

Waterhemp control in Roundup Ready 2 Xtend soybean with Tavium

Trial ID: SOY20-19 Study Dir.: Sprague, Powell, Stiles
 Conducted: Isabella Co. Investigator: Christy Sprague

Planting Date: Jul-8-2019 **Row Spacing:** 30 IN
Variety: AG26X8 **No. of Reps:** 4
Population: 150000 seeds/A **% OM:** 2.4
Soil Type: SL sandy loam **pH:** 6.1
Plot Size: 10 X 25 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Spring disked and cultimulched
Fertilizer:

Crop and Weed Description

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

Application Description

	A	B
Application Timing:	PRE	POST
Date Treated:	Jul-8-2019	Aug-9-2019
Time Treated:	2:15 PM	9:40 AM
% Cloud Cover:	15	0
Air Temp., Unit:	75 F	68 F
% Relative Humidity:	41	68
Wind Speed/Unit/Dir:	5 mph NE	8 mph W
Soil Temp, Unit:	80 F	69 F
Leaf Moist/Dew Presence (Y/N):	5	4
Soil Moist:	5	3

Crop Stage at Each Application

	A	B
Crop 1 Name:	GLXMA	GLXMA
Height:		14 "
Stage:		V5

Weed Stage at Each Application

	A	B
Weed 1 Name:	AMATU	AMATU
Height:		2-16 " (8)
Stage:		6-24L

Weed Density

	1
Date:	Aug-9-2019
Weed Name:	AMATU
Density:	20 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 "	120 "	19 GPA	WATER	30 psi
B	CUB	3.8 mph	TTI	11003	28 "	20 "	100 "	19 GPA	WATER	25 psi

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

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Pest Code	AMATU		AMATU		GLXMA
	GLXMA	AMATU	GLXMA	AMATU	
Crop Type, Code	Jul-29-2019	Jul-29-2019	Aug-8-2019	Aug-8-2019	Aug-16-2019
Rating Date	injury	control	injury	control	injury
Rating Type	percent	percent	percent	percent	percent
Rating Unit	21 DA-A	21 DA-A	31 DA-A	31 DA-A	7 DA-B
Trt-Eval Interval	0	0	0	0	0
Number of Decimals					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Timing	Appl Code					
1	Boundary	6.5 L		1.8 pt/a		PRE	A	2	99	3	84	12
1	Flexstar GT	2.82 L		3.5 pt/a		POST	B					
1	Dual II Magnum	7.64 L		1.25 pt/a		POST	B					
1	MSO	L		1 % v/v		POST	B					
1	AMS	WG		8.5 lb/100 gal		POST	B					
2	Boundary	6.5 L		1.8 pt/a		PRE	A	3	100	2	91	4
2	Tavium	3.4 L		56.5 fl oz/a		POST	B					
2	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
2	Class Act Ridion	L		1 % v/v		POST	B					
2	Intact	L		0.5 % v/v		POST	B					
3	Prefix	5.29 L		2 pt/a		PRE	A	2	100	2	91	3
3	Metribuzin	75 WG		6 oz/a		PRE	A					
3	Tavium	3.4 L		56.5 fl oz/a		POST	B					
3	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
3	Class Act Ridion	L		1 % v/v		POST	B					
3	Intact	L		0.5 % v/v		POST	B					
4	BroadAxe XC	7 L		25 fl oz/a		PRE	A	2	98	2	84	2
4	Metribuzin	75 WG		6 oz/a		PRE	A					
4	Tavium	3.4 L		56.5 fl oz/a		POST	B					
4	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
4	Class Act Ridion	L		1 % v/v		POST	B					
4	Intact	L		0.5 % v/v		POST	B					
5	Untreated							0	0	0	0	0
6	Zidua PRO	4.09 L		6 fl oz/a		PRE	A	0	96	1	80	2
6	Outlook	6 L		10 fl oz/a		POST	B					
6	Engenia	5 L		12.8 fl oz/a		POST	B					
6	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
6	Class Act Ridion	L		1 % v/v		POST	B					
6	Intact	L		0.5 % v/v		POST	B					
7	Tavium	3.4 L		56.5 fl oz/a		POST	B	0	0	0	0	1
7	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
7	Class Act Ridion	L		1 % v/v		POST	B					
7	Intact	L		0.5 % v/v		POST	B					
8	Engenia PRO	4.45 L		16 fl oz/a		POST	B	0	0	0	0	1
8	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
8	Class Act Ridion	L		1 % v/v		POST	B					
8	Intact	L		0.5 % v/v		POST	B					
LSD P=.05								1.4	3.8	2.8	6.7	2.5
Standard Deviation								1.0	2.6	1.9	4.6	1.7
CV								90.13	4.19	153.67	8.55	58.67

