

**Waterhemp control with Tendovo in Enlist E3 systems**

Trial ID: SOY28-23 Study Dir.: Sprague, Stiles  
 Conducted: Shiawassee County Investigator: Christy Sprague

**Planting Date:** May-17-2023 **Row Spacing:** 30 IN  
**Variety:** P25A16E **No. of Reps:** 4  
**Population:** 150000 S/A **% OM:** 1.5  
**Soil Type:** SCL sandy clay loam **pH:** 6.1  
**Plot Size:** 10 X 25 FT **Study Design:** Randomized Complete Block (RCB)

**Tillage/Previous Crops:** Spring chisel plowed, disked, and soil finished twice.  
**Fertilizer:**

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1	AMATU	waterhemp	Amaranthus tuberculatus
Crop	Code	Common Name	
1	GLXMA	Soybean	

**Application Description**

	A	B	C
<b>Application Timing:</b>	PRE	POST	LPOS
<b>Date Treated:</b>	May-17-2023	Jun-21-2023	Jul-7-2023
<b>Time Treated:</b>	12:00 PM	11:00 AM	10:20 AM
<b>% Cloud Cover:</b>	5	5	0
<b>Air Temp., Unit:</b>	51 F	79 F	70 F
<b>% Relative Humidity:</b>	50	49	57
<b>Wind Speed/Unit/Dir:</b>	10 MPH NE	7 MPH NE	5 MPH NE
<b>Soil Temp, Unit:</b>	57 F	82 F	76 F
<b>Leaf Moist/Dew Presence (Y/N):</b>		N	N
<b>Soil Moist:</b>	5	5	3

**Crop Stage at Each Application**

	A	B	C
<b>Crop 1 Name:</b>	GLXMA	GLXMA	GLXMA
<b>Height:</b>		2-6 " (6)	6-14 " (14)
<b>Stage:</b>		V2	V6

**Weed Stage at Each Application**

	A	B	C
<b>Weed 1 Name:</b>	AMATU	AMATU	AMATU
<b>Height:</b>		1-4 " (4)	2-10 " (4)
<b>Stage:</b>		3-many	3-many

**Weed Density**

<b>Date:</b>	1 Jun-21-2023
<b>Weed Name:</b>	AMATU
<b>Density:</b>	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	22.0 "	20 "	100.0 "	19 GPA	WATER	30 PSI
B	CUB	3.8 MPH	AIXR	11003	24.0 "	20 "	100.0 "	19 GPA	WATER	30 PSI
C	CUB	3.8 MPH	AIXR	11003	30.0 "	20 "	100.0 "	19 GPA	WATER	30 PSI

**Comments:** The waterhemp population at this location is resistant to glyphosate (Group 9) and the ALS-inhibiting (Group 2) herbicides.

