

Herbicide Response Screen.

Trial ID: 10-FagerL-Screen

Location: Murphysboro, IL

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Murphysboro IL 62966 USA
 Trial Status: FINAL Initiation Date: 05-19-10

Objectives: Determine the sensitivity of a waterhemp population to various herbicides.

Crop 1: GLXMA Soybean

Pest 1 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 30 FT Tillage Type: NO-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year

1. GLXMA 2009

Field Prep./Maintenance: N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Texture: VERY FINE SANDY LOAM
 Soil Name: ALVIN
 Fert. Level: P1 __ LB/A, K __ LB/A

Application Description

	A	B
Application Date:	05-19-10	05-27-10
Time of Day:	18:00	10:30
Application Method:	Spray	Spray
Application Timing:	PRE	4-6"WH
Application Placement:	BROFOL	BROFOL
Applied By:	DKP	DKP
Air Temperature, Unit:	71 F	86 F
% Relative Humidity:	55	65
Wind Velocity, Unit:	1 MPH	3 MPH
Wind Direction:	NE	NW
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	72 F	78 F
Soil Moisture:	NORMAL	ABONOR
% Cloud Cover:	40	10

	A	B
Crop stage at application:	05-19-10 NA	05-27-10 NA

Pest Stage At Each Application

	A	B
Application Date:	05-19-10	05-27-10
Weed Code:	AMATA	AMATA
Stage Majority (leaves):	7	9
Stage Min, Max:	COTY 10 1	24
Height Majority:	2.25 IN	5 IN
Height Min, Max:	0.5 5 1	10
Density, Unit:	40 FT2	40 FT2

