

Waterhemp control with Metamitron in sugarbeet

Trial ID: SB05-22 Study Dir.: Sprague, Stiles, Powell
 Conducted: Shiawassee County Investigator:

Planting Date: May-24-2022 **Row Spacing:** 30 IN
Variety: Crystal G049 **No. of Reps:** 4
Population: 4.375 " spacing **% OM:** 2
Soil Type: SL sandy loam **pH:** 5.7
Plot Size: 10 X 25 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall chisel plow; spring disk and soil finished
Fertilizer:

Crop and Weed Description

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

Application Description

Application Timing: A
Date Treated: PRE
 May-24-2022
Time Treated: 1:40 PM
% Cloud Cover: 5
Air Temp., Unit: 68 F
% Relative Humidity: 38
Wind Speed/Unit/Dir: 3 MPH NE
Soil Temp, Unit: 70 F
Leaf Moist/Dew Presence (Y/N): N
Soil Moist: 4

Crop Stage at Each Application

Crop 1 Name: A
 BEAVA
Height:
Stage:

Weed Stage at Each Application

Weed 1 Name: A
 AMATU
Height:
Stage:

Weed Density

Date: 1
 May-24-2022
Weed Name: AMATU
Density: 15 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	18.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	30 PSI

Comments: Waterhemp at this location is glyphosate- (Group 9) and ALS- (Group 2) resistant. Location: 42°50'9.86"N; 84° 9'1.65"W.

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 Protocol ID: SB05-22 Location: Shiawassee County Trial Year: 2022
 Project ID: Project ID 2: Project ID 3:
 Study Director: Sprague, Stiles, Powell Sponsor Contact:
 Investigator (Creator): Christy Sprague

Pest Code	AMATU	AMATU	AMATU	AMATU	AMATU	AMATU	AMATU
Rating Date	Jun-8-2022	Jun-14-2022	Jun-21-2022	Jun-21-2022	Jul-7-2022	Jul-7-2022	Jul-19-2022
Rating Type	control	control	control	counts	control	counts	control
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	0.5 m2, 0, 100	%, 0, 100	0.5 m2, 0, 100	%, 0, 100
Trt-Eval Interval	15 DA-A	21 DA-A	28 DA-A	28 DA-A	44 DA-A	44 DA-A	56 DA-A
Number of Decimals	0	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Appl Unit	Appl Timing	Code	100	99	92	1	85	2	86
1	Dual Magnum	0.5 pt/a	PRE	A		100	99	92	1	85	2	86
2	Ethofumesate	2 pt/a	PRE	A		100	99	93	1	87	3	89
3	Ethofumesate	3 pt/a	PRE	A		99	100	98	1	92	1	91
4	Untreated			A		0	0	0	62	0	84	0
5	Metatmitron	19.6 fl oz/a	PRE	A		23	33	10	82	0	92	0
6	Metatmitron	39 fl oz/a	PRE	A		53	55	38	56	28	67	25
7	Metatmitron	59 fl oz/a	PRE	A		91	78	58	12	63	22	61
8	Metatmitron	78 fl oz/a	PRE	A		98	89	76	6	70	9	64
9	Metatmitron	19.6 fl oz/a	PRE	A		100	100	95	1	89	2	91
	Ethofumesate	2 pt/a	PRE	A								
10	Metatmitron	39 fl oz/a	PRE	A		100	99	93	0	88	2	87
	Ethofumesate	2 pt/a	PRE	A								
11	Metatmitron	59 fl oz/a	PRE	A		100	99	97	0	90	1	90
	Ethofumesate	2 pt/a	PRE	A								
12	Metatmitron	78 fl oz/a	PRE	A		100	99	93	1	90	2	88
	Ethofumesate	2 pt/a	PRE	A								
13	Metatmitron	19.6 fl oz/a	PRE	A		100	99	95	1	89	2	87
	Ethofumesate	3 pt/a	PRE	A								
14	Metatmitron	39 fl oz/a	PRE	A		99	97	91	2	86	2	82
	Ethofumesate	3 pt/a	PRE	A								
15	Metatmitron	59 fl oz/a	PRE	A		100	99	89	1	83	1	83
	Ethofumesate	3 pt/a	PRE	A								
16	Metatmitron	78 fl oz/a	PRE	A		99	97	89	1	82	2	84
	Ethofumesate	3 pt/a	PRE	A								
	LSD P=.05					9.6	10.3	8.5	20.1	9.8	22.6	10.8
	Standard Deviation					6.7	7.2	6.0	14.1	6.9	15.9	7.6
	CV					7.92	8.66	7.95	99.28	9.79	87.08	10.95

Could not calculate LSD (% mean diff) for columns 10,11 because error mean square = 0.

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 Investigator (Creator): Christy Sprague

Pest Code	AMATU	AMATU
Rating Date	Jul-19-2022	Jul-26-2022
Rating Type	counts	control
Rating Unit/Min/Max	0.5 m2, 0, 100	%, 0, 100
Trt-Eval Interval	56 DA-A	63 DA-A
Number of Decimals	0	0

Trt No.	Treatment Name	Rate	Unit	Appl Timing	Appl Code		
1	Dual Magnum	0.5	pt/a	PRE	A	3	81
2	Ethofumesate	2	pt/a	PRE	A	3	81
3	Ethofumesate	3	pt/a	PRE	A	1	87
4	Untreated				A	63	0
5	Metatmitron	19.6	fl oz/a	PRE	A	70	15
6	Metatmitron	39	fl oz/a	PRE	A	56	24
7	Metatmitron	59	fl oz/a	PRE	A	17	46
8	Metatmitron	78	fl oz/a	PRE	A	8	56
9	Metatmitron	19.6	fl oz/a	PRE	A	2	77
	Ethofumesate	2	pt/a	PRE	A		
10	Metatmitron	39	fl oz/a	PRE	A	3	77
	Ethofumesate	2	pt/a	PRE	A		
11	Metatmitron	59	fl oz/a	PRE	A	1	84
	Ethofumesate	2	pt/a	PRE	A		
12	Metatmitron	78	fl oz/a	PRE	A	3	81
	Ethofumesate	2	pt/a	PRE	A		
13	Metatmitron	19.6	fl oz/a	PRE	A	3	82
	Ethofumesate	3	pt/a	PRE	A		
14	Metatmitron	39	fl oz/a	PRE	A	2	76
	Ethofumesate	3	pt/a	PRE	A		
15	Metatmitron	59	fl oz/a	PRE	A	2	75
	Ethofumesate	3	pt/a	PRE	A		
16	Metatmitron	78	fl oz/a	PRE	A	2	77
	Ethofumesate	3	pt/a	PRE	A		
LSD P=.05						17.5	9.3 . .
Standard Deviation						12.3	6.5 . .
CV						83.37	10.24 . .

Could not calculate LSD (% mean diff) for columns 10,11 because error mean square = 0.