

Waterhemp control options in XtendFlex soybean

Trial ID: SOY21-22 Study Dir.: Sprague, Stiles, Powell
 Conducted: Shiawassee County Investigator:

Planting Date: May-24-2022 **Row Spacing:** 30 IN
Variety: AG24XF1 **No. of Reps:** 4
Population: 150000 seeds/A **% OM:** 2.6
Soil Type: SCL sandy clay loam **pH:** 6.1
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	GLXMA	Soybean	

Application Description

	A	B	C
Application Timing:	PRE	EPOS	POST
Date Treated:	May-24-2022	Jun-21-2022	Jun-30-2022
Time Treated:	2:25 PM	9:45 AM	10:30 AM
% Cloud Cover:	5	0	0
Air Temp., Unit:	65 F	80 F	82 F
% Relative Humidity:	38	51	55
Wind Speed/Unit/Dir:	5 MPH NE	7 MPH W	10 MPH SW
Soil Temp, Unit:	70 F	75 F	81 F
Leaf Moist/Dew Presence (Y/N):	N	N	N
Soil Moist:	4	5	5

Crop Stage at Each Application

	A	B	C
Crop 1 Name:	GLXMA	GLXMA	GLXMA
Height:		3-5 " (4)	8 "
Stage:		V2	V4

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	AMATU	AMATU	AMATU
Height:		2-5 " (4)	0.5-14 " (10)
Stage:		4L-12L (8L)	2L-40L (20L)

Weed Density

Date:	1 Jun-30-2022
Weed Name:	AMATU
Density:	36 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	18.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	25 PSI
B	CUB	3.8 MPH	TTI	11003	24.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	25 PSI
C	CUB	3.8 MPH	TTI	11003	28.0 "	20.0 "	100.0 "	19 GAL/AC	WATER	25 PSI

Comments: Waterhemp at this location is Group 2 & 9 (ALS & glyphosate) resistant.

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 Protocol ID: SOY21-22 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	C, GLXMA	AMATU	AMATU	AMATU	C, GLXMA	AMATU
Crop Type, Code	Jun-14-2022	Jun-14-2022	Jun-21-2022	Jun-30-2022	Jul-7-2022	Jul-7-2022
Rating Date	injury	control	control	control	injury	control
Rating Type	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100
Rating Unit/Min/Max	21 DA-A	21 DA-A	28 DA-A	9 DA-B	7 DA-C	7 DA-C
Trt-Eval Interval	0	0	0	0	0	0
Number of Decimals						

Trt No.	Treatment Name	Rate	Unit	Appl Timing	Appl Code						
1	Valor EZ	2 fl oz/a		PRE	A	6	91	87	85	0	82
	Roundup PowerMax 3	30 fl oz/a		POST	C						
	AMS	17 lb/100 gal		POST	C						
2	Valor EZ	2 fl oz/a		PRE	A	6	94	88	82	0	96
	Liberty	32 fl oz/a		POST	C						
	Roundup PowerMax 3	30 fl oz/a		POST	C						
	AMS	17 lb/100 gal		POST	C						
3	Valor EZ	2 fl oz/a		PRE	A	6	93	90	86	0	93
	XtendiMax	22 fl oz/a		POST	C						
	Roundup PowerMax 3	30 fl oz/a		POST	C						
	VaporGrip	20 fl oz/a		POST	C						
	Cognitive 1	0.5 % v/v		POST	C						
4	Valor EZ	2 fl oz/a		PRE	A	6	92	89	84	0	96
	XtendiMax	22 fl oz/a		POST	C						
	Liberty	32 fl oz/a		POST	C						
	VaporGrip	20 fl oz/a		POST	C						
	Cognitive 1	0.5 % v/v		POST	C						
5	Valor EZ	2 fl oz/a		PRE	A	5	88	85	81	0	94
	Warrant	3 pt/a		POST	C						
	Liberty	32 fl oz/a		POST	C						
	Roundup PowerMax 3	30 fl oz/a		POST	C						
	AMS	17 lb/100 gal		POST	C						
6	Valor EZ	2 fl oz/a		PRE	A	10	90	85	84	0	90
	Warrant	3 pt/a		POST	C						
	XtendiMax	22 fl oz/a		POST	C						
	Roundup PowerMax 3	30 fl oz/a		POST	C						
	VaporGrip	20 fl oz/a		POST	C						
	Cognitive 1	0.5 % v/v		POST	C						
7	Valor EZ	2 fl oz/a		PRE	A	8	92	92	87	11	93
	Warrant Ultra	50 fl oz/a		POST	C						
	Roundup PowerMax 3	30 fl oz/a		POST	C						
	Crop oil concentrate	1 % v/v		POST	C						
	AMS	17 lb/100 gal		POST	C						
8	XtendiMax	22 fl oz/a		PRE	A	0	43	20	0	0	83
	Liberty	32 fl oz/a		POST	C						
	Roundup PowerMax 3	30 fl oz/a		POST	C						
	AMS	17 lb/100 gal		POST	C						
9	Roundup PowerMax 3	30 fl oz/a		EPOS	B	0	0	0	0	0	0
	AMS	17 lb/100 gal		EPOS	B						
10	Liberty	32 fl oz/a		EPOS	B	0	0	80	84	0	78
	Roundup PowerMax 3	30 fl oz/a		EPOS	B						
	AMS	17 lb/100 gal		EPOS	B						
11	XtendiMax	22 fl oz/a		EPOS	B	0	0	78	83	0	77
	Roundup PowerMax 3	30 fl oz/a		EPOS	B						
	VaporGrip	20 fl oz/a		EPOS	B						
	Cognitive 1	0.5 % v/v		EPOS	B						
12	XtendiMax	22 fl oz/a		EPOS	B	0	0	85	81	0	72
	Liberty	32 fl oz/a		EPOS	B						
	VaporGrip	20 fl oz/a		EPOS	B						
	Cognitive 1	0.5 % v/v		EPOS	B						
	LSD P=.05					2.7	9.4	10.7	10.4	0.5	8.3
	Standard Deviation					1.9	6.4	7.4	7.1	0.3	5.7
	CV					47.71	11.31	10.04	10.19	34.52	7.17

