Purdue Weed Science

Trial ID: 17S-SEPAC-Soy-01 Location: SEPAC Trial Year: 2017
Protocol ID: 17S-SEPAC-Soy-01 Investigator: Dr. Bill Johnson
Project ID: 17C05H048 Study Director: Taylor Campbell
Sponsor Contact: Joseph Argentine - AMVAC

General Trial Information

Study Director: Taylor Campbell **Title:** Research Associate
Investigator: Dr. Bill Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: E established
Initiation Date: 4/17/2017

Trial Location

City: Butlerville **Country:** USA United States
State/Prov.: Indiana
Postal Code: 47723

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Taylor Campbell **Title:** Research Associate
Organization: Purdue University
Address: 915 W State Street
City+State/Prov: West Lafayette, IN
Postal Code: 47907 **E-mail:** campbe59@purdue.edu
Country: USA United States

Investigator: Dr. Bill Johnson **Title:** Professor
Organization: Purdue University
Address: 915 W State Street
City+State/Prov: West Lafayette, IN
Postal Code: 47907 **E-mail:** wgj@purdue.edu
Country: USA United States

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: CZ2915LL

Planting Date: 6/2/2017
Planting Rate, Unit: 140000 S/A **Planting Method:** PLANTD planted
Depth, Unit: 1 IN **Planting Equipment:** PP Plot Planter
Row Spacing, Unit: 30 IN
Planting Density, Unit: 140000 S/A
Soil Temperature, Unit: 79 F
Soil Moisture: WET wet

Pest Description

Pest 1 Type: W **Code:** AMBEL Ambrosia artemisiifolia
Common Name: Common ragweed

Pest 2 Type: W **Code:** XANST Xanthium strumarium
Common Name: Common cocklebur

Pest 3 Type: W **Code:** PANDI Panicum dichotomiflorum
Common Name: Fall panicum

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:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Soil Description

Description Name: SEPAC-Field U4

% Sand: 20	**% OM:** 1.8	**Texture:** SIL silt loam
% Silt: 65	**pH:** 5.6	**Soil Name:** Avonburg
% Clay: 15	**CEC:** 6.7	**Fert. Level:** G good
		Soil Drainage: P poor

Application Description

	A
Application Date:	6/2/2017
Appl. Start Time:	10:30 AM
Appl. Stop Time:	10:55 AM
Application Method:	SPRAY
Application Timing:	PREPLA
Application Placement:	BROADC
Applied By:	S. DeSimini
Air Temperature, Unit:	80 F
% Relative Humidity:	27
Wind Velocity, Unit:	3 MPH
Wind Direction:	E
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	79 F
Soil Moisture:	WET
% Cloud Cover:	0

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBEL W
Stage Majority, Percent:	13
Stage Minimum, Percent:	12
Stage Maximum, Percent:	14
Height, Unit:	5 IN
Height Minimum, Maximum:	4 6
Density, Unit:	7 FT2
Pest 2 Code, Type, Scale:	XANST W
Stage Majority, Percent:	11
Stage Minimum, Percent:	10
Stage Maximum, Percent:	12
Height, Unit:	4 IN
Height Minimum, Maximum:	3 5
Density, Unit:	5 FT2
Pest 3 Code, Type, Scale:	PANDI W
Stage Majority, Percent:	12
Stage Minimum, Percent:	11
Stage Maximum, Percent:	13
Height, Unit:	5 IN
Height Minimum, Maximum:	4 8
Density, Unit:	7 FT2

Application Equipment

	A
Appl. Equipment:	CO2 BACKPACK
Equipment Type:	BACCAI
Operation Pressure, Unit:	32 PSI
Nozzle Type:	XR
Nozzle Size:	11002
Nozzle Spacing, Unit:	20 IN
Nozzles/Row:	4
Boom Length, Unit:	6.7 FT
Boom Height, Unit:	20 IN
Ground Speed, Unit:	3 MPH
Spray Volume, Unit:	15 GAL/AC
Mix Size, Unit:	1119 mL
Propellant:	COMCO2

