

Waterhemp control with Rinskor in sugarbeet

Trial ID: SB08-23 Study Dir.: Sprague, Stiles
 Conducted: Shiawassee County Investigator: Christy Sprague

Planting Date: May-23-2023 **Row Spacing:** 30 IN
Variety: Crystal G049 **No. of Reps:** 4
Population: 4.375 " spacing **% OM:** 1.9
Soil Type: SCL sandy clay loam **pH:** 6.7
Plot Size: 10 X 25 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Spring chisel plow; spring disk and soil finish twice.

Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	AMATU	waterhemp	Amaranthus tuberculatus
Crop	Code	Common Name	
1	BEAVP	sugarbeet	

Application Description

	A	B
Application Timing:	2-leaf	4-6 leaf
Date Treated:	Jun-14-2023	Jun-21-2023
Time Treated:	2:00 PM	9:45 AM
% Cloud Cover:	50	0
Air Temp., Unit:	71 F	75 F
% Relative Humidity:	41	54
Wind Speed/Unit/Dir:	6 MPH NNW	7 MPH ENE
Soil Temp, Unit:	83 F	79 F
Leaf Moist/Dew Presence (Y/N):	N	N
Soil Moist:	5	5

Crop Stage at Each Application

	A	B
Crop 1 Name:	BEAVP	BEAVP
Height:	1-2 " (2)	2-3 " (3)
Stage:	2L	4-6L

Weed Stage at Each Application

	A	B
Weed 1 Name:	AMATU	AMATU
Height:	0.5-3 " (2)	1-4 " (3)
Stage:	cot-4L (2L)	cot-8L (3L)

Weed Density

	1
Date:	Jun-21-2023
Weed Name:	AMATU
Density:	7 FT2

Application Equipment

Appl	Sprayer Type	Ground Speed	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	Spray Volume	Carrier	Operation Pressure
A	CUB	3.8 MPH	AIXR	11003	24.0 "	20 "	100 "	19 GPA	WATER	30 PSI
B	CUB	3.8 MPH	AIXR	11003	24.0 "	20 "	100 "	19 GPA	WATER	30 PSI

Comments: Dry conditions early in the season resulted in erratic sugarbeet and waterhemp emergence. Significant precipitation did not occur until June 26 and continued throughout July and August improving incorporation of residual herbicides.

