

Valent Postemergence Waterhemp Control.

Trial ID: 10-DSO-ValentPOST 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: Evaluate herbicide application timings and mixtures for control of glyphosate-resistant waterhemp.

Crop 1: GLXMA Soybean Variety: AG 4005 Description: RR
 Planting Method: SEEDED Planting Date: 05-08-10
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

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	C
Application Date:	05-25-10	05-28-10	06-04-10
Time of Day:	11:45	8:30	12:45
Application Method:	Spray	Spray	Spray
Application Timing:	2"WH	4"WH	8"WH
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	NVH	NVH	DKP
Air Temperature, Unit:	86 F	79 F	91 F
% Relative Humidity:	66	54	52
Wind Velocity, Unit:	1 MPH	2 MPH	4 MPH
Wind Direction:	NW	N	S
Dew Presence (Y/N):	N	Y	N
Soil Temperature, Unit:	80 F	78 F	80 F
Soil Moisture:	ABONOR	ABONOR	NORMAL
% Cloud Cover:	90	5	50

	05-25-10	05-28-10	06-04-10
Crop stage at application:	V1	V1-V2	V3
Height Min, Max (inch):	3 4	4 6	4 9

Pest Stage At Each Application

	05-25-10	05-28-10	06-04-10
Application Date:	05-25-10	05-28-10	06-04-10
Weed Code:	AMATA	AMATA	AMATA
Stage Majority (leaves):	6	8	12
Stage Min, Max:	4 8	3 12	4 20
Height Majority:	2 IN	4 IN	8 IN
Height Min, Max:	1 4	2 5	2 11
Density, Unit:	30 FT2	30 FT2	40 FT2

Application Equipment

	05-25-10	05-28-10	06-04-10
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

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										AMATA-HR AMATA-HR				
Pest Code										GLXMA GLXMA GLXMA				
Crop Code														
Rating Date														
Rating Data Type										Injury Injury Injury				
Rating Unit										Percent Percent Percent				
Rating Timing										Control Control				
Trt-Eval Interval										Percent Percent				
										7 DAT 14 DAT 28 DAT 14 DAT 28 DAT				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	NONTREATED									0 g	0 g	0 b	0 i	0 h
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"WH	C	0 g	0 g	0 b	58 f	30 g
2	AMS	100	SG	2.5	lb/a	2.5	lb/a	8"WH	C					
3	RESOURCE	0.86	EC	0.0202	lb ai/a	3	fl oz/a	8"WH	C	9 e	4 c-g	0 b	72 e	43 fg
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"WH	C					
3	AMS	100	SG	2.5	lb/a	2.5	lb/a	8"WH	C					
4	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	8"WH	C	11 e	5 c-f	0 b	70 e	48 ef
4	RESOURCE	0.86	EC	0.0202	lb ai/a	3	fl oz/a	8"WH	C					
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"WH	C					
4	AMS	100	SG	2.5	lb/a	2.5	lb/a	8"WH	C					
5	PREFIX	5.29	EC	0.66	lb ai/a	1	pt/a	8"WH	C	17 d	6 cde	0 b	84 c	65 cd
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"WH	C					
5	AMS	100	SG	2.5	lb/a	2.5	lb/a	8"WH	C					
6	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	2"WH	A	23 c	7 cd	0 b	92 ab	74 bc
6	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	2"WH	A					
7	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	2"WH	A	4 f	1 fg	0 b	76 de	50 def
7	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	2"WH	A					
8	FLEXSTAR	1.88	EC	0.352	lb ai/a	1.5	pt/a	2"WH	A	10 e	2 efg	0 b	98 a	97 a
8	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	2"WH	A					
9	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	2"WH	A	33 a	19 a	3 ab	98 a	95 a
9	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	2"WH	A					
9	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	2"WH	A					
10	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	4"WH	B	23 c	8 c	0 b	96 ab	86 ab
10	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	4"WH	B					
11	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	4"WH	B	4 f	3 d-g	1 b	33 g	32 g
11	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	4"WH	B					
12	FLEXSTAR	1.88	EC	0.352	lb ai/a	1.5	pt/a	4"WH	B	18 d	5 c-f	0 b	97 a	96 a
12	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	4"WH	B					
13	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	4"WH	B	25 bc	7 cd	4 a	97 a	93 a
13	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	4"WH	B					
13	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	4"WH	B					
14	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	8"WH	C	28 b	20 a	5 a	73 e	63 cde
14	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	8"WH	C					
15	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	8"WH	C	12 e	7 cd	1 b	13 h	13 h
15	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	8"WH	C					
16	FLEXSTAR	1.88	EC	0.352	lb ai/a	1.5	pt/a	8"WH	C	19 d	13 b	0 b	89 bc	83 ab
16	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	8"WH	C					
17	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	8"WH	C	34 a	16 ab	0 b	82 cd	66 c
17	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	8"WH	C					
17	COC (PRIME OIL)	100	SL	1	pt/a	1	pt/a	8"WH	C					
LSD (P=.05)										3.4	4.5	2.9	7.5	15.8
Replicate F										1.122	0.212	0.730	1.240	1.451
Replicate Prob(F)										0.3381	0.8104	0.4898	0.3028	0.2493
Treatment F										82.880	16.025	2.438	135.815	30.209
Treatment Prob(F)										0.0001	0.0001	0.0156	0.0001	0.0001

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

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Trial Comments

1. Protocol: Valent (V10206 MD 64.02 and 64.01).
2. Ratings: CI at 7 and 14 DAT; WC at 14 and 28 DAT.
3. DAT = Days after treatment.
Ratings at 7 DAT were on 6-1-10, 6-4-10, and 6-10-10 for the 2"WH, 4"WH, and 8"WH applications, respectively.
Ratings at 14 DAT were on 6-8-10, 6-11-10, and 6-17-10 for the 2"WH, 4"WH, and 8"WH applications, respectively.
Ratings at 28 DAT were on 6-22-10, 6-25-10, and 7-2-10 for the 2"WH, 4"WH, and 8"WH applications, respectively.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
Crop injury was necrosis, chlorosis, and stunting.
5. Blanket burndown application of glyphosate (1.12 lbae/A) plus 2,4-D (0.475 lbae/A) plus AMS was applied 4-13-10.
Blanket preemergence application of Gramoxone (3 pt/A) plus NIS (0.5% v/v) was applied 5-8-10.
6. Not harvested.