

Revisiting Sonalan for weed control in soybean

Trial ID: SOY01-20 Study Dir.: Sprague, Powell, Stiles
 Conducted: Campus, T-10 Investigator: Christy Sprague

Planting Date: May-24-2020 **Row Spacing:** 30 IN
Variety: P25T09E **No. of Reps:** 4
Population: 156000 seeds/A **% OM:** 2.6
Soil Type: L loam **pH:** 7.5
Plot Size: 10 X 35 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall chisel plow, fall soil finish; Spring soil finish (2X)

Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	ANGR	mainly foxtail species	Annual grass
2	CHEAL	common lambsquarters	Chenopodium album
3	AMAPO	Powell amaranth	Amaranthus powellii
4	AMBEL	common ragweed	Ambrosia artemisiifolia
5	SINAR	wild mustard	Sinapis arvensis
6	ABUTH	velvetleaf	Abutilon theophrasti
Crop	Code	Common Name	
1	GLXMA	Soybean	

Application Description

	A	B	C
Application Timing:	PPI	PRE	POST
Date Treated:	May-24-2020	May-24-2020	Jun-22-2020
Time Treated:	10:39 AM	10:50 AM	2:00 PM
% Cloud Cover:	0	0	40
Air Temp., Unit:	73 F	73 F	82 F
% Relative Humidity:	77	77	51
Wind Speed/Unit/Dir:	8.5 MPH W	8 MPH W	6.5 MPH SW
Soil Temp, Unit:	69 F	69 F	89 F
Leaf Moist/Dew Presence (Y/N):			
Soil Moist:	4	4	5

Crop Stage at Each Application

	A	B	C
Crop 1 Name:	GLXMA	GLXMA	GLXMA
Height:			8 "
Stage:			V4

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	ANGR	ANGR	ANGR
Height:			7-12 " (9.5)
Stage:			4L
Weed 2 Name:	CHEAL	CHEAL	CHEAL
Height:			2-4 " (3)
Stage:			15-20L
Weed 3 Name:	AMAPO	AMAPO	AMAPO
Height:			2-4 " (3)
Stage:			8-10L
Weed 4 Name:	AMBEL	AMBEL	AMBEL
Height:			4-6 " (5)
Stage:			6-12L
Weed 5 Name:	SINAR	SINAR	SINAR
Height:			6 "
Stage:			
Weed 6 Name:	ABUTH	ABUTH	ABUTH
Height:			4 "
Stage:			

Weed Density

	1	2	3	4	5	6
Date:	Jun-22-2020	Jun-22-2020	Jun-22-2020	Jun-22-2020	Jun-22-2020	Jun-22-2020
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	SINAR	ABUTH
Density:	14 FT2	4 FT2	1 FT2	3 FT2	1 FT2	1 FT2

Application Equipment

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Conducted: Campus, T-10

Investigator: Christy Sprague

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	24 "	20 "	100 "	19 GPA	WATER	30 psi
B	CUB	3.8 mph	AIXR	11003	24 "	20 "	100 "	19 GPA	WATER	30 psi
C	CUB	3.8 mph	AIXR	11003	27 "	20 "	100 "	19 GPA	WATER	30 psi

Comments: PPI treatments were incorporated with a Triple-K at 1.5" depth. The common ragweed population in this study is resistant to the Group 2 (ALS-inhibiting) herbicides.

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 Project ID: Study Director: Sprague, Powell, Stiles
 Sponsor Contact:

Pest Code						ANGR	CHEAL	AMBEL	SINAR				
Crop Type, Code						C GLXMA				C GLXMA			
Rating Date						Jun-15-2020	Jun-15-2020	Jun-15-2020	Jun-15-2020	Jun-15-2020	Jun-22-2020		
Rating Type						injury	control	control	control	control	injury		
Rating Unit						percent	percent	percent	percent	percent	percent		
Trt-Eval Interval						22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A	29 DA-A		
Number of Decimals						0	0	0	0	0	0		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Timing	Appl Code						
1	Sonalan HFP	3 L		2 pt/a		PPI	A	1	93	97	66	71	2
	Roundup PowerMax	4.5 SL		32 fl oz/a		POST	C						
	AMS	WG		17 lb/100 gal		POST	C						
2	Sonalan HFP	3 L		2 pt/a		PPI	A	0	95	100	93	96	4
	Metribuzin	75 WG		8 oz/a		PPI	A						
	Roundup PowerMax	4.5 SL		32 fl oz/a		POST	C						
	AMS	WG		17 lb/100 gal		POST	C						
3	Sonalan HFP	3 L		2 pt/a		PPI	A	0	97	100	99	100	4
	Boundary	6.5 L		2 pt/a		PPI	A						
	Roundup PowerMax	4.5 SL		32 fl oz/a		POST	C						
	AMS	WG		17 lb/100 gal		POST	C						
4	Sonalan HFP	3 L		2 pt/a		PPI	A	1	90	100	65	70	3
	Warrant	3 L		3 pt/a		POST	C						
	Roundup PowerMax	4.5 SL		32 fl oz/a		POST	C						
	AMS	WG		17 lb/100 gal		POST	C						
5	Sonalan HFP	3 L		2 pt/a		PPI	A	2	98	100	71	74	3
	Warrant Ultra	3.45 L		50 fl oz/a		POST	C						
	Roundup PowerMax	4.5 SL		32 fl oz/a		POST	C						
	AMS	WG		17 lb/100 gal		POST	C						
6	Untreated							0	0	0	0	0	0
7	Valor XLT	40.3 WG		5 oz/a		PRE	B	18	70	100	99	100	13
	Roundup PowerMax	4.5 SL		32 fl oz/a		POST	C						
	AMS	WG		17 lb/100 gal		POST	C						
8	Zidua PRO	4.09 L		6 fl oz/a		PRE	B	0	84	100	97	100	2
	Roundup PowerMax	4.5 SL		32 fl oz/a		POST	C						
	AMS	WG		17 lb/100 gal		POST	C						
	LSD P=.05							2.6	6.9	2.4	7.4	10.4	4.2
	Standard Deviation							1.8	4.7	1.6	5.0	7.1	2.9
	CV							64.34	6.01	1.89	6.85	9.26	76.93