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Rating Date	Jun-20-2023	Jun-20-2023	Jun-29-2023	Jun-29-2023	Jul-7-2023	Jul-7-2023
Rating Type	injury	control	injury	control	injury	control
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100
Crop Type, Code	C, BEAVP		C, BEAVP		C, BEAVP	
Pest Code		AMATU		AMATU		AMATU
Trt-Eval Interval	6 DA-A	6 DA-A	8 DA-B	8 DA-B	16 DA-B	16 DA-B
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing	Jun-20-2023 injury	Jun-20-2023 control	Jun-29-2023 injury	Jun-29-2023 control	Jul-7-2023 injury	Jul-7-2023 control
1	Untreated					0	0	0	0	0	0
2	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	A	coty-2 leaf	13	17	22	40	12	19
	Destiny HC	1.5	pt/a	A	coty-2 leaf						
	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	B	4-6 leaf						
	Destiny HC	1.5	pt/a	B	4-6 leaf						
3	Florpyrauxifen (F7B-71-1)	2.06	fl oz/a	A	coty-2 leaf	17	22	20	43	15	15
	Destiny HC	1.5	pt/a	A	coty-2 leaf						
	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	B	4-6 leaf						
	Destiny HC	1.5	pt/a	B	4-6 leaf						
4	Florpyrauxifen (F7B-71-1)	2.74	fl oz/a	A	coty-2 leaf	18	23	23	45	13	24
	Destiny HC	1.5	pt/a	A	coty-2 leaf						
	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	B	4-6 leaf						
	Destiny HC	1.5	pt/a	B	4-6 leaf						
5	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	A	coty-2 leaf	25	62	23	87	12	92
	Ethofumesate	6	fl oz/a	A	coty-2 leaf						
	Dual Magnum	1	pt/a	A	coty-2 leaf						
	Roundup PowerMax 3	25	fl oz/a	A	coty-2 leaf						
	Destiny HC	1.5	pt/a	A	coty-2 leaf						
	AMSOL	2.5	% v/v	A	coty-2 leaf						
	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	B	4-6 leaf						
	Ethofumesate	6	fl oz/a	B	4-6 leaf						
	Dual Magnum	1	pt/a	B	4-6 leaf						
	Roundup PowerMax 3	25	fl oz/a	B	4-6 leaf						
	Destiny HC	1.5	pt/a	B	4-6 leaf						
	AMSOL	2.5	% v/v	B	4-6 leaf						
6	Florpyrauxifen (F7B-71-1)	2.06	fl oz/a	A	coty-2 leaf	25	63	22	92	14	99
	Ethofumesate	6	fl oz/a	A	coty-2 leaf						
	Dual Magnum	1	pt/a	A	coty-2 leaf						
	Roundup PowerMax 3	25	fl oz/a	A	coty-2 leaf						
	Destiny HC	1.5	pt/a	A	coty-2 leaf						
	AMSOL	2.5	% v/v	A	coty-2 leaf						
	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	B	4-6 leaf						
	Ethofumesate	6	fl oz/a	B	4-6 leaf						
	Dual Magnum	1	pt/a	B	4-6 leaf						
	Roundup PowerMax 3	25	fl oz/a	B	4-6 leaf						
	Destiny HC	1.5	pt/a	B	4-6 leaf						
	AMSOL	2.5	% v/v	B	4-6 leaf						
7	Florpyrauxifen (F7B-71-1)	2.74	fl oz/a	A	coty-2 leaf	25	67	23	88	17	97
	Ethofumesate	6	fl oz/a	A	coty-2 leaf						
	Dual Magnum	1	pt/a	A	coty-2 leaf						
	Roundup PowerMax 3	25	fl oz/a	A	coty-2 leaf						
	Destiny HC	1.5	pt/a	A	coty-2 leaf						
	AMSOL	2.5	% v/v	A	coty-2 leaf						
	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	B	4-6 leaf						
	Ethofumesate	6	fl oz/a	B	4-6 leaf						
	Dual Magnum	1	pt/a	B	4-6 leaf						
	Roundup PowerMax 3	25	fl oz/a	B	4-6 leaf						
	Destiny HC	1.5	pt/a	B	4-6 leaf						
	AMSOL	2.5	% v/v	B	4-6 leaf						
8	Loyant (GF-3206)	0.274	fl oz/a	A	coty-2 leaf	7	17	23	47	15	22
	Destiny HC	1.5	pt/a	A	coty-2 leaf						
	Loyant (GF-3206)	0.274	fl oz/a	B	4-6 leaf						
	Destiny HC	1.5	pt/a	B	4-6 leaf						

Missing data estimates are included in columns: Average=1,2,3,4,6,7,8

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Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