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Reps: 4 Plots: 6.67 by 30 feet
Spray vol: 15 GAL/AC Mix Size: 1119 mL (1043.3 mL calculated mix size)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Appl Code	Spray Volume	Volume Unit	Amt Product to Measure	Rep 1	2	3	4
1	UNTREATED CONTROL										101	301	602	701
2	LIBERTY	280	g/L	SL	29	oz/a	A	15	GAL/AC	16.9 ml/mx	102	302	503	804
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	A	15	GAL/AC	27.97 ml/mx				
3	LIBERTY	280	g/L	SL	29	oz/a	A	15	GAL/AC	16.9 ml/mx	103	401	601	704
	SCEPTER	70	%W/W	DF	1.4	oz/a	A	15	GAL/AC	0.7822 g/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	A	15	GAL/AC	27.97 ml/mx				
4	LIBERTY	280	g/L	SL	29	oz/a	A	15	GAL/AC	16.9 ml/mx	104	403	504	803
	CLASSIC	25	%W/W	DF	0.33	oz/a	A	15	GAL/AC	0.1844 g/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	A	15	GAL/AC	27.97 ml/mx				
5	LIBERTY	280	g/L	SL	29	oz/a	A	15	GAL/AC	16.9 ml/mx	201	404	502	703
	DUAL MAGNUM	7.62	LB/GAL	EC	20	oz/a	A	15	GAL/AC	11.66 ml/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	A	15	GAL/AC	27.97 ml/mx				
6	LIBERTY	280	g/L	SL	29	oz/a	A	15	GAL/AC	16.9 ml/mx	202	402	501	702
	DUAL MAGNUM	7.62	LB/GAL	EC	20	oz/a	A	15	GAL/AC	11.66 ml/mx				
	SCEPTER	70	%W/W	DF	1.4	oz/a	A	15	GAL/AC	0.7822 g/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	A	15	GAL/AC	27.97 ml/mx				
7	LIBERTY	280	g/L	SL	29	oz/a	A	15	GAL/AC	16.9 ml/mx	203	304	603	802
	PREFIX	5.264	LB/GAL	EC	2.2	pt/a	A	15	GAL/AC	20.51 ml/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	A	15	GAL/AC	27.97 ml/mx				
8	LIBERTY	280	g/L	SL	29	oz/a	A	15	GAL/AC	16.9 ml/mx	204	303	604	801
	PREFIX	5.264	LB/GAL	EC	2.2	pt/a	A	15	GAL/AC	20.51 ml/mx				
	SCEPTER	70	%W/W	DF	1.4	oz/a	A	15	GAL/AC	0.7822 g/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	A	15	GAL/AC	27.97 ml/mx				

Sort Order: Replicate 1

Purdue Weed Science

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Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2	3	4
	Pest Type					W Weed	W Weed	W Weed	W Weed
	Pest Code					SETPU	AMBEL	XANST	SETPU
	Pest Name					yellow foxtail	Common ragweed	Common cockleb>	yellow foxtail
	Crop Code								
	Crop Name								
	Rating Date					6/8/2017	6/8/2017	6/8/2017	6/16/2017
	Rating Type					CONTRO	CONTRO	CONTRO	CONTRO
	Rating Unit					%	%	%	%
	Number of Subsamples					1	1	1	1
	Assessed By					T. Campbell	T. Campbell	T. Campbell	T. Campbell
	Days After First/Last Applic.					6 6	6 6	6 6	14 14
	Trt-Eval Interval					6 DA-A	6 DA-A	6 DA-A	14 DA-A
	ARM Action Codes					P	P	P	P
	Number of Decimals					0	0	0	0
1	UNTREATED CONTROL				101	0	0	0	0
					301	0	0	0	0
					602	0	0	0	0
					701	0	0	0	0
					Mean =	0	0	0	0
2	LIBERTY	29	oz/a	A	102	60	50	90	95
	N-PAK	2.5	% v/v	A	302	65	60	90	85
					503	40	100	90	95
					804	50	100	90	90
					Mean =	54	78	90	91
3	LIBERTY	29	oz/a	A	103	60	95	90	90
	SCEPTER	1.4	oz/a	A	401	60	100	90	90
	N-PAK	2.5	% v/v	A	601	60	100	90	90
					704	50	100	90	95
					Mean =	58	99	90	91
4	LIBERTY	29	oz/a	A	104	70	60	90	95
	CLASSIC	0.33	oz/a	A	403	60	100	90	90
	N-PAK	2.5	% v/v	A	504	60	100	90	85
					803	65	100	90	95
					Mean =	64	90	90	91
5	LIBERTY	29	oz/a	A	201	80	100	90	95
	DUAL MAGNUM	20	oz/a	A	404	50	60	90	95
	N-PAK	2.5	% v/v	A	502	70	100	90	98
					703	40	100	90	98
					Mean =	60	90	90	97
6	LIBERTY	29	oz/a	A	202	90	50	90	95
	DUAL MAGNUM	20	oz/a	A	402	50	100	90	90
	SCEPTER	1.4	oz/a	A	501	50	100	90	95
	N-PAK	2.5	% v/v	A	702	60	100	90	90
					Mean =	63	88	90	93
7	LIBERTY	29	oz/a	A	203	85	50	90	90
	PREFIX	2.2	pt/a	A	304	60	50	90	80
	N-PAK	2.5	% v/v	A	603	70	100	90	85
					802	65	100	90	85
					Mean =	70	75	90	85
8	LIBERTY	29	oz/a	A	204	85	60	90	90
	PREFIX	2.2	pt/a	A	303	60	50	90	90
	SCEPTER	1.4	oz/a	A	604	50	100	90	80
	N-PAK	2.5	% v/v	A	801	70	100	90	85
					Mean =	66	78	90	86

