

Waterhemp control from residual herbicide strategies in sugarbeet for weed control

Trial ID: SB05-25
 Conducted: Shiawassee Co. (Durand)

Study Dir.: Stiles, Sprague
 Investigator: Christy Sprague

Planting Date: May-12-2025
Variety: Crystal G229
Population: 4.375 " spacing
Soil Type: SCL sandy clay loam
Plot Size: 10 X 30 FT

Row Spacing: 30 "
No. of Reps: 4
% OM: 2.2
pH: 7.2
Study Design: Randomized Complete Block (RCB)

Tillage/Previous Crops: Spring cultivated.

Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	AMATU	tall waterhemp	Amaranthus tuberculatus
Crop	Code	Common Name	
1	BETVU	Sugarbeet	

Application Description

	A	B	C	D
Application Timing:	PRE	2 lf	6-8 lf	12 lf
Date Treated:	May-12-2025	Jun-10-2025	Jun-24-2025	Jul-8-2025
Time Treated:	8:30 PM	11:00 AM	8:50 AM	12:00 PM
% Cloud Cover:	10	75	15	20
Air Temp., Unit:	70 F	68 F	82 F	75 F
% Relative Humidity:	52	57	73	63
Wind Speed/Unit/Dir:	7 MPH SE	10 MPH WSW	4 MPH W	6 MPH SW
Soil Temp, Unit:	68 F	70 F	80 F	79 F
Leaf Moist/Dew Presence (Y/N):	N	N	N	N
Soil Moist:	4	5	5	5

Crop Stage at Each Application

	A	B	C	D
Crop 1 Name:	BETVU	BETVU	BETVU	BETVU
Height:	2 "	8-10 " (9)	12-14 " (13)	
Stage:	2 lf	6-8 lf	12 lf	

Weed Stage at Each Application

	A	B	C	D
Weed 1 Name:	AMATU	AMATU	AMATU	AMATU
Height:	0.25-3 " (1.5)	1-4 " (2.5)	1-14 " (8)	
Stage:	2-6L	4-12L	4-18L	

Weed Density

	1
Date:	Jun-10-2025
Weed Name:	AMATU
Density:	18 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	TTI	11003	20.0 "	20.0 "	120.0 "	19 GAL/AC	WATER	27 PSI
B	CUB	3.8 MPH	AIXR	11003	20.0 "	20.0 "	120.0 "	19 GAL/AC	WATER	30 PSI
C	CUB	3.8 MPH	AIXR	11003	24.0 "	20.0 "	120.0 "	19 GAL/AC	WATER	30 PSI
D	CUB	3.8 MPH	AIXR	11003	30.0 "	20.0 "	120.0 "	19 GAL/AC	WATER	30 PSI

Comments: The waterhemp at this location is glyphosate (Group 9) and ALS (Group 2) resistant.

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Investigator: Christy Sprague

Rating Date					Jun-10-2025	Jun-10-2025	Jun-24-2025	Jun-24-2025	Jul-22-2025	Jul-22-2025
Rating Type					injury	control	injury	injury	injury	control
Rating Unit					%	%	%	%	%	%
Crop Type, Code					C, BETVU		C, BETVU		C, BETVU	
Pest Code						AMATU		AMATU		AMATU
Treatment Appl. Interval					29 DA-A	29 DA-A	14 DA-B	14 DA-B	14 DA-D	14 DA-D
Number of Decimals					0	0	0	0	0	0
Trt No.	Treatment Name	Rate	Appl Code	Appl Timing						
		Rate Unit								
1	Dual Magnum	0.5 pt/a	A	PRE	0	97	0	74	0	68
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf						
	AMS	17 lb/100 gal	B	2 leaf						
	Dual Magnum	1.3 pt/a	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf						
	AMS	17 lb/100 gal	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf						
	AMS	17 lb/100 gal	D	12 leaf						
2	Ethofumesate	3 pt/a	A	PRE	3	100	0	100	0	100
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf						
	AMS	17 lb/100 gal	B	2 leaf						
	Dual Magnum	1.3 pt/a	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf						
	AMS	17 lb/100 gal	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf						
	AMS	17 lb/100 gal	D	12 leaf						
3	Dual Magnum	0.5 pt/a	A	PRE	3	100	0	100	0	98
	Ethofumesate	3 pt/a	A	PRE						
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf						
	AMS	17 lb/100 gal	B	2 leaf						
	Dual Magnum	1.3 pt/a	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf						
	AMS	17 lb/100 gal	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf						
	AMS	17 lb/100 gal	D	12 leaf						
4	Goltix	64 fl oz/a	A	PRE	3	100	0	99	0	97
	Ethofumesate	2.5 pt/a	A	PRE						
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf						
	AMS	17 lb/100 gal	B	2 leaf						
	Dual Magnum	1.3 pt/a	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf						
	AMS	17 lb/100 gal	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf						
	AMS	17 lb/100 gal	D	12 leaf						
5	Ethofumesate	6 fl oz/a	B	2 leaf	0	0	0	61	0	64
	Dual Magnum	1 pt/a	B	2 leaf						
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf						
	Destiny HC	1.5 pt/a	B	2 leaf						
	AMS	17 lb/100 gal	B	2 leaf						
	Ethofumesate	6 fl oz/a	C	6-8 leaf						
	Dual Magnum	1 pt/a	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf						
	Destiny HC	1.5 pt/a	C	6-8 leaf						
	AMS	17 lb/100 gal	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf						
	AMS	17 lb/100 gal	D	12 leaf						

