

Gowan Sonalan HFP PPI Weed Control in Soybean
 Trial ID: 19GOWAN Location: The Ohio State University
 Protocol ID: 19GOWAN Investigator: Dr. Mark M. Loux Trial Year: 2019
 Project ID: Study Director: Anthony Dobbels
 Sponsor Contact: Paul David, GOWAN

General Trial Information

Study Director: Anthony Dobbels
Investigator: Dr. Mark M. Loux

Trial Status: E established
ARM Trial Created On: Mar-26-2019

Trial Location

City: South Charleston **Country:** USA United States
State/Prov.: Ohio
Postal Code: 45368 **Climate Zone:** USWARM US Warm Continental

Latitude of LL Corner °: 39.86079 N
Longitude of LL Corner °: 83.66992 W
Altitude of LL Corner: 1134.00 Ft

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Anthony Dobbels

Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: C GLXMA Glycine max Soybean
Entry Date: May-21-2019 **Stage Scale:** VR
Variety: Seed Consultants EX932E
Attributes: Enlist E3, RR, LL, 2,4-D
Planting Date: May-16-2019 **Planting Rate:** 165000 S/A
Depth: 1.5 IN
Rows per Plot: 8 **Planting Method:** PLANTD planted
Row Spacing: 15 IN **Planting Equipment:** PP plot planter
Seed Bed: MEDIUM medium
Soil Temperature: 65 F **Soil Moisture:** DRY dry
Emergence Date: May-27-2019

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail **Entry Date:** Jun-20-2019

Pest 2 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyard grass **Entry Date:** Jun-20-2019

Pest 3 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed **Entry Date:** Jun-20-2019

Pest 4 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: common lambsquarters **Entry Date:** Jun-20-2019

Pest 5 Type: W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed **Entry Date:** Jun-20-2019

Pest 6 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf **Entry Date:** Jun-20-2019

Pest 7 Type: W **Code:** SOLNI *Solanum nigrum*
Common Name: Black nightshade **Entry Date:** Jun-20-2019

Pest 8 Type: W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida **Entry Date:** Jun-20-2019

Site and Design

Treated Plot Width: 6.67 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT **Experimental Unit:** 1 PLOT plot
Treated Plot Area: 200.1 FT² **Treatments:** 8 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOB� Randomized Complete Block (RCB)

Previous

No. Crop Year
 1. CORN 2018

Soil Description

Description Name: F-7 East
% Sand: 37 **% OM:** 2.8 **Texture:** SICL silty clay loam
% Silt: 48 **pH:** 5.7 **Soil Name:** Crosby
% Clay: 15 **CEC:** 11.8 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B
Application Date	May-16-2019	Jun-20-2019
Appl. Start Time	1:30 PM	9:30 AM
Appl. Stop Time	2:30 PM	9:40 AM
Application Method	SPRAY	SPRAY
Application Timing	PREPLA	POST
Application Placement	BROSOI	BROFOL
Applied By	KILEY	DOBBELS
Appl. Entry Date	May-17-2019	Jun-20-2019
Air Temperature Start, Stop	74 74 F	70 70 F
% Relative Humidity Start, Stop	45 45	95 95
Wind Velocity+Dir. Start	12 MPH SSW	11 MPH SSW
Wind Velocity+Dir. Stop	12 MPH SSW	11 MPH SSW
Wind Velocity+Dir. Max	12 MPH SSW	11 MPH SSW
Wet Leaves (Y/N)	N no	N no
Soil Temperature	61 F	68 F
Soil Moisture	DRY	WET
Soil Surface Condition	SMOOTH	SMOOTH
% Cloud Cover	33	100
Next Moisture Occurred On	May-17-2019	Jun-20-2019
Time to Next Moisture	1 DAY	6 HR
Moisture 6 Hours after Appl.	0 IN	0.01 IN
Moisture 1 Week after Appl.	2.54 IN	1.24 IN

Comment:

PPI applications were incorporated with two passes in different direction of a field cultivator within one hour of application.

