

Herbicide Response Screen.

Trial ID: 10-DSO-Screen Location: De Soto, IL

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 City State Zip Country: De Soto IL 62924 USA
 Trial Status: FINAL Initiation Date: 05-08-10

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

Crop 1: YACKR Arable land Variety: NON-CROP

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

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 13 LB/A, P205 34 LB/A, K20 92 LB/A

% OM: 2.5 Texture: SILT LOAM
 pH: 6.8 Soil Name: OKAW
 CEC: 12 Fert. Level: P1 88 LB/A, K 207 LB/A

Application Description

	A	B
Application Date:	05-08-10	05-25-10
Time of Day:	19:30	11:30
Application Method:	Spray	Spray
Application Timing:	PRE	4-6"WH
Application Placement:	BROFOL	BROFOL
Applied By:	NVH	NVH
Air Temperature, Unit:	57 F	86 F
% Relative Humidity:	50	66
Wind Velocity, Unit:	4 MPH	1 MPH
Wind Direction:	NW	NW
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	68 F	80 F
Soil Moisture:	NORMAL	ABONOR
% Cloud Cover:	30	90

05-08-10 05-25-10
 Crop stage at application: NA NA

Pest Stage At Each Application

	05-08-10	05-25-10
Application Date:	05-08-10	05-25-10
Weed Code:	AMATA	AMATA
Stage Majority (leaves):	NA	6
Stage Min, Max:		4 15
Height Majority:		5 IN
Height Min, Max:		1 7
Density, Unit:		50 FT2

Application Equipment

	05-08-10	05-25-10
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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Pest Code		AMATA-HR		AMATA-HR		AMATA-HR		AMATA-HR		AMATA-HR	
Crop Code		05-25-10		06-01-10		06-15-10		06-08-10		06-22-10	
Rating Date		Plants		Plants		Plants		Control		Control	
Rating Data Type		0.5 M2		0.5 M2		0.5 M2		Percent		Percent	
Rating Unit											
Rating Timing											
Trt-Eval Interval		0 DA-B		7 DA-B		21 DA-B		14 DA-B		28 DA-B	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
1	NONTREATED									336 f	0 j
2	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		4-6"WH B		438 def	47 hi
2	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B		79 gh	67 fg
3	ROUNDUP POWERMAX	4.5 SL		1.55 lb ae/a		44 fl oz/a		4-6"WH B		493 a-e	85 bc
3	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B		49 ghi	29 gh
4	ROUNDUP POWERMAX	4.5 SL		12.4 lb ae/a		352 fl oz/a		4-6"WH B		414 ef	96 a
4	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B		9 i	10 h
5	PURSUIT	2 SL		0.0625 lb ai/a		4 fl oz/a		4-6"WH B		532 a-e	3 h
5	PRIME OIL COC	100 SL		1 % v/v		1 % v/v		4-6"WH B		415 a	0 j
5	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B		415 a	
6	AATREX	4 SC		1 lb ai/a		1 qt/a		4-6"WH B		552 a-d	59 ef
6	PRIME OIL COC	100 SL		1 % v/v		1 % v/v		4-6"WH B		163 de	43 i
7	FLEXSTAR	1.88 EC		0.353 lb ai/a		24 fl oz/a		4-6"WH B		454 c-f	72 c-f
7	PRIME OIL COC	100 SL		1 % v/v		1 % v/v		4-6"WH B		34 hi	82 c
7	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B		62 fg	
8	ROUNDUP POWERMAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		4-6"WH B		578 abc	63 e-h
8	PURSUIT	2 SL		0.0625 lb ai/a		4 fl oz/a		4-6"WH B		61 ghi	84 bc
8	AATREX	4 SC		1 lb ai/a		1 qt/a		4-6"WH B		31 gh	
8	PRIME OIL COC	100 SL		0.25 % v/v		0.25 % v/v		4-6"WH B		84 bc	
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		481 b-e	96 a
9	PURSUIT	2 SL		0.0625 lb ai/a		4 fl oz/a		4-6"WH B		4 i	97 a
9	AATREX	4 SC		1 lb ai/a		1 qt/a		4-6"WH B		3 h	
9	FLEXSTAR	1.88 EC		0.353 lb ai/a		24 fl oz/a		4-6"WH B		97 a	
9	PRIME OIL COC	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		493 a-e	65 d-g
11	2,4-D LV 4	3.8 EC		0.95 lb ae/a		2 pt/a		4-6"WH B		177 cde	94 ab
12	CLARITY	4 SL		0.25 lb ae/a		8 fl oz/a		4-6"WH B		101 fg	88 abc
13	IGNITE 280	2.34 EC		0.402 lb ai/a		22 fl oz/a		4-6"WH B		4 h	
13	N-PAK AMS	100 SL		5 % v/v		5 % v/v		4-6"WH B		599 ab	53 ghi
14	CALLISTO	4 SC		0.094 lb ai/a		3 fl oz/a		4-6"WH B		526 a-e	52 ghi
14	COC (PRIME OIL)	100 SL		1 % v/v		1 % v/v		4-6"WH B		154 ef	
15	GRAMOXONE INTEON	2 SL		0.625 lb ai/a		2.5 pt/a		4-6"WH B		34 gh	83 c
15	COC (PRIME OIL)	100 SL		1 % v/v		1 % v/v		4-6"WH B		83 c	82 a-d
16	GRAMOXONE INTEON	2 SL		0.625 lb ai/a		2.5 pt/a		4-6"WH B		549 a-e	619 a
16	AATREX	4 SC		1 lb ai/a		1 qt/a		4-6"WH B		17 i	28 gh
17	GRAMOXONE INTEON	2 SL		0.625 lb ai/a		2.5 pt/a		PRE A		96 a	78 b-e
17	FLEXSTAR	1.88 EC		0.353 lb ai/a		24 fl oz/a		PRE A		39 hi	60 fgh
18	GRAMOXONE INTEON	2 SL		0.625 lb ai/a		2.5 pt/a		PRE A		71 fg	90 abc
18	PURSUIT	2 SL		0.0625 lb ai/a		4 fl oz/a		PRE A		97 a	83 abc
19	GRAMOXONE INTEON	2 SL		0.625 lb ai/a		2.5 pt/a		PRE A		6 g	7 i
19	CALLISTO	4 SC		0.094 lb ai/a		3 fl oz/a		PRE A		6 h	15 g
LSD (P=.05)										136.9	17.4
Replicate F										3.297	0.665
Replicate Prob(F)										0.0503	0.5208
Treatment F										19.747	26.021
Treatment Prob(F)										0.0001	0.0001

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

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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. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
Plants 0.5 M² = Plants per 0.5 square meter.
4. Blanket burndown application of glyphosate (1.12 lbae/A) plus 2,4-D (0.475 lbae/A) plus AMS was applied 4-13-10.
5. Not harvested.