Could not calculate LSD (% mean diff) for columns 9,13,15,17,22,24,28 because error mean square = 0.

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Project ID:

Study Director: Sprague, Powell, Stiles

Sponsor Contact:

Pest Code	ANGR	CHEAL	AMAPO	AMBEL	SINAR	C GLXMA
Crop Type, Code						Jul-7-2020
Rating Date	Jun-22-2020	Jun-22-2020	Jun-22-2020	Jun-22-2020	Jun-22-2020	injury
Rating Type	control	control	control	control	control	percent
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	29 DA-A	29 DA-A	29 DA-A	29 DA-A	29 DA-A	15 DA-C
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Appl Timing	Appl Code						
1	Sonalan HFP	3 L		2 pt/a	PPI	A	93	97	100	77	75	0
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
2	Sonalan HFP	3 L		2 pt/a	PPI	A	94	100	100	92	100	0
	Metribuzin	75 WG		8 oz/a	PPI	A						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
3	Sonalan HFP	3 L		2 pt/a	PPI	A	97	100	100	97	100	0
	Boundary	6.5 L		2 pt/a	PPI	A						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
4	Sonalan HFP	3 L		2 pt/a	PPI	A	93	98	100	74	71	4
	Warrant	3 L		3 pt/a	POST	C						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
5	Sonalan HFP	3 L		2 pt/a	PPI	A	95	99	100	78	78	10
	Warrant Ultra	3.45 L		50 fl oz/a	POST	C						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
6	Untreated						0	0	0	0	0	0
7	Valor XLT	40.3 WG		5 oz/a	PRE	B	82	99	100	96	100	3
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
8	Zidua PRO	4.09 L		6 fl oz/a	PRE	B	88	100	100	95	100	0
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
	LSD P=.05						4.7	3.9	.	5.9	6.5	2.4
	Standard Deviation						3.2	2.7	0.0	4.0	4.4	1.6
	CV						4.0	3.1	0.0	5.24	5.67	75.64

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Study Director: Sprague, Powell, Stiles

Sponsor Contact:

Pest Code					ANGR	CHEAL	AMAPO	AMBEL	SINAR	ABUTH	C GLXMA		
Crop Type, Code					Jul-7-2020	Jul-7-2020	Jul-7-2020	Jul-7-2020	Jul-7-2020	Jul-7-2020	Jul-20-2020		
Rating Date					control	control	control	control	control	control	injury		
Rating Type					percent	percent	percent	percent	percent	percent	percent		
Rating Unit					15 DA-C	15 DA-C	15 DA-C	15 DA-C	15 DA-C	15 DA-C	28 DA-C		
Trt-Eval Interval					0	0	0	0	0	0	0		
Number of Decimals					0	0	0	0	0	0	0		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Appl Timing	Appl Code							
1	Sonalan HFP	3 L		2 pt/a	PPI	A	100	100	100	96	100	100	1
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C							
	AMS	WG		17 lb/100 gal	POST	C							
2	Sonalan HFP	3 L		2 pt/a	PPI	A	100	100	100	100	100	100	0
	Metribuzin	75 WG		8 oz/a	PPI	A							
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C							
	AMS	WG		17 lb/100 gal	POST	C							
3	Sonalan HFP	3 L		2 pt/a	PPI	A	100	100	100	100	100	100	0
	Boundary	6.5 L		2 pt/a	PPI	A							
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C							
	AMS	WG		17 lb/100 gal	POST	C							
4	Sonalan HFP	3 L		2 pt/a	PPI	A	100	98	100	92	100	100	1
	Warrant	3 L		3 pt/a	POST	C							
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C							
	AMS	WG		17 lb/100 gal	POST	C							
5	Sonalan HFP	3 L		2 pt/a	PPI	A	100	100	100	83	100	94	3
	Warrant Ultra	3.45 L		50 fl oz/a	POST	C							
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C							
	AMS	WG		17 lb/100 gal	POST	C							
6	Untreated						0	0	0	0	0	0	0
7	Valor XLT	40.3 WG		5 oz/a	PRE	B	100	100	100	100	100	100	3
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C							
	AMS	WG		17 lb/100 gal	POST	C							
8	Zidua PRO	4.09 L		6 fl oz/a	PRE	B	100	100	100	100	100	100	0
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C							
	AMS	WG		17 lb/100 gal	POST	C							
	LSD P=.05						.	2.6	.	6.8	.	6.5	2.5
	Standard Deviation						0.0	1.8	0.0	4.6	0.0	4.4	1.7
	CV						0.0	2.03	0.0	5.5	0.0	5.1	185.59