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	5	6	7
	Pest Type					W Weed	W Weed	
	Pest Code					AMBEL	XANST	
	Pest Name					Common ragweed	Common cockleb>	
	Crop Code							GLXMA
	Crop Name							Soybean
	Rating Date					6/16/2017	6/16/2017	6/16/2017
	Rating Type					CONTRO	CONTRO	PHYGEN
	Rating Unit					%	%	%
	Number of Subsamples					1	1	1
	Assessed By					T. Campbell	T. Campbell	T. Campbell
	Days After First/Last Applic.					14 14	14 14	14 14
	Trt-Eval Interval					14 DA-A	14 DA-A	14 DA-A
	ARM Action Codes					P	P	P
	Number of Decimals					0	0	0
1	UNTREATED CONTROL				101	0	0	0
					301	0	0	0
					602	0	0	0
					701	0	0	0
					Mean =	0	0	0
2	LIBERTY	29	oz/a	A	102	100	65	0
	N-PAK	2.5	% v/v	A	302	100	65	0
					503	100	65	0
					804	100	75	0
					Mean =	100	68	0
3	LIBERTY	29	oz/a	A	103	100	90	0
	SCEPTER	1.4	oz/a	A	401	100	90	0
	N-PAK	2.5	% v/v	A	601	100	95	0
					704	100	95	0
					Mean =	100	93	0
4	LIBERTY	29	oz/a	A	104	100	80	0
	CLASSIC	0.33	oz/a	A	403	100	70	0
	N-PAK	2.5	% v/v	A	504	100	80	0
					803	100	90	0
					Mean =	100	80	0
5	LIBERTY	29	oz/a	A	201	100	40	0
	DUAL MAGNUM	20	oz/a	A	404	100	55	0
	N-PAK	2.5	% v/v	A	502	100	80	0
					703	100	70	0
					Mean =	100	61	0
6	LIBERTY	29	oz/a	A	202	100	90	0
	DUAL MAGNUM	20	oz/a	A	402	100	85	0
	SCEPTER	1.4	oz/a	A	501	100	90	0
	N-PAK	2.5	% v/v	A	702	100	80	0
					Mean =	100	86	0
7	LIBERTY	29	oz/a	A	203	100	85	0
	PREFIX	2.2	pt/a	A	304	100	75	0
	N-PAK	2.5	% v/v	A	603	100	70	0
					802	100	85	0
					Mean =	100	79	0
8	LIBERTY	29	oz/a	A	204	100	65	0
	PREFIX	2.2	pt/a	A	303	100	85	0
	SCEPTER	1.4	oz/a	A	604	100	90	0
	N-PAK	2.5	% v/v	A	801	100	95	0
					Mean =	100	84	0