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Rating Date					Jun-10-2025	Jun-10-2025	Jun-24-2025	Jun-24-2025	Jul-22-2025	Jul-22-2025
Rating Type					injury	control	injury	injury	injury	control
Rating Unit					%	%	%	%	%	%
Crop Type, Code					C, BETVU		C, BETVU		C, BETVU	
Pest Code						AMATU		AMATU		AMATU
Treatment Appl. Interval					29 DA-A	29 DA-A	14 DA-B	14 DA-B	14 DA-D	14 DA-D
Number of Decimals					0	0	0	0	0	0
Trt	Treatment	Rate	Appl	Appl						
No.	Name	Rate Unit	Code	Timing						
6	Dual Magnum	0.5 pt/a	A	PRE	4	96	0	89	0	80
	Dual Magnum	1 pt/a	B	2 leaf						
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf						
	Destiny HC	1.5 pt/a	B	2 leaf						
	AMS	17 lb/100 gal	B	2 leaf						
	Ethofumesate	6 fl oz/a	C	6-8 leaf						
	Dual Magnum	1 pt/a	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf						
	Destiny HC	1.5 pt/a	C	6-8 leaf						
	AMS	17 lb/100 gal	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf						
	AMS	17 lb/100 gal	D	12 leaf						
7	Ethofumesate	3 pt/a	A	PRE	3	100	3	100	0	100
	Dual Magnum	1 pt/a	B	2 leaf						
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf						
	Destiny HC	1.5 pt/a	B	2 leaf						
	AMS	17 lb/100 gal	B	2 leaf						
	Ethofumesate	6 fl oz/a	C	6-8 leaf						
	Dual Magnum	1 pt/a	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf						
	Destiny HC	1.5 pt/a	C	6-8 leaf						
	AMS	17 lb/100 gal	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf						
	AMS	17 lb/100 gal	D	12 leaf						
8	Dual Magnum	0.5 pt/a	A	PRE	0	100	3	100	0	99
	Ethofumesate	3 pt/a	A	PRE						
	Dual Magnum	1 pt/a	B	2 leaf						
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf						
	Destiny HC	1.5 pt/a	B	2 leaf						
	AMS	17 lb/100 gal	B	2 leaf						
	Ethofumesate	6 fl oz/a	C	6-8 leaf						
	Dual Magnum	1 pt/a	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf						
	Destiny HC	1.5 pt/a	C	6-8 leaf						
	AMS	17 lb/100 gal	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf						
	AMS	17 lb/100 gal	D	12 leaf						
9	Untreated				0	0	0	0	0	0
10	Dual Magnum	0.5 pt/a	A	PRE	0	95	0	91	0	87
	Dual Magnum	1 pt/a	B	2 leaf						
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf						
	AMS	17 lb/100 gal	B	2 leaf						
	Dual Magnum	1 pt/a	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf						
	AMS	17 lb/100 gal	C	6-8 leaf						
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf						
	AMS	17 lb/100 gal	D	12 leaf						