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Pest Code	AMATU		AMATU		AMATU
	Aug-16-2019	Aug-23-2019	Aug-23-2019	Sep-11-2019	Sep-11-2019
Crop Type, Code	control	injury	control	injury	control
Rating Date	percent	percent	percent	percent	percent
Rating Type	7 DA-B	14 DA-B	14 DA-B	33 DA-B	33 DA-B
Rating Unit	0	0	0	0	0
Trt-Eval Interval					
Number of Decimals					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Timing	Appl Code					
1	Boundary	6.5 L		1.8 pt/a		PRE	A	99	8	100	4	96
1	Flexstar GT	2.82 L		3.5 pt/a		POST	B					
1	Dual II Magnum	7.64 L		1.25 pt/a		POST	B					
1	MSO	L		1 % v/v		POST	B					
1	AMS	WG		8.5 lb/100 gal		POST	B					
2	Boundary	6.5 L		1.8 pt/a		PRE	A	96	3	100	0	100
2	Tavium	3.4 L		56.5 fl oz/a		POST	B					
2	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
2	Class Act Ridion	L		1 % v/v		POST	B					
2	Intact	L		0.5 % v/v		POST	B					
3	Prefix	5.29 L		2 pt/a		PRE	A	99	2	100	0	100
3	Metribuzin	75 WG		6 oz/a		PRE	A					
3	Tavium	3.4 L		56.5 fl oz/a		POST	B					
3	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
3	Class Act Ridion	L		1 % v/v		POST	B					
3	Intact	L		0.5 % v/v		POST	B					
4	BroadAxe XC	7 L		25 fl oz/a		PRE	A	90	1	99	0	99
4	Metribuzin	75 WG		6 oz/a		PRE	A					
4	Tavium	3.4 L		56.5 fl oz/a		POST	B					
4	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
4	Class Act Ridion	L		1 % v/v		POST	B					
4	Intact	L		0.5 % v/v		POST	B					
5	Untreated							0	0	0	0	0
6	Zidua PRO	4.09 L		6 fl oz/a		PRE	A	80	2	95	0	96
6	Outlook	6 L		10 fl oz/a		POST	B					
6	Engenia	5 L		12.8 fl oz/a		POST	B					
6	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
6	Class Act Ridion	L		1 % v/v		POST	B					
6	Intact	L		0.5 % v/v		POST	B					
7	Tavium	3.4 L		56.5 fl oz/a		POST	B	60	0	72	0	75
7	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
7	Class Act Ridion	L		1 % v/v		POST	B					
7	Intact	L		0.5 % v/v		POST	B					
8	Engenia PRO	4.45 L		16 fl oz/a		POST	B	60	0	73	0	74
8	Roundup PowerMax	4.5 SL		26 fl oz/a		POST	B					
8	Class Act Ridion	L		1 % v/v		POST	B					
8	Intact	L		0.5 % v/v		POST	B					
LSD P=.05								9.8	2.1	6.1	0.5	5.4
Standard Deviation								6.7	1.4	4.1	0.4	3.7
CV								9.13	79.54	5.19	80.81	4.6