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY
Days after Emergence	-11	24
Stage Majority, Percent		V3 100
Height Average		6 IN
Height Minimum, Maximum		6 7

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	SETFA W	SETFA W
Stage Majority, Percent	13	90
Stage Minimum, Percent	12	10
Stage Maximum, Percent	13	90
Height Average	4	IN
Height Minimum, Maximum	2	8
Density Average	8	PLA/m2
Density Min, Max	6	9
Pest 2 Code, Type, Scale	ECHCG W	ECHCG W
Stage Majority, Percent	13	90
Stage Minimum, Percent	12	10
Stage Maximum, Percent	13	90
Height Average	4	IN
Height Minimum, Maximum	2	6
Density Average	105.3	PLA/m2
Density Min, Max	68	152
Pest 3 Code, Type, Scale	AMBTR W	AMBTR W
Stage Majority, Percent	19	100
Height Average	12	IN
Height Minimum, Maximum	10	12
Density Average	5.3	PLA/m2
Density Min, Max	4	8
Pest 4 Code, Type, Scale	CHEAL W	CHEAL W
Stage Majority, Percent	18	100
Height Average	3	IN
Height Minimum, Maximum	2	3
Density Average	22.6	PLA/m2
Density Min, Max	4	52
Pest 5 Code, Type, Scale	AMARE W	AMARE W
Stage Majority, Percent	16	100
Height Average	2	IN
Height Minimum, Maximum	2	3
Density Average	3	PLA/m2
Density Min, Max	2	3
Pest 6 Code, Type, Scale	ABUTH W	ABUTH W
Stage Majority, Percent	13	100
Height Average	3	IN
Height Minimum, Maximum	2	3
Density Average	0.33	PLA/m2
Density Min, Max	0	2
Pest 7 Code, Type, Scale	SOLNI W	SOLNI W
Stage Majority, Percent	12	80
Stage Minimum, Percent	12	80
Stage Maximum, Percent	13	20
Height Average	2	IN
Height Minimum, Maximum	1	2
Density Average	16	PLA/m2
Density Min, Max	0	48
Pest 8 Code, Type, Scale	SIDSP W	SIDSP W
Stage Majority, Percent	13	80
Stage Minimum, Percent	12	20
Stage Maximum, Percent	13	80
Height Average	2	IN
Height Minimum, Maximum	2	3
Density Average	3	PLA/m2
Density Min, Max	3	6

Application Equipment

	A	B
Appl. Equipment	6 foot TTI	10' AI XR
Equipment Type	SPRBAC	SPRBAC
Operation Pressure	48 PSI	42 PSI
Nozzle Type	TTI	AI XR
Nozzle Size	110015	110015
Nozzle Spacing	18 IN	18 IN
Boom Length	6.67 FT	10 FT
Boom Height	20 IN	20 IN
Ground Speed	3 MPH	3 MPH
Carrier	WATER	WATER
Application Amount	15 GPA	15 GPA
Mix Size	1 Liters	3 GAL
Propellant	COMCO2	COMCO2

Equipment Comment:Incorporated with two passes of field cultivator within 1 hour.

Date	By	Context	Notes
Mar-26-2019	Dr. Mark M. Loux	STATUS	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
May-17-2019	Dr. Mark M. Loux	STATUS	Automatically added by ARM: Trial Status updated to 'E' when Application Date entered.

SE Definitions

1.