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Rating Date					Jun-10-2025	Jun-10-2025	Jun-24-2025	Jun-24-2025	Jul-22-2025	Jul-22-2025	
Rating Type					injury	control	injury	injury	injury	control	
Rating Unit					%	%	%	%	%	%	
Crop Type, Code					C, BETVU		C, BETVU		C, BETVU		
Pest Code						AMATU		AMATU		AMATU	
Treatment Appl. Interval					29 DA-A	29 DA-A	14 DA-B	14 DA-B	14 DA-D	14 DA-D	
Number of Decimals					0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Appl Timing						
11	Dual Magnum	0.5 pt/a	A	PRE		0	97	1	90	0	87
	Outlook	12 fl oz/a	B	2 leaf							
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf							
	AMS	17 lb/100 gal	B	2 leaf							
	Outlook	12 fl oz/a	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf							
	AMS	17 lb/100 gal	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf							
	AMS	17 lb/100 gal	D	12 leaf							
12	Dual Magnum	0.5 pt/a	A	PRE		0	99	6	96	0	91
	Warrant	3 pt/a	B	2 leaf							
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf							
	AMS	17 lb/100 gal	B	2 leaf							
	Warrant	3 pt/a	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf							
	AMS	17 lb/100 gal	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf							
	AMS	17 lb/100 gal	D	12 leaf							
13	Dual Magnum	0.5 pt/a	A	PRE		4	100	0	98	0	96
	Ethofumesate	3 pt/a	A	PRE							
	Dual Magnum	1 pt/a	B	2 leaf							
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf							
	AMS	17 lb/100 gal	B	2 leaf							
	Dual Magnum	1 pt/a	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf							
	AMS	17 lb/100 gal	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf							
	AMS	17 lb/100 gal	D	12 leaf							
14	Dual Magnum	0.5 pt/a	A	PRE		5	99	0	100	0	100
	Ethofumesate	3 pt/a	A	PRE							
	Outlook	12 fl oz/a	B	2 leaf							
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf							
	AMS	17 lb/100 gal	B	2 leaf							
	Outlook	12 fl oz/a	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf							
	AMS	17 lb/100 gal	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf							
	AMS	17 lb/100 gal	D	12 leaf							
15	Dual Magnum	0.5 pt/a	A	PRE		1	100	1	100	0	98
	Ethofumesate	3 pt/a	A	PRE							
	Warrant	3 pt/a	B	2 leaf							
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf							
	AMS	17 lb/100 gal	B	2 leaf							
	Warrant	3 pt/a	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf							
	AMS	17 lb/100 gal	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf							
	AMS	17 lb/100 gal	D	12 leaf							
16	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		0	0	0	15	0	16
	AMS	17 lb/100 gal	B	2 leaf							
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf							
	AMS	17 lb/100 gal	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf							
	AMS	17 lb/100 gal	D	12 leaf							

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Study Director: Stiles, Sprague Sponsor Contact:

Investigator: Christy Sprague

Rating Date					Jun-10-2025	Jun-10-2025	Jun-24-2025	Jun-24-2025	Jul-22-2025	Jul-22-2025	
Rating Type					injury	control	injury	injury	injury	control	
Rating Unit					%	%	%	%	%	%	
Crop Type, Code					C, BETVU		C, BETVU		C, BETVU		
Pest Code						AMATU		AMATU		AMATU	
Treatment Appl. Interval					29 DA-A	29 DA-A	14 DA-B	14 DA-B	14 DA-D	14 DA-D	
Number of Decimals					0	0	0	0	0	0	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Appl Timing						
17	Dual Magnum	0.5 pt/a	A	PRE		0	98	0	90	5	96
	Warrant	3 pt/a	B	2 leaf							
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf							
	AMS	17 lb/100 gal	B	2 leaf							
	Ultra Blazer	1 pt/a	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf							
	AMS	17 lb/100 gal	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf							
	AMS	17 lb/100 gal	D	12 leaf							
18	Dual Magnum	0.5 pt/a	A	PRE		1	96	0	90	4	97
	Warrant	3 pt/a	B	2 leaf							
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf							
	AMS	17 lb/100 gal	B	2 leaf							
	Ultra Blazer	1 pt/a	C	6-8 leaf							
	Warrant	3 pt/a	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf							
	AMS	17 lb/100 gal	C	6-8 leaf							
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf							
19	Dual Magnum	0.5 pt/a	A	PRE		0	99	1	94	15	99
	Warrant	3 pt/a	B	2 leaf							
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf							
	AMS	17 lb/100 gal	B	2 leaf							
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf							
	AMS	17 lb/100 gal	C	6-8 leaf							
	Ultra Blazer	1 pt/a	D	12 leaf							
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf							
	AMS	17 lb/100 gal	D	12 leaf							
20	Dual Magnum	0.5 pt/a	A	PRE		0	100	3	95	14	99
	Warrant	3 pt/a	B	2 leaf							
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf							
	AMS	17 lb/100 gal	B	2 leaf							
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf							
	AMS	17 lb/100 gal	C	6-8 leaf							
	Ultra Blazer	1 pt/a	D	12 leaf							
	Warrant	3 pt/a	D	12 leaf							
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf							
LSD P=.05					4.1	4.5	3.7	10.9	0.8	10.8	
Standard Deviation					2.9	3.2	2.6	7.7	0.6	7.6	
CV					229.91	3.79	298.46	9.14	31.29	9.16	