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	8	9	10	11
	Pest Type					W Weed	W Weed	W Weed	W Weed
	Pest Code					XANST	IPOHE	SETPU	AMBEL
	Pest Name					Common cockleb>	ivy-leaf morni>	yellow foxtail	Common ragweed
	Crop Code								
	Crop Name								
	Rating Date					6/30/2017	6/30/2017	6/30/2017	6/30/2017
	Rating Type					CONTRO	CONTRO	CONTRO	CONTRO
	Rating Unit					%	%	%	%
	Number of Subsamples					1	1	1	1
	Assessed By					T. Campbell	T. Campbell	T. Campbell	T. Campbell
	Days After First/Last Applic.					28 28	28 28	28 28	28 28
	Trt-Eval Interval					28 DA-A	28 DA-A	28 DA-A	28 DA-A
	ARM Action Codes					P	P	P	P
	Number of Decimals					0	0	0	0
1	UNTREATED CONTROL				101	0	0	0	0
					301	0	0	0	0
					602	0	0	0	0
					701	0	0	0	0
					Mean =	0	0	0	0
2	LIBERTY	29	oz/a	A	102	10	30	80	100
	N-PAK	2.5	% v/v	A	302	75	70	10	100
					503	20	60	90	100
					804	30	50	65	100
					Mean =	34	53	61	100
3	LIBERTY	29	oz/a	A	103	75	90	70	100
	SCEPTER	1.4	oz/a	A	401	75	40	60	100
	N-PAK	2.5	% v/v	A	601	90	80	80	100
					704	75	80	85	100
					Mean =	79	73	74	100
4	LIBERTY	29	oz/a	A	104	60	30	85	100
	CLASSIC	0.33	oz/a	A	403	40	65	70	100
	N-PAK	2.5	% v/v	A	504	80	70	70	100
					803	80	50	85	100
					Mean =	65	54	78	100
5	LIBERTY	29	oz/a	A	201	20	90	90	100
	DUAL MAGNUM	20	oz/a	A	404	20	60	75	100
	N-PAK	2.5	% v/v	A	502	60	20	90	100
					703	20	60	90	100
					Mean =	30	58	86	100
6	LIBERTY	29	oz/a	A	202	75	75	80	100
	DUAL MAGNUM	20	oz/a	A	402	70	80	75	100
	SCEPTER	1.4	oz/a	A	501	85	30	80	100
	N-PAK	2.5	% v/v	A	702	70	70	85	100
					Mean =	75	64	80	100
7	LIBERTY	29	oz/a	A	203	60	20	65	100
	PREFIX	2.2	pt/a	A	304	60	40	60	100
	N-PAK	2.5	% v/v	A	603	30	40	90	100
					802	75	50	80	100
					Mean =	56	38	74	100
8	LIBERTY	29	oz/a	A	204	60	30	50	100
	PREFIX	2.2	pt/a	A	303	80	65	60	100
	SCEPTER	1.4	oz/a	A	604	80	65	70	100
	N-PAK	2.5	% v/v	A	801	95	85	60	100
					Mean =	79	61	60	100

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	12	13	14	15
	Pest Type						W Weed	W Weed	W Weed
	Pest Code						XANST	IPOHE	SETPU
	Pest Name						Common cockleb>	ivy-leaf morni>	yellow foxtail
	Crop Code					GLXMA			
	Crop Name					Soybean			
	Rating Date					6/30/2017	7/10/2017	7/10/2017	7/10/2017
	Rating Type					PHYGEN	CONTRO	CONTRO	CONTRO
	Rating Unit					%	%	%	%
	Number of Subsamples					1	1	1	1
	Assessed By					T. Campbell	T. Campbell	T. Campbell	T. Campbell
	Days After First/Last Applic.					28 28	38 38	38 38	38 38
	Trt-Eval Interval					28 DA-A	28 DA-A	28 DA-A	28 DA-A
	ARM Action Codes					P	P	P	P
	Number of Decimals					0	0	0	0
1	UNTREATED CONTROL				101	0	0	0	0
					301	0	0	0	0
					602	0	0	0	0
					701	0	0	0	0
					Mean =	0	0	0	0
2	LIBERTY	29	oz/a	A	102	0	10	30	70
	N-PAK	2.5	% v/v	A	302	0	60	60	10
					503	0	20	40	90
					804	0	10	50	65
					Mean =	0	25	45	59
3	LIBERTY	29	oz/a	A	103	0	50	80	40
	SCEPTER	1.4	oz/a	A	401	0	75	40	60
	N-PAK	2.5	% v/v	A	601	0	90	70	50
					704	0	65	75	80
					Mean =	0	70	66	58
4	LIBERTY	29	oz/a	A	104	0	5	20	80
	CLASSIC	0.33	oz/a	A	403	0	40	60	50
	N-PAK	2.5	% v/v	A	504	0	70	70	40
					803	0	70	30	60
					Mean =	0	46	45	58
5	LIBERTY	29	oz/a	A	201	0	5	80	80
	DUAL MAGNUM	20	oz/a	A	404	0	5	60	70
	N-PAK	2.5	% v/v	A	502	0	20	20	90
					703	0	10	60	90
					Mean =	0	10	55	83
6	LIBERTY	29	oz/a	A	202	0	10	65	80
	DUAL MAGNUM	20	oz/a	A	402	0	60	80	70
	SCEPTER	1.4	oz/a	A	501	0	85	30	65
	N-PAK	2.5	% v/v	A	702	0	40	65	75
					Mean =	0	49	60	73
7	LIBERTY	29	oz/a	A	203	0	40	20	60
	PREFIX	2.2	pt/a	A	304	0	20	40	50
	N-PAK	2.5	% v/v	A	603	0	20	20	90
					802	0	30	30	50
					Mean =	0	28	28	63
8	LIBERTY	29	oz/a	A	204	0	60	30	50
	PREFIX	2.2	pt/a	A	303	0	70	50	40
	SCEPTER	1.4	oz/a	A	604	0	10	30	60
	N-PAK	2.5	% v/v	A	801	0	85	70	40
					Mean =	0	56	45	48