Missing data estimates are included in columns: Average=1,2,3,4,5,6,7,8,9,10,11
 Could not calculate LSD (% mean diff) for columns 9,12 because error mean square = 0.

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Pest Code					AMATU	C, GLXMA	AMATU	AMATU		
Crop Type, Code					Jul-14-2022	Jul-28-2022	Jul-28-2022	Aug-15-2022		
Rating Date					injury	control	injury	control		
Rating Type										
Rating Unit/Min/Max					%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100		
Trt-Eval Interval					14 DA-C	14 DA-C	28 DA-C	28 DA-C		
Number of Decimals					0	0	0	0		
Trt No.	Treatment Name	Rate	Unit	Appl Timing	Appl Code					
1	Valor EZ	2 fl oz/a		PRE	A	0	70	0	67	63
	Roundup PowerMax 3	30 fl oz/a		POST	C					
	AMS	17 lb/100 gal		POST	C					
2	Valor EZ	2 fl oz/a		PRE	A	0	96	0	91	88
	Liberty	32 fl oz/a		POST	C					
	Roundup PowerMax 3	30 fl oz/a		POST	C					
	AMS	17 lb/100 gal		POST	C					
3	Valor EZ	2 fl oz/a		PRE	A	0	93	0	91	93
	XtendiMax	22 fl oz/a		POST	C					
	Roundup PowerMax 3	30 fl oz/a		POST	C					
	VaporGrip	20 fl oz/a		POST	C					
	Cognitive 1	0.5 % v/v		POST	C					
4	Valor EZ	2 fl oz/a		PRE	A	0	95	0	95	93
	XtendiMax	22 fl oz/a		POST	C					
	Liberty	32 fl oz/a		POST	C					
	VaporGrip	20 fl oz/a		POST	C					
	Cognitive 1	0.5 % v/v		POST	C					
5	Valor EZ	2 fl oz/a		PRE	A	0	94	0	92	89
	Warrant	3 pt/a		POST	C					
	Liberty	32 fl oz/a		POST	C					
	Roundup PowerMax 3	30 fl oz/a		POST	C					
	AMS	17 lb/100 gal		POST	C					
6	Valor EZ	2 fl oz/a		PRE	A	1	91	0	91	91
	Warrant	3 pt/a		POST	C					
	XtendiMax	22 fl oz/a		POST	C					
	Roundup PowerMax 3	30 fl oz/a		POST	C					
	VaporGrip	20 fl oz/a		POST	C					
	Cognitive 1	0.5 % v/v		POST	C					
7	Valor EZ	2 fl oz/a		PRE	A	10	93	0	93	91
	Warrant Ultra	50 fl oz/a		POST	C					
	Roundup PowerMax 3	30 fl oz/a		POST	C					
	Crop oil concentrate	1 % v/v		POST	C					
	AMS	17 lb/100 gal		POST	C					
8	XtendiMax	22 fl oz/a		PRE	A	0	70	0	66	63
	Liberty	32 fl oz/a		POST	C					
	Roundup PowerMax 3	30 fl oz/a		POST	C					
	AMS	17 lb/100 gal		POST	C					
9	Roundup PowerMax 3	30 fl oz/a		EPOS	B	0	0	0	0	0
	AMS	17 lb/100 gal		EPOS	B					
10	Liberty	32 fl oz/a		EPOS	B	0	62	0	52	58
	Roundup PowerMax 3	30 fl oz/a		EPOS	B					
	AMS	17 lb/100 gal		EPOS	B					
11	XtendiMax	22 fl oz/a		EPOS	B	0	74	0	66	68
	Roundup PowerMax 3	30 fl oz/a		EPOS	B					
	VaporGrip	20 fl oz/a		EPOS	B					
	Cognitive 1	0.5 % v/v		EPOS	B					
12	XtendiMax	22 fl oz/a		EPOS	B	0	61	0	55	57
	Liberty	32 fl oz/a		EPOS	B					
	VaporGrip	20 fl oz/a		EPOS	B					
	Cognitive 1	0.5 % v/v		EPOS	B					
	LSD P=.05					0.7	9.0	.	9.0	7.5 .
	Standard Deviation					0.5	6.2	0.0	6.2	5.1 .
	CV					51.17	8.22	0.0	8.69	7.2 .

Missing data estimates are included in columns: Average=1,2,3,4,5,6,7,8,9,10,11
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