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Investigator: Christy Sprague

Rating Date	Aug-12-2025	Aug-12-2025
Rating Type	injury	control
Rating Unit	%	%
Crop Type, Code	C, BETVU	
Pest Code		AMATU
Treatment Appl. Interval	35 DA-D	35 DA-D
Number of Decimals	0	0

Trt	Treatment	Rate	Appl	Appl		
No.	Name	Rate Unit	Code	Timing		
1	Dual Magnum	0.5 pt/a	A	PRE	0	60
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Dual Magnum	1.3 pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		
2	Ethofumesate	3 pt/a	A	PRE	0	94
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Dual Magnum	1.3 pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		
3	Dual Magnum	0.5 pt/a	A	PRE	0	96
	Ethofumesate	3 pt/a	A	PRE		
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Dual Magnum	1.3 pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		
4	Goltix	64 fl oz/a	A	PRE	0	96
	Ethofumesate	2.5 pt/a	A	PRE		
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Dual Magnum	1.3 pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		
5	Ethofumesate	6 fl oz/a	B	2 leaf	0	57
	Dual Magnum	1 pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	Destiny HC	1.5 pt/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Ethofumesate	6 fl oz/a	C	6-8 leaf		
	Dual Magnum	1 pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	Destiny HC	1.5 pt/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		

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Study Director: Stiles, Sprague Sponsor Contact:

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Rating Date	Aug-12-2025	Aug-12-2025
Rating Type	injury	control
Rating Unit	%	%
Crop Type, Code	C, BETVU	
Pest Code		AMATU
Treatment Appl. Interval	35 DA-D	35 DA-D
Number of Decimals	0	0

Trt	Treatment	Rate	Appl	Appl		
No.	Name	Rate Unit	Code	Timing		
6	Dual Magnum	0.5 pt/a	A	PRE	0	77
	Dual Magnum	1 pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	Destiny HC	1.5 pt/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Ethofumesate	6 fl oz/a	C	6-8 leaf		
	Dual Magnum	1 pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	Destiny HC	1.5 pt/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		
7	Ethofumesate	3 pt/a	A	PRE	0	99
	Dual Magnum	1 pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	Destiny HC	1.5 pt/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Ethofumesate	6 fl oz/a	C	6-8 leaf		
	Dual Magnum	1 pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	Destiny HC	1.5 pt/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		
8	Dual Magnum	0.5 pt/a	A	PRE	0	100
	Ethofumesate	3 pt/a	A	PRE		
	Dual Magnum	1 pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	Destiny HC	1.5 pt/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Ethofumesate	6 fl oz/a	C	6-8 leaf		
	Dual Magnum	1 pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	Destiny HC	1.5 pt/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		
9	Untreated				0	0
10	Dual Magnum	0.5 pt/a	A	PRE	0	80
	Dual Magnum	1 pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Dual Magnum	1 pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		

Missing data estimates are included in columns: Average=1

Could not calculate LSD (% mean diff) or mean separation letters for columns 7 because error variance is 0.