Pest Type						W Weed
Pest Code						AMBEL
Pest Name						Common ragweed
Crop Code						
Crop Name						
Rating Date						7/10/2017
Rating Type						CONTRO
Rating Unit						%
Number of Subsamples						1
Assessed By						T. Campbell
Days After First/Last Applic.						38 38
Trt-Eval Interval						28 DA-A
ARM Action Codes						P
Number of Decimals						0
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	16
1	UNTREATED CONTROL				101	0
					301	0
					602	0
					701	0
					Mean =	0
2	LIBERTY	29	oz/a	A	102	100
	N-PAK	2.5	% v/v	A	302	90
					503	100
					804	98
					Mean =	97
3	LIBERTY	29	oz/a	A	103	100
	SCEPTER	1.4	oz/a	A	401	100
	N-PAK	2.5	% v/v	A	601	100
					704	100
					Mean =	100
4	LIBERTY	29	oz/a	A	104	100
	CLASSIC	0.33	oz/a	A	403	100
	N-PAK	2.5	% v/v	A	504	98
					803	100
					Mean =	100
5	LIBERTY	29	oz/a	A	201	100
	DUAL MAGNUM	20	oz/a	A	404	100
	N-PAK	2.5	% v/v	A	502	100
					703	100
					Mean =	100
6	LIBERTY	29	oz/a	A	202	98
	DUAL MAGNUM	20	oz/a	A	402	100
	SCEPTER	1.4	oz/a	A	501	100
	N-PAK	2.5	% v/v	A	702	100
					Mean =	100
7	LIBERTY	29	oz/a	A	203	100
	PREFIX	2.2	pt/a	A	304	100
	N-PAK	2.5	% v/v	A	603	100
					802	100
					Mean =	100
8	LIBERTY	29	oz/a	A	204	80
	PREFIX	2.2	pt/a	A	303	100
	SCEPTER	1.4	oz/a	A	604	100
	N-PAK	2.5	% v/v	A	801	100
					Mean =	95

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Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
SETPU, Setaria pumila, yellow foxtail = US
AMBEL, Ambrosia artemisiifolia, Common ragweed = US
XANST, Xanthium strumarium, Common cocklebur = US
IPOHE, Ipomoea hederacea, ivy-leaf morning glory = US
Crop Code
GLXMA, BSOY, Glycine max, Soybean = US
Rating Type
CONTRO = control / burndown or knockdown
PHYGEN = phytotoxicity - general / injury
Rating Unit
% = percent
ARM Action Codes
P = Rating scale of 0 to 100 (e.g. % control or injury)