Crop Type, Code C

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL	AMARE
Pest Name	Giant foxtail	Giant common ragweed	lambsqu>	Redroot pigweed
Crop Type, Code	C GLXMA	C -	C -	C -
Crop Name	Soybean			
Rating Date	Jun-3-2019	Jun-10-2019	Jun-10-2019	Jun-10-2019
Rating Type	PHYLMMA	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Data Entry Date	Jun-3-2019	Jun-11-2019	Jun-11-2019	Jun-11-2019
Days After First/Last Applic.	18 18	25 25	25 25	25 25
Trt-Eval Interval	18 DA-A	25 DA-A	25 DA-A	25 DA-A
Days After Emergence	7 DE-1	14 DE-1	14 DE-1	14 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate	Appl Unit Code	1*	2*	3*	4*	5*
1	Sonalan HFP	0.75 lb	ai/a	2 pt/a		A	1 -	83 a	0 -	82 a	100 -
	1 Roundup Powermax	0.84 lb	ae/a	24 oz/a		B					
	1 N Pak AMS	5 %	v/v	5 % v/v		B					
2	Sonalan HFP	0.75 lb	ai/a	2 pt/a		A	0 -	82 a	0 -	100 a	100 -
	2 Metribuzin	0.375 lb	ai/a	8 oz/a		A					
	2 Roundup Powermax	0.84 lb	ae/a	24 oz/a		B					
	2 N Pak AMS	5 %	v/v	5 % v/v		B					
3	Sonalan HFP	0.75 lb	ai/a	2 pt/a		A	1 -	90 a	10 -	100 a	100 -
	3 Boundary	1.63 lb	ai/a	2 pt/a		A					
	3 Roundup Powermax	0.84 lb	ae/a	24 oz/a		B					
	3 N Pak AMS	5 %	v/v	5 % v/v		B					
4	Sonalan HFP	0.75 lb	ai/a	2 pt/a		A	1 -	85 a	10 -	100 a	100 -
	4 Warrant	1.13 lb	ai/a	48 oz/a		B					
	4 Roundup Powermax	0.84 lb	ae/a	24 oz/a		B					
	4 N Pak AMS	5 %	v/v	5 % v/v		B					
5	Sonalan HFP	0.75 lb	ai/a	2 pt/a		A	2 -	78	20 -	100 a	100 -
	5 Warrant Ultra	1.36 lb	ai/a	50 oz/a		B					
	5 Roundup Powermax	0.84 lb	ae/a	24 oz/a		B					
	5 N Pak AMS	5 %	v/v	5 % v/v		B					
6	Tripzin	1.38 lb	ai/a	44 oz/a		A	0 -	78 a	27 -	100 a	100 -
	6 Roundup Powermax	0.84 lb	ae/a	24 oz/a		B					
	6 N Pak AMS	5 %	v/v	5 % v/v		B					
7	Prowl H2O	0.95 lb	ai/a	2 pt/a		A	0 -	57 b	17 -	87 a	100 -
	7 Roundup Powermax	0.84 lb	ae/a	24 oz/a		B					
	7 N Pak AMS	5 %	v/v	5 % v/v		B					
8	UTC						0 -	0 c	0 -	0 b	0 -
LSD P=.05							3.8 -	10000.8	9.1	32.2	14.3
Standard Deviation							5.0t		5.1	18.4	8.2
CV							121.57t		7.57	176.36	9.76
Levene's F							0.639		0.944	0.578	0.965
Levene's Prob(F)							0.718		0.495	0.764	0.488
Skewness							0.5954		-1.6895*	1.6009*	-2.0897*
Kurtosis							-1.4443		1.6344	1.15	3.0288*
Replicate F							1.030		0.947	2.679	1.143
Replicate Prob(F)							0.3825		0.4149	0.1035	0.3468
Treatment F							1.196		114.707	0.915	53.779
Treatment Prob(F)							0.3658		0.0001	0.5229	0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed						
Pest Code	ABUTH	SIDSP	SETFA	AMBTR	CHEAL						
Pest Name	velvetleaf	Prickly sida	Giant foxtail	Giant common ragweed	lambsqu>						
Crop Type, Code	C -	C -	C -	C -	C -						
Crop Name			GLXMA Soybean								
Rating Date	Jun-10-2019	Jun-10-2019	Jun-19-2019	Jun-19-2019	Jun-19-2019						
Rating Type	CONTRO	CONTRO	PHYMAL	CONTRO	CONTRO						
Rating Unit	%	%	%	%	%						
Number of Subsamples	1	1	1	1	1						
Data Entry Date	Jun-11-2019	Jun-11-2019	Jun-19-2019	Jun-19-2019	Jun-19-2019						
Days After First/Last Applic.	25 25	25 25	34 34	34 34	34 34						
Trt-Eval Interval	25 DA-A	25 DA-A	34 DA-A	34 DA-A	34 DA-A						
Days After Emergence	14 DE-1	14 DE-1	23 DE-1	23 DE-1	23 DE-1						
Number of Decimals	0	0	0	0	0						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	6*	7*	8*	9*	10*	11*
1	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	82 a	63 a	5 -	77 ab	0 -	75 a
1	Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
1	N Pak AMS	5 % v/v	5 % v/v		B						
2	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	73 a	63 a	3 -	75 b	9 -	87 a
2	Metribuzin	0.375 lb ai/a	8 oz/a		A						
2	Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
2	N Pak AMS	5 % v/v	5 % v/v		B						
3	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	95 a	87 a	3 -	90 a	2 -	92 a
3	Boundary	1.63 lb ai/a	2 pt/a		A						
3	Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
3	N Pak AMS	5 % v/v	5 % v/v		B						
4	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	89 a	63 a	5 -	77 ab	0 -	77 a
4	Warrant	1.13 lb ai/a	48 oz/a		B						
4	Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
4	N Pak AMS	5 % v/v	5 % v/v		B						
5	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	98 a	63 a	6 -	78 ab	9 -	93 a
5	Warrant Ultra	1.36 lb ai/a	50 oz/a		B						
5	Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
5	N Pak AMS	5 % v/v	5 % v/v		B						
6	Tripzin	1.38 lb ai/a	44 oz/a		A	100 a	100 a	7 -	77 ab	12 -	90 a
6	Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
6	N Pak AMS	5 % v/v	5 % v/v		B						
7	Prowl H2O	0.95 lb ai/a	2 pt/a		A	50 a	40 a	3 -	57 c	0 -	60 a
7	Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
7	N Pak AMS	5 % v/v	5 % v/v		B						
8	UTC					0 b	0 b	0 -	0	0 -	0 b
LSD P=.05						25.4 - 43.6	39.3	6.1	9.2	12.4 - 42.1	29.7
Standard Deviation						17.1t	22.4	3.5	5.2	0.7t	17.0
CV						28.16t	37.36	89.68	6.81	146.59t	23.67
Levene's F						0.524	0.444	0.777	0.13	0.697	0.88
Levene's Prob(F)						0.803	0.86	0.616	0.99	0.675	0.543
Skewness						-0.8614	-0.4176	0.3876	-0.6515	1.0215*	-1.3872*
Kurtosis						-0.1744	-1.1791	-1.0012	0.8786	-0.9641	0.8583
Replicate F						0.203	2.090	0.838	2.149	0.337	0.590
Replicate Prob(F)						0.8187	0.1606	0.4530	0.1593	0.7196	0.5674
Treatment F						8.170	5.422	1.080	10.851	1.821	10.040
Treatment Prob(F)						0.0007	0.0036	0.4252	0.0003	0.1609	0.0002