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Crop Type, Code						
Rating Date	Jul-20-2020	Jul-20-2020	Jul-20-2020	Jul-20-2020	Jul-20-2020	Jul-20-2020
Rating Type	control	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	28 DA-C	28 DA-C	28 DA-C	28 DA-C	28 DA-C	28 DA-C
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Appl Timing	Appl Code						
1	Sonalan HFP	3 L		2 pt/a	PPI	A	99	99	100	98	100	100
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
2	Sonalan HFP	3 L		2 pt/a	PPI	A	98	99	100	100	100	100
	Metribuzin	75 WG		8 oz/a	PPI	A						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
3	Sonalan HFP	3 L		2 pt/a	PPI	A	100	99	100	100	100	100
	Boundary	6.5 L		2 pt/a	PPI	A						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
4	Sonalan HFP	3 L		2 pt/a	PPI	A	96	95	100	89	100	100
	Warrant	3 L		3 pt/a	POST	C						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
5	Sonalan HFP	3 L		2 pt/a	PPI	A	100	100	100	78	100	95
	Warrant Ultra	3.45 L		50 fl oz/a	POST	C						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
6	Untreated						0	0	0	0	0	0
7	Valor XLT	40.3 WG		5 oz/a	PRE	B	99	100	100	100	100	100
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
8	Zidua PRO	4.09 L		6 fl oz/a	PRE	B	100	100	100	100	100	100
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
	LSD P=.05						3.1	5.5	.	5.1	.	5.2
	Standard Deviation						2.1	3.8	0.0	3.4	0.0	3.5
	CV						2.44	4.35	0.0	4.14	0.0	4.07

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Sponsor Contact:

Pest Code	ANGR	CHEAL	AMAPO	AMBEL	C GLXMA	C GLXMA
Crop Type, Code					Oct-14-2020	Oct-14-2020
Rating Date	Oct-13-2020	Oct-13-2020	Oct-13-2020	Oct-13-2020	moisture	yield
Rating Type	control	control	control	control	percent	bu/acre
Rating Unit	percent	percent	percent	percent		
Trt-Eval Interval	113 DA-C	113 DA-C	113 DA-C	113 DA-C	114 DA-C	at 13% M
Number of Decimals	0	0	0	0	1	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Appl Timing	Appl Code	ANGR	CHEAL	AMAPO	AMBEL	C GLXMA	C GLXMA
1	Sonalan HFP	3 L		2 pt/a	PPI	A	98	99	100	97	15.3	54.4
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
2	Sonalan HFP	3 L		2 pt/a	PPI	A	98	100	100	98	15.1	56.2
	Metribuzin	75 WG		8 oz/a	PPI	A						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
3	Sonalan HFP	3 L		2 pt/a	PPI	A	100	100	100	97	15.3	55.7
	Boundary	6.5 L		2 pt/a	PPI	A						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
4	Sonalan HFP	3 L		2 pt/a	PPI	A	98	92	100	90	15.5	51.7
	Warrant	3 L		3 pt/a	POST	C						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
5	Sonalan HFP	3 L		2 pt/a	PPI	A	100	95	100	80	15.5	51.1
	Warrant Ultra	3.45 L		50 fl oz/a	POST	C						
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
6	Untreated						0	0	0	0	18.0	19.1
7	Valor XLT	40.3 WG		5 oz/a	PRE	B	98	100	100	100	15.6	50.9
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
8	Zidua PRO	4.09 L		6 fl oz/a	PRE	B	100	100	100	100	15.3	52.5
	Roundup PowerMax	4.5 SL		32 fl oz/a	POST	C						
	AMS	WG		17 lb/100 gal	POST	C						
	LSD P=.05						3.1	7.2	.	4.5	0.87	9.82
	Standard Deviation						2.1	4.9	0.0	3.0	0.59	6.68
	CV						2.48	5.68	0.0	3.69	3.78	13.64