6
Stage Maximum, Percent:	30
Height, Unit:	5 IN
Height Minimum, Maximum:	3 10
Density, Unit:	5 FT2
Pest 2 Code, Type, Scale:	VERAR W
Stage Majority, Percent:	20
Stage Minimum, Percent:	18
Stage Maximum, Percent:	26
Height, Unit:	9 IN
Height Minimum, Maximum:	7 9
Density, Unit:	1 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

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							ERICA-HR 5-9-13 Control Percent 7 DA-A	ERICA-HR 5-16-13 Control Percent 14 DA-A	ERICA-HR 5-30-13 Control Percent 28 DA-A	VERAR 5-9-13 Control Percent 7 DA-A	VERAR 5-16-13 Control Percent 14 DA-A
Trt Treatment No. Name	Form Conc	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1 TOUCHDOWN HI-TECH CLASS ACT NG	5 SL 100 SL		0.375 lb ae/a 2.5 % v/v	9.6 fl oz/a 2.5 % v/v		6-8"MT A 6-8"MT A		28 d	57 d	42 f	20 c 87 a
2 TOUCHDOWN HI-TECH AGH 11021	5 SL 100 SL		0.375 lb ae/a 0.75 pt/a	9.6 fl oz/a 0.75 pt/a		6-8"MT A 6-8"MT A		36 c	69 c	86 e	25 b 80 b
3 TOUCHDOWN HI-TECH AGH 11021 CLASS ACT NG AG 02013	5 SL 100 SL 100 SL 100 SL		0.375 lb ae/a 0.75 pt/a 2.5 % v/v 4 fl oz/a	9.6 fl oz/a 0.75 pt/a 2.5 % v/v 4 fl oz/a		6-8"MT A 6-8"MT A 6-8"MT A 6-8"MT A		40 b	72 bc	89 cd	28 ab 90 a
4 TOUCHDOWN HI-TECH AGH 11021 CLASS ACT NG SUPERB HC AG 02013	5 SL 100 SL 100 SL 100 SL 100 SL		0.375 lb ae/a 0.75 pt/a 2.5 % v/v 1 pt/a 4 fl oz/a	9.6 fl oz/a 0.75 pt/a 2.5 % v/v 1 pt/a 4 fl oz/a		6-8"MT A 6-8"MT A 6-8"MT A 6-8"MT A 6-8"MT A		40 b	72 bc	88 cde	27 ab 87 a
5 TOUCHDOWN HI-TECH AGH 11021 CLASS ACT NG DESTINY HC	5 SL 100 SL 100 SL 100 SL		0.375 lb ae/a 0.75 pt/a 2.5 % v/v 1 pt/a	9.6 fl oz/a 0.75 pt/a 2.5 % v/v 1 pt/a		6-8"MT A 6-8"MT A 6-8"MT A 6-8"MT A		40 b	72 bc	86 de	27 ab 88 a
6 TOUCHDOWN HI-TECH AGH 11021	5 SL 100 SL		0.375 lb ae/a 1.5 pt/a	9.6 fl oz/a 1.5 pt/a		6-8"MT A 6-8"MT A		40 b	71 bc	91 bc	25 b 85 ab
7 TOUCHDOWN HI-TECH AGH 11021 CLASS ACT NG AG 02013	5 SL 100 SL 100 SL 100 SL		0.375 lb ae/a 1.5 pt/a 2.5 % v/v 4 fl oz/a	9.6 fl oz/a 1.5 pt/a 2.5 % v/v 4 fl oz/a		6-8"MT A 6-8"MT A 6-8"MT A 6-8"MT A		43 a	74 b	93 ab	28 ab 88 a
8 TOUCHDOWN HI-TECH AGH 11021	5 SL 100 SL		0.375 lb ae/a 2 pt/a	9.6 fl oz/a 2 pt/a		6-8"MT A 6-8"MT A		43 a	72 bc	93 ab	30 a 90 a
9 TOUCHDOWN HI-TECH AGH 11021 CLASS ACT NG AG 02013	5 SL 100 SL 100 SL 100 SL		0.375 lb ae/a 2 pt/a 2.5 % v/v 4 fl oz/a	9.6 fl oz/a 2 pt/a 2.5 % v/v 4 fl oz/a		6-8"MT A 6-8"MT A 6-8"MT A 6-8"MT A		45 a	78 a	95 a	30 a 90 a
10 NONTREATED								0 e	0 e	0 g	0 d 0 c
LSD (P=.05)								2.5	3.4	2.7	3.8
Standard Deviation								1.4	2.0	1.6	2.2
CV								4.05	3.1	2.09	9.14
Replicate F								4.476	1.401	1.189	8.308
Replicate Prob(F)								0.0264	0.2719	0.3274	0.0028
Treatment F								257.604	407.931	1130.986	49.692
Treatment Prob(F)								0.0001	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 (Study 15).
2. WC 7, 14, and 28 DA-A. Target horseweed.
3. No yield (non-crop).
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
5. By 5-30-13, VERAR in the nontreated plots was senescing naturally and could no longer be evaluated.
6. Not harvested (non-crop).