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed						
Pest Code	AMARE	ABUTH	SIDSP	SOLPT	SETFA						
Pest Name	Redroot pigweed	velvetleaf	Prickly sida	Eastern black >	Giant foxtail						
Crop Type, Code	C -	C -	C -	C - C	GLXMA						
Crop Name				Soybean							
Rating Date	Jun-19-2019	Jun-19-2019	Jun-19-2019	Jun-19-2019	Jul-5-2019						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYLMA						
Rating Unit	%	%	%	%	%						
Number of Subsamples	1	1	1	1	1						
Data Entry Date	Jun-19-2019	Jun-19-2019	Jun-19-2019	Jun-19-2019	Jul-8-2019						
Days After First/Last Applic.	34 34	34 34	34 34	34 34	50 15						
Trt-Eval Interval	34 DA-A	34 DA-A	34 DA-A	34 DA-A	15 DA-B						
Days After Emergence	23 DE-1	23 DE-1	23 DE-1	23 DE-1	39 DE-1						
Number of Decimals	0	0	0	0	0						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	12*	13*	14*	15*	16*	17*
1	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	98 a	58 -	30 bc	4 b	3 -	100 -
	1 Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
	1 N Pak AMS	5 % v/v	5 % v/v		B						
2	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	98 a		50 bc	4 b	0 -	100 -
	2 Metribuzin	0.375 lb ai/a	8 oz/a		A						
	2 Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
	2 N Pak AMS	5 % v/v	5 % v/v		B						
3	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	98 a	67 -	75 ab	93 a	2 -	100 -
	3 Boundary	1.63 lb ai/a	2 pt/a		A						
	3 Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
	3 N Pak AMS	5 % v/v	5 % v/v		B						
4	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 a	53 -	30 bc	14 b	3 -	100 -
	4 Warrant	1.13 lb ai/a	48 oz/a		B						
	4 Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
	4 N Pak AMS	5 % v/v	5 % v/v		B						
5	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 a	62 -	43 bc	47 ab	4 -	100 -
	5 Warrant Ultra	1.36 lb ai/a	50 oz/a		B						
	5 Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
	5 N Pak AMS	5 % v/v	5 % v/v		B						
6	Tripzin	1.38 lb ai/a	44 oz/a		A	98 a	87 -	100 a	14 b	3 -	100 -
	6 Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
	6 N Pak AMS	5 % v/v	5 % v/v		B						
7	Prowl H2O	0.95 lb ai/a	2 pt/a		A	78 a	16 -	30 bc	8 b	4 -	100 -
	7 Roundup Powermax	0.84 lb ae/a	24 oz/a		B						
	7 N Pak AMS	5 % v/v	5 % v/v		B						
8	UTC					0 b	0 -	0 c	0 b	4 -	100 -
LSD P=.05						18.3 - 21.9	51.5	34.4	37.8 - 54.4	5.1	.
Standard Deviation						14.5t	26.7	19.6	20.4t	2.9	0.0
CV						20.36t	55.38	43.86	84.19t	102.28	0.0
Levene's F						0.557	0.397	1.203	0.181	0.571	0.00
Levene's Prob(F)						0.779	0.839	0.356	0.985	0.769	.
Skewness						-1.6181*	0.0046	0.0987	0.7649	0.6249	.
Kurtosis						1.5076	-1.2567	-1.0688	0.1239	0.4602	.
Replicate F						0.080	0.219	1.833	0.229	0.184	0.000
Replicate Prob(F)						0.9240	0.8086	0.1963	0.7987	0.8343	1.0000
Treatment F						12.897	3.510	7.389	3.085	0.692	0.000
Treatment Prob(F)						0.0001	0.0625	0.0008	0.0419	0.6784	1.0000