Mean separation letters are 'na' (not applicable) when error variance is 0

Waterhemp control from residual herbicide strategies in sugarbeet for weed control

Trial ID: SB05-25

Protocol ID: SB05-25 Location: Shiawassee Co. (Durand) Trial Year: 2025

Study Director: Stiles, Sprague Sponsor Contact:

Investigator: Christy Sprague

Rating Date	Aug-12-2025	Aug-12-2025
Rating Type	injury	control
Rating Unit	%	%
Crop Type, Code	C, BETVU	
Pest Code		AMATU
Treatment Appl. Interval	35 DA-D	35 DA-D
Number of Decimals	0	0

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Appl Timing		
11	Dual Magnum	0.5 pt/a	pt/a	A	PRE	0	83
	Outlook	12 fl oz/a	fl oz/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	lb/100 gal	B	2 leaf		
	Outlook	12 fl oz/a	fl oz/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	lb/100 gal	D	12 leaf		
12	Dual Magnum	0.5 pt/a	pt/a	A	PRE	0	86
	Warrant	3 pt/a	pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	lb/100 gal	B	2 leaf		
	Warrant	3 pt/a	pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	lb/100 gal	D	12 leaf		
13	Dual Magnum	0.5 pt/a	pt/a	A	PRE	0	95
	Ethofumesate	3 pt/a	pt/a	A	PRE		
	Dual Magnum	1 pt/a	pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	lb/100 gal	B	2 leaf		
	Dual Magnum	1 pt/a	pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	lb/100 gal	D	12 leaf		
14	Dual Magnum	0.5 pt/a	pt/a	A	PRE	0	99
	Ethofumesate	3 pt/a	pt/a	A	PRE		
	Outlook	12 fl oz/a	fl oz/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	lb/100 gal	B	2 leaf		
	Outlook	12 fl oz/a	fl oz/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	lb/100 gal	D	12 leaf		
15	Dual Magnum	0.5 pt/a	pt/a	A	PRE	0	96
	Ethofumesate	3 pt/a	pt/a	A	PRE		
	Warrant	3 pt/a	pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	lb/100 gal	B	2 leaf		
	Warrant	3 pt/a	pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	lb/100 gal	D	12 leaf		
16	Roundup PowerMax 3	30 fl oz/a	fl oz/a	B	2 leaf	0	0
	AMS	17 lb/100 gal	lb/100 gal	B	2 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	lb/100 gal	D	12 leaf		

Missing data estimates are included in columns: Average=1

Could not calculate LSD (% mean diff) or mean separation letters for columns 7 because error variance is 0.

Mean separation letters are 'na' (not applicable) when error variance is 0

Waterhemp control from residual herbicide strategies in sugarbeet for weed control

Trial ID: SB05-25

Protocol ID: SB05-25 Location: Shiawassee Co. (Durand) Trial Year: 2025

Study Director: Stiles, Sprague Sponsor Contact:

Investigator: Christy Sprague

Rating Date					Aug-12-2025	Aug-12-2025
Rating Type					injury	control
Rating Unit					%	%
Crop Type, Code					C, BETVU	
Pest Code						AMATU
Treatment Appl. Interval					35 DA-D	35 DA-D
Number of Decimals					0	0
Trt	Treatment	Rate	Appl	Appl		
No.	Name	Rate Unit	Code	Timing		
17	Dual Magnum	0.5 pt/a	A	PRE	0	89
	Warrant	3 pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Ultra Blazer	1 pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		
18	Dual Magnum	0.5 pt/a	A	PRE	0	92
	Warrant	3 pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Ultra Blazer	1 pt/a	C	6-8 leaf		
	Warrant	3 pt/a	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		
19	Dual Magnum	0.5 pt/a	A	PRE	0	94
	Warrant	3 pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Ultra Blazer	1 pt/a	D	12 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		
20	Dual Magnum	0.5 pt/a	A	PRE	0	94
	Warrant	3 pt/a	B	2 leaf		
	Roundup PowerMax 3	30 fl oz/a	B	2 leaf		
	AMS	17 lb/100 gal	B	2 leaf		
	Roundup PowerMax 3	20 fl oz/a	C	6-8 leaf		
	AMS	17 lb/100 gal	C	6-8 leaf		
	Ultra Blazer	1 pt/a	D	12 leaf		
	Warrant	3 pt/a	D	12 leaf		
	Roundup PowerMax 3	20 fl oz/a	D	12 leaf		
	AMS	17 lb/100 gal	D	12 leaf		
LSD P=.05					.	12.8
Standard Deviation					0.0	9.0
CV					0.0	11.37

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