Rating Date		Jun-20-2023	Jun-20-2023	Jun-29-2023	Jun-29-2023	Jul-7-2023	Jul-7-2023
Rating Type		injury	control	injury	control	injury	control
Rating Unit/Min/Max		%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100
Crop Type, Code		C, BEAVP		C, BEAVP		C, BEAVP	
Pest Code			AMATU		AMATU		AMATU
Trt-Eval Interval		6 DA-A	6 DA-A	8 DA-B	8 DA-B	16 DA-B	16 DA-B
Number of Decimals		0	0	0	0	0	0
Trt Treatment	Rate	Appl	Appl				
No. Name	Rate Unit	Code	Timing				
9 Roundup PowerMax 3	25 fl oz/a	A	coty-2 leaf	0	13	0	18
Destiny HC	1.5 pt/a	A	coty-2 leaf				0
AMSOL	2.5 % v/v	A	coty-2 leaf				0
Roundup PowerMax 3	25 fl oz/a	B	4-6 leaf				
Destiny HC	1.5 pt/a	B	4-6 leaf				
AMSOL	2.5 % v/v	B	4-6 leaf				
10 Ethofumesate	6 fl oz/a	A	coty-2 leaf	20	67	15	96
Dual Magnum	1 pt/a	A	coty-2 leaf				2
Roundup PowerMax 3	25 fl oz/a	A	coty-2 leaf				96
Destiny HC	1.5 pt/a	A	coty-2 leaf				
AMSOL	2.5 % v/v	A	coty-2 leaf				
Ethofumesate	6 fl oz/a	B	4-6 leaf				
Dual Magnum	1 pt/a	B	4-6 leaf				
Roundup PowerMax 3	25 fl oz/a	B	4-6 leaf				
Destiny HC	1.5 pt/a	B	4-6 leaf				
AMSOL	2.5 % v/v	B	4-6 leaf				
11 Stinger HL	1.2 fl oz/a	A	coty-2 leaf	23	68	20	85
Dual Magnum	1 pt/a	A	coty-2 leaf				18
Roundup PowerMax 3	25 fl oz/a	A	coty-2 leaf				90
AMSOL	2.5 % v/v	A	coty-2 leaf				
Stinger HL	2.4 fl oz/a	B	4-6 leaf				
Dual Magnum	1 pt/a	B	4-6 leaf				
Roundup PowerMax 3	25 fl oz/a	B	4-6 leaf				
AMSOL	2.5 % v/v	B	4-6 leaf				
12 Stinger HL	1.2 fl oz/a	A	coty-2 leaf	18	63	37	95
Dual Magnum	1 pt/a	A	coty-2 leaf				23
Roundup PowerMax 3	25 fl oz/a	A	coty-2 leaf				98
AMSOL	2.5 % v/v	A	coty-2 leaf				
Ultra Blazer	16 fl oz/a	B	4-6 leaf				
Roundup PowerMax 3	25 fl oz/a	B	4-6 leaf				
AMSOL	2.5 % v/v	B	4-6 leaf				
LSD P=.05				5.7	12.8	6.5	18.5
Standard Deviation				3.4	7.5	3.8	10.9
CV				21.22	18.75	20.25	17.8
							31.85
							15.08

Missing data estimates are included in columns: Average=1,2,3,4,6,7,8

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Rating Date	Jul-19-2023	Jul-19-2023
Rating Type	injury	control
Rating Unit/Min/Max	%, 0, 100	%, 0, 100
Crop Type, Code	C, BEAVP	
Pest Code		AMATU
Trt-Eval Interval	28 DA-B	28 DA-B
Number of Decimals	0	0

Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing	Jul-19-2023 injury	Jul-19-2023 control
1	Untreated					0	0
2	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	A	coty-2 leaf	20	16
	Destiny HC	1.5	pt/a	A	coty-2 leaf		
	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	B	4-6 leaf		
	Destiny HC	1.5	pt/a	B	4-6 leaf		
3	Florpyrauxifen (F7B-71-1)	2.06	fl oz/a	A	coty-2 leaf	21	21
	Destiny HC	1.5	pt/a	A	coty-2 leaf		
	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	B	4-6 leaf		
	Destiny HC	1.5	pt/a	B	4-6 leaf		
4	Florpyrauxifen (F7B-71-1)	2.74	fl oz/a	A	coty-2 leaf	19	20
	Destiny HC	1.5	pt/a	A	coty-2 leaf		
	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	B	4-6 leaf		
	Destiny HC	1.5	pt/a	B	4-6 leaf		
5	Florpyrauxifen (F7B-71-1)	1.37	fl oz/a	A	coty-2 leaf	11	92
	Ethofumesate	6	fl oz/a	A	coty-2 leaf		
	Dual Magnum	1	pt/a	A	coty-2 leaf		
	Roundup PowerMax 3	25	fl oz/a	A	coty-2 leaf		
	Destiny HC	1.5	pt/a	A	coty-2 leaf		
	AMSOL	2.5	% v/v	A	coty-2 leaf		
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	Destiny HC	1.5	pt/a	B	4-6 leaf		
	AMSOL	2.5	% v/v	B	4-6 leaf		
6	Florpyrauxifen (F7B-71-1)	2.06	fl oz/a	A	coty-2 leaf	16	96
	Ethofumesate	6	fl oz/a	A	coty-2 leaf		
	Dual Magnum	1	pt/a	A	coty-2 leaf		
	Roundup PowerMax 3	25	fl oz/a	A	coty-2 leaf		
	Destiny HC	1.5	pt/a	A	coty-2 leaf		
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	Dual Magnum	1	pt/a	B	4-6 leaf		
	Roundup PowerMax 3	25	fl oz/a	B	4-6 leaf		
	Destiny HC	1.5	pt/a	B	4-6 leaf		
	AMSOL	2.5	% v/v	B	4-6 leaf		
7	Florpyrauxifen (F7B-71-1)	2.74	fl oz/a	A	coty-2 leaf	24	93
	Ethofumesate	6	fl oz/a	A	coty-2 leaf		
	Dual Magnum	1	pt/a	A	coty-2 leaf		
	Roundup PowerMax 3	25	fl oz/a	A	coty-2 leaf		
	Destiny HC	1.5	pt/a	A	coty-2 leaf		
	AMSOL	2.5	% v/v	A	coty-2 leaf		
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	Dual Magnum	1	pt/a	B	4-6 leaf		
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	Destiny HC	1.5	pt/a	B	4-6 leaf		
	AMSOL	2.5	% v/v	B	4-6 leaf		
8	Loyant (GF-3206)	0.274	fl oz/a	A	coty-2 leaf	13	22
	Destiny HC	1.5	pt/a	A	coty-2 leaf		
	Loyant (GF-3206)	0.274	fl oz/a	B	4-6 leaf		
	Destiny HC	1.5	pt/a	B	4-6 leaf		

