

Waterhemp Screen for Postemergence Herbicides.

Trial ID: 09-DeSoto-POSTScreen Location: De Soto, IL

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 City State Zip Country: De Soto IL 62924 USA
 Trial Status: FINAL Initiation Date: 06-06-09

Objectives: Determine the sensitivity of a waterhemp population to various postemergence 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 2008

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 0 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

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Application Date: 06-06-09
 Time of Day: 9:00
 Application Method: Spray
 Application Timing: 4-6"WH
 Application Placement: BROFOL
 Applied By: DKP
 Air Temperature, Unit: 74 F
 % Relative Humidity: 33
 Wind Velocity, Unit: 4 MPH
 Wind Direction: SE
 Dew Presence (Y/N): N
 Soil Temperature, Unit: 70 F
 Soil Moisture: NORMAL
 % Cloud Cover: 40

06-06-09
 Crop stage at application: NA

Pest Stage At Each Application

Application Date: 06-06-09
 Weed Code: AMATA
 Stage Majority (leaves): 8
 Stage Min, Max: 4 16
 Height Majority: 5 IN
 Height Min, Max: 2 10
 Density, Unit: 40 FT2

Application Equipment

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

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										AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Pest Code										06-20-09	07-04-09	06-13-09	06-13-09	06-13-09	06-27-09
Crop Code										Control	Control	Plant-Total	Plant-Dead	PlntInjured	Plant-Alive
Rating Date										Percent	Percent	0.5 m2	0.5 m2	0.5 m2	0.5 m2
Rating Data Type															
Rating Unit															
Rating Timing															
Trt-Eval Interval										14 DA-A	28 DA-A	7 DA-A	7 DA-A	7 DA-A	21 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"WH	A	22 f	19 g	263 b-e	12 de	32 bc	263 b
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"WH	A						
2	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	4-6"WH	A	46 e	28 efg	283 b-e	40 b-e	30 bc	146 c
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"WH	A						
3	ROUNDUP POWERMAX	4.5	SL	3.1	lb ae/a	88	fl oz/a	4-6"WH	A	62 cd	36 d-g	229 cde	70 b-e	45 bc	116 cd
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"WH	A						
4	ROUNDUP POWERMAX	4.5	SL	6.2	lb ae/a	176	fl oz/a	4-6"WH	A	83 ab	63 bc	200 e	83 bcd	45 bc	65 cd
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"WH	A						
5	ROUNDUP POWERMAX	4.5	SL	12.4	lb ae/a	352	fl oz/a	4-6"WH	A	87 a	67 b	256 b-e	90 bc	75 ab	105 cd
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"WH	A						
6	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	4-6"WH	A	5 g	2 h	323 bcd	0 e	0 c	323 b
6	PRIME OIL COC	100	SL	1	% v/v	1	% v/v	4-6"WH	A						
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"WH	A						
7	AATREX	4	SC	1	lb ai/a	1	qt/a	4-6"WH	A	53 de	25 fg	350 b	21 cde	57 bc	112 cd
7	PRIME OIL COC	100	SL	1	% v/v	1	% v/v	4-6"WH	A						
8	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	4-6"WH	A	91 a	66 b	287 b-e	114 ab	92 ab	115 cd
8	PRIME OIL COC	100	SL	1	% v/v	1	% v/v	4-6"WH	A						
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"WH	A						
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"WH	A	60 cde	38 def	215 de	25 cde	65 abc	92 cd
9	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	4-6"WH	A						
9	AATREX	4	SC	1	lb ai/a	1	qt/a	4-6"WH	A						
9	PRIME OIL COC	100	SL	0.25	% v/v	0.25	% v/v	4-6"WH	A						
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"WH	A						
10	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"WH	A	97 a	91 a	293 b-e	171 a	75 ab	20 d
10	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	4-6"WH	A						
10	AATREX	4	SC	1	lb ai/a	1	qt/a	4-6"WH	A						
10	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	4-6"WH	A						
10	PRIME OIL COC	100	SL	0.25	% v/v	0.25	% v/v	4-6"WH	A						
10	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"WH	A						
11	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	4-6"WH	A	70 bc	67 b	352 b	0 e	0 c	52 cd
12	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	4-6"WH	A	86 a	85 a	330 bc	0 e	0 c	22 d
13	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	4-6"WH	A	57 cde	47 cd	357 b	0 e	0 c	134 c
14	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	4-6"WH	A	89 a	43 de	296 b-e	105 ab	133 a	113 cd
14	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"WH	A						
15	NONTREATED									0 g	0 h	502 a	0 e	0 c	502 a
LSD (P=.05)										15.5	17.2	111.3	76.1	71.9	102.6
Replicate F										0.236	2.307	0.482	0.087	0.313	0.999
Replicate Prob(F)										0.7914	0.1182	0.6223	0.9172	0.7336	0.3810
Treatment F										33.756	21.823	3.708	4.170	2.651	12.948
Treatment Prob(F)										0.0001	0.0001	0.0015	0.0006	0.0136	0.0001

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

Trial Comments

1. Protocol: SIU.
2. Ratings: WC at 14 + 28 DAT.
3. Blanket burndown application of Roundup PowerMax (32 fl oz/A) + 2,4-D (1 pt/A) + AMS (1% w/w) was applied on 4-26-09.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate). 0.5 m2 = 0.5 square meter.
5. Not harvested.