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	CHEAL	AMARE	ABUTH	SIDSP
Pest Name	Giant ragweed	common lambsqu>	Redroot pigweed	velvetleaf	Prickly sida
Crop Type, Code	C -	C -	C -	C -	C -
Crop Name					
Rating Date	Jul-5-2019	Jul-5-2019	Jul-5-2019	Jul-5-2019	Jul-5-2019
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Data Entry Date	Jul-8-2019	Jul-8-2019	Jul-8-2019	Jul-8-2019	Jul-8-2019
Days After First/Last Applic.	50 15	50 15	50 15	50 15	50 15
Trt-Eval Interval	15 DA-B	15 DA-B	15 DA-B	15 DA-B	15 DA-B
Days After Emergence	39 DE-1	39 DE-1	39 DE-1	39 DE-1	39 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	18*	19*	20*	21*	22*
1	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	93 -	100 -	100 -	100 -	100 -
	1 Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
	1 N Pak AMS	5 % v/v	5 % v/v		B					
2	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	94 -	100 -	100 -	100 -	100 -
	2 Metribuzin	0.375 lb ai/a	8 oz/a		A					
	2 Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
	2 N Pak AMS	5 % v/v	5 % v/v		B					
3	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	95 -	100 -	100 -	100 -	100 -
	3 Boundary	1.63 lb ai/a	2 pt/a		A					
	3 Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
	3 N Pak AMS	5 % v/v	5 % v/v		B					
4	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	95 -	100 -	100 -	100 -	100 -
	4 Warrant	1.13 lb ai/a	48 oz/a		B					
	4 Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
	4 N Pak AMS	5 % v/v	5 % v/v		B					
5	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	95 -	100 -	100 -	100 -	100 -
	5 Warrant Ultra	1.36 lb ai/a	50 oz/a		B					
	5 Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
	5 N Pak AMS	5 % v/v	5 % v/v		B					
6	Tripzin	1.38 lb ai/a	44 oz/a		A	100	100 -	100 -	100 -	100 -
	6 Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
	6 N Pak AMS	5 % v/v	5 % v/v		B					
7	Prowl H2O	0.95 lb ai/a	2 pt/a		A	95 -	100 -	100 -	100 -	100 -
	7 Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
	7 N Pak AMS	5 % v/v	5 % v/v		B					
8	UTC					100 -	100 -	100 -	100 -	100 -
LSD P=.05						14.1	.	.	.	.
Standard Deviation						7.9	0.0	0.0	0.0	0.0
CV						8.29	0.0	0.0	0.0	0.0
Levene's F						0.201	0.00	0.00	0.00	0.00
Levene's Prob(F)						0.971	.	.	.	.
Skewness						-0.942	.	.	.	.
Kurtosis						-1.1507	.	.	.	.
Replicate F						0.791	0.000	0.000	0.000	0.000
Replicate Prob(F)						0.4756	1.0000	1.0000	1.0000	1.0000
Treatment F						0.218	0.000	0.000	0.000	0.000
Treatment Prob(F)						0.9638	1.0000	1.0000	1.0000	1.0000