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Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4
	Pest Type				W Weed	W Weed	W Weed	W Weed
	Pest Code				SETPU	AMBEL	XANST	SETPU
	Pest Name				yellow foxtail	Common ragweed	Common cockleb>	yellow foxtail
	Crop Code							
	Crop Name							
	Rating Date				6/8/2017	6/8/2017	6/8/2017	6/16/2017
	Rating Type				CONTRO	CONTRO	CONTRO	CONTRO
	Rating Unit				%	%	%	%
	Number of Subsamples				1	1	1	1
	Assessed By				T. Campbell	T. Campbell	T. Campbell	T. Campbell
	Days After First/Last Applic.				6 6	6 6	6 6	14 14
	Trt-Eval Interval				6 DA-A	6 DA-A	6 DA-A	14 DA-A
	ARM Action Codes				P	P	P	P
	Number of Decimals				0	0	0	0
1	UNTREATED CONTROL				0 b	0 b	0 b	0 c
2	LIBERTY	29	oz/a	A	54 a	78 a	90 a	91 ab
	N-PAK	2.5	% v/v	A				
3	LIBERTY	29	oz/a	A	58 a	99 a	90 a	91 ab
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
4	LIBERTY	29	oz/a	A	64 a	90 a	90 a	91 ab
	CLASSIC	0.33	oz/a	A				
	N-PAK	2.5	% v/v	A				
5	LIBERTY	29	oz/a	A	60 a	90 a	90 a	97 a
	DUAL MAGNUM	20	oz/a	A				
	N-PAK	2.5	% v/v	A				
6	LIBERTY	29	oz/a	A	63 a	88 a	90 a	93 ab
	DUAL MAGNUM	20	oz/a	A				
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
7	LIBERTY	29	oz/a	A	70 a	75 a	90 a	85 b
	PREFIX	2.2	pt/a	A				
	N-PAK	2.5	% v/v	A				
8	LIBERTY	29	oz/a	A	66 a	78 a	90 a	86 b
	PREFIX	2.2	pt/a	A				
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
	LSD P=.05				14.6	23.5	.	5.0
	Standard Deviation				9.9	16.0	0.0	3.4
	CV				18.27	21.46	0.0	4.32
	Bartlett's X2				8.224	10.231	0.0	4.277
	P(Bartlett's X2)				0.222	0.115	.	0.639
	Skewness				-1.2582*	-1.1439*	-2.3809*	-2.2752*
	Kurtosis				1.3202	0.1258	3.9094*	3.6051*
	Replicate F				5.253	7.259	0.000	1.793
	Replicate Prob(F)				0.0073	0.0016	1.0000	0.1794
	Treatment F				20.604	15.202	0.000	354.524
	Treatment Prob(F)				0.0001	0.0001	1.0000	0.0001

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Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	5	6	7	8
Pest Type					W Weed	W Weed		W Weed
Pest Code					AMBEL	XANST		XANST
Pest Name					Common ragweed	Common cockleb>		Common cockleb>
Crop Code							GLXMA	
Crop Name							Soybean	
Rating Date					6/16/2017	6/16/2017	6/16/2017	6/30/2017
Rating Type					CONTRO	CONTRO	PHYGEN	CONTRO
Rating Unit					%	%	%	%
Number of Subsamples					1	1	1	1
Assessed By					T. Campbell	T. Campbell	T. Campbell	T. Campbell
Days After First/Last Applic.					14 14	14 14	14 14	28 28
Trt-Eval Interval					14 DA-A	14 DA-A	14 DA-A	28 DA-A
ARM Action Codes					P	P	P	P
Number of Decimals					0	0	0	0
1	UNTREATED CONTROL				0 b	0 d	0 a	0 c
2	LIBERTY	29	oz/a	A	100 a	68 bc	0 a	34 b
	N-PAK	2.5	% v/v	A				
3	LIBERTY	29	oz/a	A	100 a	93 a	0 a	79 a
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
4	LIBERTY	29	oz/a	A	100 a	80 ab	0 a	65 a
	CLASSIC	0.33	oz/a	A				
	N-PAK	2.5	% v/v	A				
5	LIBERTY	29	oz/a	A	100 a	61 c	0 a	30 b
	DUAL MAGNUM	20	oz/a	A				
	N-PAK	2.5	% v/v	A				
6	LIBERTY	29	oz/a	A	100 a	86 a	0 a	75 a
	DUAL MAGNUM	20	oz/a	A				
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
7	LIBERTY	29	oz/a	A	100 a	79 ab	0 a	56 ab
	PREFIX	2.2	pt/a	A				
	N-PAK	2.5	% v/v	A				
8	LIBERTY	29	oz/a	A	100 a	84 ab	0 a	79 a
	PREFIX	2.2	pt/a	A				
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
LSD P=.05					.	12.4	.	25.2
Standard Deviation					0.0	8.4	0.0	17.1
CV					0.0	12.27	0.0	32.85
Bartlett's X2					0.0	11.583	0.0	7.341
P(Bartlett's X2)					.	0.072	.	0.29
Skewness					-2.3809*	-1.6492*	.	-0.5428
Kurtosis					3.9094*	1.7112*	.	-1.2118
Replicate F					0.000	2.255	0.000	0.684
Replicate Prob(F)					1.0000	0.1117	1.0000	0.5717
Treatment F					0.000	49.054	0.000	11.020
Treatment Prob(F)					1.0000	0.0001	1.0000	0.0001