Michigan State University

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Trial ID: SOY28-23

Protocol ID: SOY28-23 Location: Shiawassee County Trial Year: 2023

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

Rating Date	Jun-7-2023	Jun-20-2023	Jun-28-2023	Jul-7-2023	Jul-19-2023	Sep-21-2023
Rating Type	control	control	control	control	control	control
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100
Pest Code	AMATU	AMATU	AMATU	AMATU	AMATU	AMATU
Trt-Eval Interval	21 DA-A	34 DA-A	7 DA-B	16 DA-B	12 DA-C	76 DA-C
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing	Jun-7-2023	Jun-20-2023	Jun-28-2023	Jul-7-2023	Jul-19-2023	Sep-21-2023
1	Roundup PowerMax 3	30 fl oz/a		B	POST	0	0	0	0	0	0
	AMS	17 lb/100 gal		B	POST						
2	Tendovo	1.5 qt/a		A	PRE	100	87	98	100	100	96
	Enlist One	2 pt/a		B	POST						
	Roundup PowerMax 3	30 fl oz/a		B	POST						
	AMS	17 lb/100 gal		B	POST						
3	Tendovo	1.5 qt/a		A	PRE	100	90	100	100	100	100
	Dual Magnum	1.25 pt/a		B	POST						
	Enlist One	2 pt/a		B	POST						
	Roundup PowerMax 3	30 fl oz/a		B	POST						
	AMS	17 lb/100 gal		B	POST						
4	Tendovo	1.75 qt/a		A	PRE	100	89	99	100	100	99
	Dual Magnum	1.25 pt/a		B	POST						
	Enlist One	2 pt/a		B	POST						
	Roundup PowerMax 3	30 fl oz/a		B	POST						
	AMS	17 lb/100 gal		B	POST						
5	Zidua Pro	4.5 fl oz/a		A	PRE	100	89	99	100	100	100
	Dual Magnum	1.25 pt/a		B	POST						
	Enlist One	2 pt/a		B	POST						
	Roundup PowerMax 3	30 fl oz/a		B	POST						
	AMS	17 lb/100 gal		B	POST						
6	Tendovo	1.5 qt/a		A	PRE	100	86	85	83	98	100
	Dual Magnum	1.25 pt/a		C	LPOS						
	Enlist One	2 pt/a		C	LPOS						
	Roundup PowerMax 3	30 fl oz/a		C	LPOS						
	AMS	17 lb/100 gal		C	LPOS						
7	Tendovo	1.75 qt/a		A	PRE	100	91	91	86	99	100
	Dual Magnum	1.25 pt/a		C	LPOS						
	Enlist One	2 pt/a		C	LPOS						
	Roundup PowerMax 3	30 fl oz/a		C	LPOS						
	AMS	17 lb/100 gal		C	LPOS						
8	Zidua Pro	4.5 fl oz/a		A	PRE	100	90	91	87	97	100
	Dual Magnum	1.25 pt/a		C	LPOS						
	Enlist One	2 pt/a		C	LPOS						
	Roundup PowerMax 3	30 fl oz/a		C	LPOS						
	AMS	17 lb/100 gal		C	LPOS						
	LSD P=.05					0.5	8.6	8.1	9.9	3.8	3.0
	Standard Deviation					0.4	5.9	5.5	6.8	2.6	2.0
	CV					0.4	7.55	6.68	8.24	2.99	2.36

Missing data estimates are included in columns: Average=5,6,7

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Trial ID: SOY28-23

Protocol ID: SOY28-23 Location: Shiawassee County Trial Year: 2023

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

Rating Date	Oct-24-2023
Rating Type	control
Rating Unit/Min/Max	%, 0, 100
Pest Code	AMATU
Trt-Eval Interval	109 DA-C
Number of Decimals	0

Trt No.	Treatment Name	Rate	Unit	Appl Code	Appl Timing	
1	Roundup PowerMax 3	30 fl oz/a		B	POST	0
	AMS	17 lb/100 gal		B	POST	
2	Tendovo	1.5 qt/a		A	PRE	96
	Enlist One	2 pt/a		B	POST	
	Roundup PowerMax 3	30 fl oz/a		B	POST	
	AMS	17 lb/100 gal		B	POST	
3	Tendovo	1.5 qt/a		A	PRE	100
	Dual Magnum	1.25 pt/a		B	POST	
	Enlist One	2 pt/a		B	POST	
	Roundup PowerMax 3	30 fl oz/a		B	POST	
	AMS	17 lb/100 gal		B	POST	
4	Tendovo	1.75 qt/a		A	PRE	98
	Dual Magnum	1.25 pt/a		B	POST	
	Enlist One	2 pt/a		B	POST	
	Roundup PowerMax 3	30 fl oz/a		B	POST	
	AMS	17 lb/100 gal		B	POST	
5	Zidua Pro	4.5 fl oz/a		A	PRE	99
	Dual Magnum	1.25 pt/a		B	POST	
	Enlist One	2 pt/a		B	POST	
	Roundup PowerMax 3	30 fl oz/a		B	POST	
	AMS	17 lb/100 gal		B	POST	
6	Tendovo	1.5 qt/a		A	PRE	100
	Dual Magnum	1.25 pt/a		C	LPOS	
	Enlist One	2 pt/a		C	LPOS	
	Roundup PowerMax 3	30 fl oz/a		C	LPOS	
	AMS	17 lb/100 gal		C	LPOS	
7	Tendovo	1.75 qt/a		A	PRE	100
	Dual Magnum	1.25 pt/a		C	LPOS	
	Enlist One	2 pt/a		C	LPOS	
	Roundup PowerMax 3	30 fl oz/a		C	LPOS	
	AMS	17 lb/100 gal		C	LPOS	
8	Zidua Pro	4.5 fl oz/a		A	PRE	100
	Dual Magnum	1.25 pt/a		C	LPOS	
	Enlist One	2 pt/a		C	LPOS	
	Roundup PowerMax 3	30 fl oz/a		C	LPOS	
	AMS	17 lb/100 gal		C	LPOS	
	LSD P=.05					3.9
	Standard Deviation					2.7
	CV					3.09