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	SOLPT	SETFA	AMBTR	CHEAL	AMARE					
Pest Name	Eastern black Giant foxtail		Giant ragweed	common lambsqu>	Redroot pigweed					
Crop Type, Code	C -	C -	C -	C -	C -					
Crop Name										
Rating Date	Jul-5-2019	Jul-17-2019	Jul-17-2019	Jul-17-2019	Jul-17-2019					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1					
Data Entry Date	Jul-8-2019	Jul-17-2019	Jul-17-2019	Jul-17-2019	Jul-17-2019					
Days After First/Last Applic.	50 15	62 27	62 27	62 27	62 27					
Trt-Eval Interval	15 DA-B	27 DA-B	27 DA-B	27 DA-B	27 DA-B					
Days After Emergence	39 DE-1	51 DE-1	51 DE-1	51 DE-1	51 DE-1					
Number of Decimals	0	0	0	0	0					
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	23*	24*	25*	26*	27*
1	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 -	100	98 -	100 -	100 -
1	Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
1	N Pak AMS	5 % v/v	5 % v/v		B					
2	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 -	100 -	98 -	100 -	100 -
2	Metribuzin	0.375 lb ai/a	8 oz/a		A					
2	Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
2	N Pak AMS	5 % v/v	5 % v/v		B					
3	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 -	100 -	100 -	100 -	100 -
3	Boundary	1.63 lb ai/a	2 pt/a		A					
3	Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
3	N Pak AMS	5 % v/v	5 % v/v		B					
4	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 -	100 -	100 -	100 -	100 -
4	Warrant	1.13 lb ai/a	48 oz/a		B					
4	Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
4	N Pak AMS	5 % v/v	5 % v/v		B					
5	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 -	100 -	100 -	100 -	100 -
5	Warrant Ultra	1.36 lb ai/a	50 oz/a		B					
5	Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
5	N Pak AMS	5 % v/v	5 % v/v		B					
6	Tripzin	1.38 lb ai/a	44 oz/a		A	100 -	100 -	100 -	100 -	100 -
6	Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
6	N Pak AMS	5 % v/v	5 % v/v		B					
7	Prowl H2O	0.95 lb ai/a	2 pt/a		A	100 -	100 -	99 -	100 -	100 -
7	Roundup Powermax	0.84 lb ae/a	24 oz/a		B					
7	N Pak AMS	5 % v/v	5 % v/v		B					
8	UTC					100 -	100 -	100 -	100 -	100 -
LSD P=.05						.	.	2.8	.	.
Standard Deviation						0.0	0.0	1.6	0.0	0.0
CV						0.0	0.0	1.59	0.0	0.0
Levene's F						0.00	0.00	0.762	0.00	0.00
Levene's Prob(F)						.	.	0.626	.	.
Skewness						.	.	-2.879*	.	.
Kurtosis						.	.	7.2801*	.	.
Replicate F						0.000	0.000	0.149	0.000	0.000
Replicate Prob(F)						1.0000	1.0000	0.8630	1.0000	1.0000
Treatment F						0.000	0.000	0.681	0.000	0.000
Treatment Prob(F)						1.0000	1.0000	0.6864	1.0000	1.0000