Application Equipment

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

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										AMATA	AMATA	AMATA	AMATA	AMATA
Pest Code										06-10-10	06-24-10	05-27-10	06-03-10	06-17-10
Crop Code										Control	Control	Plants	Plants	Plants
Rating Date										Percent	Percent	0.5 m2	0.5 m2	0.5 m2
Rating Data Type														
Rating Unit														
Rating Timing														
Trt-Eval Interval										14 DA-B	28 DA-B	0 DA-B	7 DA-B	21 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	NONTREATED									0 j	0 f	268 ab	295 a	324 a
2	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		4-6"WH B		37 h	12 f	218 ab	210 abc	158 b-e
2	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B						
3	ROUNDUP POWERMAX	4.5 SL		1.55 lb ae/a		44 fl oz/a		4-6"WH B		64 efg	47 de	206 ab	169 a-d	160 b-e
3	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B						
4	ROUNDUP POWERMAX	4.5 SL		12.4 lb ae/a		352 fl oz/a		4-6"WH B		85 bc	60 cd	284 ab	77 c-f	120 b-f
4	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B						
5	PURSUIT	2 SL		0.0625 lb ai/a		4 fl oz/a		4-6"WH B		17 i	13 f	235 ab	271 ab	248 ab
5	COC (PRIME OIL)	100 SL		1 % v/v		1 % v/v		4-6"WH B						
5	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B						
6	AATREX	4 SC		1 lb ai/a		1 qt/a		4-6"WH B		32 h	12 f	156 b	151 b-e	90 c-f
6	COC (PRIME OIL)	100 SL		1 % v/v		1 % v/v		4-6"WH B						
7	FLEXSTAR	1.88 EC		0.353 lb ai/a		24 fl oz/a		4-6"WH B		96 ab	96 a	198 ab	1 f	1 f
7	COC (PRIME OIL)	100 SL		1 % v/v		1 % v/v		4-6"WH B						
7	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B						
8	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		4-6"WH B		72 de	45 de	189 ab	62 def	49 def
8	PURSUIT	2 SL		0.0625 lb ai/a		4 fl oz/a		4-6"WH B						
8	AATREX	4 SC		1 lb ai/a		1 qt/a		4-6"WH B						
8	COC (PRIME OIL)	100 SL		0.25 % v/v		0.25 % v/v		4-6"WH B						
8	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B						
9	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		4-6"WH B		97 a	96 a	295 a	1 f	1 f
9	PURSUIT	2 SL		0.0625 lb ai/a		4 fl oz/a		4-6"WH B						
9	AATREX	4 SC		1 lb ai/a		1 qt/a		4-6"WH B						
9	FLEXSTAR	1.88 EC		0.353 lb ai/a		24 fl oz/a		4-6"WH B						
9	COC (PRIME OIL)	100 SL		0.25 % v/v		0.25 % v/v		4-6"WH B						
9	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B						
10	2,4-D LV 4	3.8 EC		0.475 lb ae/a		1 pt/a		4-6"WH B		71 e	60 cd	232 ab	188 a-d	121 b-f
11	2,4-D LV 4	3.8 EC		0.95 lb ae/a		2 pt/a		4-6"WH B		82 cd	85 ab	224 ab	154 bcd	59 def
12	CLARITY	4 SL		0.25 lb ae/a		8 fl oz/a		4-6"WH B		53 g	50 de	227 ab	283 ab	228 abc
13	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a		4-6"WH B		53 g	40 e	229 ab	175 a-d	198 a-d
13	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B						
14	CALLISTO	4 SC		0.094 lb ai/a		3 fl oz/a		4-6"WH B		59 fg	47 de	243 ab	184 a-d	103 b-f
14	COC (PRIME OIL)	100 SL		1 % v/v		1 % v/v		4-6"WH B						
15	GRAMOXONE INTEON	2 SL		0.625 lb ai/a		2.5 pt/a		4-6"WH B		86 bc	57 cd	257 ab	51 def	156 b-e
15	COC (PRIME OIL)	100 SL		1 % v/v		1 % v/v		4-6"WH B						
16	GRAMOXONE INTEON	2 SL		0.625 lb ai/a		2.5 pt/a		PRE A		82 cd	71 bc	0 c	1 f	25 ef
16	AATREX	4 SC		1 lb ai/a		1 qt/a		PRE A						
16	COC (PRIME OIL)	100 SL		1 % v/v		1 % v/v		PRE A						
17	GRAMOXONE INTEON	2 SL		0.625 lb ai/a		2.5 pt/a		PRE A		98 a	98 a	0 c	0 f	0 f
17	FLEXSTAR	1.88 EC		0.353 lb ai/a		24 fl oz/a		PRE A						
17	COC (PRIME OIL)	100 SL		1 % v/v		1 % v/v		PRE A						
18	GRAMOXONE INTEON	2 SL		0.625 lb ai/a		2.5 pt/a		PRE A		55 g	48 de	0 c	75 c-f	107 b-f
18	PURSUIT	2 SL		0.0625 lb ai/a		4 fl oz/a		PRE A						
18	COC (PRIME OIL)	100 SL		1 % v/v		1 % v/v		PRE A						
19	GRAMOXONE INTEON	2 SL		0.625 lb ai/a		2.5 pt/a		PRE A		67 ef	53 de	0 c	14 ef	72 def
19	CALLISTO	4 SC		0.094 lb ai/a		3 fl oz/a		PRE A						
19	COC (PRIME OIL)	100 SL		1 % v/v		1 % v/v		PRE A						
LSD (P=.05)										11.2	15.1	137.6	139.5	152.9

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Pest Code	AMATA	AMATA	AMATA	AMATA	AMATA
Crop Code					
Rating Date	06-10-10	06-24-10	05-27-10	06-03-10	06-17-10
Rating Data Type	Control	Control	Plants	Plants	Plants
Rating Unit	Percent	Percent	0.5 m2	0.5 m2	0.5 m2
Rating Timing					
Trt-Eval Interval	14 DA-B	28 DA-B	0 DA-B	7 DA-B	21 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code
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Replicate F	0.750	0.586	4.470	3.326	0.983				
Replicate Prob(F)	0.4794	0.5617	0.0185	0.0473	0.3839				
Treatment F	48.663	30.705	4.467	4.303	2.803				
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0041				

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

Trial Comments

1. Protocol: SIU(BGY).
2. Ratings: Weed counts as 2 (0.5 m2) quadrats per plot at 0, 7, and 21 DA-B.
WC at 14 and 28 DA-B.
3. Blanket burndown application of Gramoxone (3 pt/A) plus NIS (0.5% v/v) was applied 4-13-10.
4. Plants 0.5 m2 = Plants per 0.5 square meter.
5. Not harvested, non-crop.