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Rating Date	Jul-19-2023	Jul-19-2023
Rating Type	injury	control
Rating Unit/Min/Max	%, 0, 100	%, 0, 100
Crop Type, Code	C, BEAVP	
Pest Code	AMATU	
Trt-Eval Interval	28 DA-B	28 DA-B
Number of Decimals	0	0

Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing		
9	Roundup PowerMax 3	25 fl oz/a	A		coty-2 leaf	0	0
	Destiny HC	1.5 pt/a	A		coty-2 leaf		
	AMSOL	2.5 % v/v	A		coty-2 leaf		
	Roundup PowerMax 3	25 fl oz/a	B		4-6 leaf		
	Destiny HC	1.5 pt/a	B		4-6 leaf		
	AMSOL	2.5 % v/v	B		4-6 leaf		
10	Ethofumesate	6 fl oz/a	A		coty-2 leaf	5	95
	Dual Magnum	1 pt/a	A		coty-2 leaf		
	Roundup PowerMax 3	25 fl oz/a	A		coty-2 leaf		
	Destiny HC	1.5 pt/a	A		coty-2 leaf		
	AMSOL	2.5 % v/v	A		coty-2 leaf		
	Ethofumesate	6 fl oz/a	B		4-6 leaf		
	Dual Magnum	1 pt/a	B		4-6 leaf		
	Roundup PowerMax 3	25 fl oz/a	B		4-6 leaf		
	Destiny HC	1.5 pt/a	B		4-6 leaf		
	AMSOL	2.5 % v/v	B		4-6 leaf		
11	Stinger HL	1.2 fl oz/a	A		coty-2 leaf	21	84
	Dual Magnum	1 pt/a	A		coty-2 leaf		
	Roundup PowerMax 3	25 fl oz/a	A		coty-2 leaf		
	AMSOL	2.5 % v/v	A		coty-2 leaf		
	Stinger HL	2.4 fl oz/a	B		4-6 leaf		
	Dual Magnum	1 pt/a	B		4-6 leaf		
	Roundup PowerMax 3	25 fl oz/a	B		4-6 leaf		
	AMSOL	2.5 % v/v	B		4-6 leaf		
12	Stinger HL	1.2 fl oz/a	A		coty-2 leaf	23	96
	Dual Magnum	1 pt/a	A		coty-2 leaf		
	Roundup PowerMax 3	25 fl oz/a	A		coty-2 leaf		
	AMSOL	2.5 % v/v	A		coty-2 leaf		
	Ultra Blazer	16 fl oz/a	B		4-6 leaf		
	Roundup PowerMax 3	25 fl oz/a	B		4-6 leaf		
	AMSOL	2.5 % v/v	B		4-6 leaf		
	LSD P=.05					6.6	11.1
	Standard Deviation					4.6	7.7
	CV					31.92	14.53