Pest Type	W Weed	W Weed
Pest Code	ABUTH	SIDSP
Pest Name	velvetleaf	Prickly sida
Crop Type, Code	C -	C -
Crop Name		
Rating Date	Jul-17-2019	Jul-17-2019
Rating Type	CONTRO	CONTRO
Rating Unit	%	%
Number of Subsamples	1	1
Data Entry Date	Jul-17-2019	Jul-17-2019
Days After First/Last Applic.	62 27	62 27
Trt-Eval Interval	27 DA-B	27 DA-B
Days After Emergence	51 DE-1	51 DE-1
Number of Decimals	0	0

Trt No.	Treatment Name	Rate Rate Unit	Other Rate	Other Rate Unit	Appl Code	28*	29*
1	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 -	100 -
1	Roundup Powermax	0.84 lb ae/a	24 oz/a		B		
1	N Pak AMS	5 % v/v	5 % v/v		B		
2	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 -	100 -
2	Metribuzin	0.375 lb ai/a	8 oz/a		A		
2	Roundup Powermax	0.84 lb ae/a	24 oz/a		B		
2	N Pak AMS	5 % v/v	5 % v/v		B		
3	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 -	100 -
3	Boundary	1.63 lb ai/a	2 pt/a		A		
3	Roundup Powermax	0.84 lb ae/a	24 oz/a		B		
3	N Pak AMS	5 % v/v	5 % v/v		B		
4	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 -	100 -
4	Warrant	1.13 lb ai/a	48 oz/a		B		
4	Roundup Powermax	0.84 lb ae/a	24 oz/a		B		
4	N Pak AMS	5 % v/v	5 % v/v		B		
5	Sonalan HFP	0.75 lb ai/a	2 pt/a		A	100 -	100 -
5	Warrant Ultra	1.36 lb ai/a	50 oz/a		B		
5	Roundup Powermax	0.84 lb ae/a	24 oz/a		B		
5	N Pak AMS	5 % v/v	5 % v/v		B		
6	Tripzin	1.38 lb ai/a	44 oz/a		A	100 -	100 -
6	Roundup Powermax	0.84 lb ae/a	24 oz/a		B		
6	N Pak AMS	5 % v/v	5 % v/v		B		
7	Prowl H2O	0.95 lb ai/a	2 pt/a		A	100 -	100 -
7	Roundup Powermax	0.84 lb ae/a	24 oz/a		B		
7	N Pak AMS	5 % v/v	5 % v/v		B		
8	UTC					100 -	100 -
LSD P=.05						.	.
Standard Deviation						0.0	0.0
CV						0.0	0.0
Levene's F						0.00	0.00
Levene's Prob(F)						.	.
Skewness						.	.
Kurtosis						.	.
Replicate F						0.000	0.000
Replicate Prob(F)						1.0000	1.0000
Treatment F						0.000	0.000
Treatment Prob(F)						1.0000	1.0000

(19GOWAN)

The Ohio State University

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Gowan Sonalan HFP PPI Weed Control in Soybean

Trial ID: 19GOWAN

Location:

Trial Year: 2019

Protocol ID: 19GOWAN

Investigator: Dr. Mark M. Loux

Project ID:

Study Director: Anthony Dobbels

Sponsor Contact: Paul David, GOWAN

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US

AMBTR, Ambrosia trifida, Giant ragweed = US

CHEAL, Chenopodium album, common lambsquarters = US

AMARE, Amaranthus retroflexus, Redroot pigweed = US

ABUTH, Abutilon theophrasti, velvetleaf = US

SIDSP, Sida spinosa, Prickly sida = US

SOLPT, Solanum ptychanthum, Eastern black nightshade = US

Crop Type, Code

C, G-ByrC7 = EPPO species (Bayer) codes

GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

PHYLMA = phytotoxicity - leaf malformation

CONTRO = control / burndown or knockdown

Rating Unit

% = percent