

Sugarbeet tolerance and control of herbicide-resistant waterhemp with postemergence herbicides

Trial ID: SB08-18 Study Dir.: Sprague, Powell, Stiles
 Conducted: Isabella Co. Investigator: Christy Sprague

Planting Date: May-1-2018 **Row Spacing:** 30 IN
Variety: Crystal G515 **No. of Reps:** 4
Population: 4.375 " spacing **% OM:** 2.9
Soil Type: SL sandy loam **pH:** 7.2
Plot Size: 10 X 25 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Spring disk; spring cultimulched
Fertilizer:

Crop and Weed Description

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

Application Description

A
Application Timing: POST
Date Treated: May-30-2018
Time Treated: 2:30 PM
% Cloud Cover: 40
Air Temp., Unit: 90 F
% Relative Humidity: 48
Wind Speed/Unit/Dir: 10 mph SE
Soil Temp, Unit: 77 F
Leaf Moist/Dew Presence (Y/N): 4
Soil Moist: 3

Crop Stage at Each Application

A
Crop 1 Name: BETVU
Height: 1-2 " (1.5)
Stage: 2L

Weed Stage at Each Application

A
Weed 1 Name: AMATU
Height: 1 "
Stage: 2L

Weed Density

1
Date: May-30-2018
Weed Name: AMATU
Density: 13 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	22 "	20 "	100 "	19 GPA	WATER	30 PSI

Comments:

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Pest Code		AMATU	AMATU	AMATU	AMATU
Crop Code	BETVU				
Rating Date	Jun-14-2018	Jun-14-2018	Jun-21-2018	Jun-29-2018	Jul-9-2018
Rating Type	injury	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Trt-Eval Interval	15 DA-A	15 DA-A	22 DA-A	30 DA-A	40 DA-A
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code					
1	Roundup PowerMax	4.5	SL	32 fl oz/a	A		0	7	10	8	0
1	AMS		WG	17 lb/100 gal	A						
2	Ethofumesate	4	L	10.4 fl oz/a	A		2	33	13	12	7
2	Roundup PowerMax	4.5	SL	32 fl oz/a	A						
2	Destiny HC		L	1.5 pt/a	A						
2	AMS		WG	17 lb/100 gal	A						
3	Ethofumesate	4	L	13.76 fl oz/a	A		0	40	47	43	23
3	Roundup PowerMax	4.5	SL	32 fl oz/a	A						
3	Destiny HC		L	1.5 pt/a	A						
3	AMS		WG	17 lb/100 gal	A						
4	Spin-Aid (phenmedipham)	1.3	L	32 fl oz/a	A		0	35	43	43	23
4	Roundup PowerMax	4.5	SL	32 fl oz/a	A						
4	AMS		WG	17 lb/100 gal	A						
5	Betanex (desmedipham)	1.3	L	32 fl oz/a	A		4	40	17	10	17
5	Roundup PowerMax	4.5	SL	32 fl oz/a	A						
5	AMS		WG	17 lb/100 gal	A						
6	Goltix	50	WG	2 lb/a	A		5	30	13	12	17
6	Roundup PowerMax	4.5	SL	32 fl oz/a	A						
6	Destiny HC		L	1.5 pt/a	A						
6	AMS		WG	17 lb/100 gal	A						
7	Betamix (des + phen)	1.3	L	32 fl oz/a	A		7	43	48	47	37
7	Roundup PowerMax	4.5	SL	32 fl oz/a	A						
7	AMS		WG	17 lb/100 gal	A						
8	Powertwin (etho + phen)	3.33	L	25 fl oz/a	A		8	47	57	55	33
8	Roundup PowerMax	4.5	SL	32 fl oz/a	A						
8	AMS		WG	17 lb/100 gal	A						
9	Toreo (etho + meta)	4.15	L	44 fl oz/a	A		10	68	77	73	37
9	Roundup PowerMax	4.5	SL	32 fl oz/a	A						
9	Destiny HC		L	1.5 pt/a	A						
9	AMS		WG	17 lb/100 gal	A						
10	Spin-Aid (phenmedipham)	1.3	L	32 fl oz/a	A		7	50	53	50	30
10	Goltix	50	WG	2 lb/a	A						
10	Roundup PowerMax	4.5	SL	32 fl oz/a	A						
10	AMS		WG	17 lb/100 gal	A						
11	Betanex (desmedipham)	1.3	L	32 fl oz/a	A		3	60	62	61	40
11	Goltix	50	WG	2 lb/a	A						
11	Roundup PowerMax	4.5	SL	32 fl oz/a	A						
11	AMS		WG	17 lb/100 gal	A						

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code					
12	Powertwin (etho + phen)	3.33	L	25	fl oz/a	A	2	48	57	55	33
12	Goltix	50	WG	2	lb/a	A					
12	Roundup PowerMax	4.5	SL	32	fl oz/a	A					
12	AMS		WG	17	lb/100 gal	A					
	LSD P=.05			4.4				30.8	44.7	41.6	22.3
	Standard Deviation			2.6				18.2	26.4	24.6	13.2
	CV			64.4				43.51	63.8	62.93	53.35