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Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	9	10	11	12
	Pest Type				W Weed	W Weed	W Weed	
	Pest Code				IPOHE	SETPU	AMBEL	
	Pest Name				ivy-leaf morni>	yellow foxtail	Common ragweed	
	Crop Code							GLXMA
	Crop Name							Soybean
	Rating Date				6/30/2017	6/30/2017	6/30/2017	6/30/2017
	Rating Type				CONTRO	CONTRO	CONTRO	PHYGEN
	Rating Unit				%	%	%	%
	Number of Subsamples				1	1	1	1
	Assessed By				T. Campbell	T. Campbell	T. Campbell	T. Campbell
	Days After First/Last Applic.				28 28	28 28	28 28	28 28
	Trt-Eval Interval				28 DA-A	28 DA-A	28 DA-A	28 DA-A
	ARM Action Codes				P	P	P	P
	Number of Decimals				0	0	0	0
1	UNTREATED CONTROL				0 b	0 b	0 b	0 a
2	LIBERTY	29	oz/a	A	53 a	61 a	100 a	0 a
	N-PAK	2.5	% v/v	A				
3	LIBERTY	29	oz/a	A	73 a	74 a	100 a	0 a
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
4	LIBERTY	29	oz/a	A	54 a	78 a	100 a	0 a
	CLASSIC	0.33	oz/a	A				
	N-PAK	2.5	% v/v	A				
5	LIBERTY	29	oz/a	A	58 a	86 a	100 a	0 a
	DUAL MAGNUM	20	oz/a	A				
	N-PAK	2.5	% v/v	A				
6	LIBERTY	29	oz/a	A	64 a	80 a	100 a	0 a
	DUAL MAGNUM	20	oz/a	A				
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
7	LIBERTY	29	oz/a	A	38 a	74 a	100 a	0 a
	PREFIX	2.2	pt/a	A				
	N-PAK	2.5	% v/v	A				
8	LIBERTY	29	oz/a	A	61 a	60 a	100 a	0 a
	PREFIX	2.2	pt/a	A				
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
	LSD P=.05				30.1	19.0	.	.
	Standard Deviation				20.5	12.9	0.0	0.0
	CV				41.06	20.13	0.0	0.0
	Bartlett's X2				2.143	17.206	0.0	0.0
	P(Bartlett's X2)				0.906	0.009*	.	.
	Skewness				-0.447	-1.477*	-2.3809*	.
	Kurtosis				-0.8045	0.9789	3.9094*	.
	Replicate F				0.484	3.829	0.000	0.000
	Replicate Prob(F)				0.6968	0.0248	1.0000	1.0000
	Treatment F				4.848	18.024	0.000	0.000
	Treatment Prob(F)				0.0022	0.0001	1.0000	1.0000

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Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	13	14	15	16
	Pest Type				W Weed	W Weed	W Weed	W Weed
	Pest Code				XANST	IPOHE	SETPU	AMBEL
	Pest Name				Common cockleb>	ivy-leaf morni>	yellow foxtail	Common ragweed
	Crop Code							
	Crop Name							
	Rating Date				7/10/2017	7/10/2017	7/10/2017	7/10/2017
	Rating Type				CONTRO	CONTRO	CONTRO	CONTRO
	Rating Unit				%	%	%	%
	Number of Subsamples				1	1	1	1
	Assessed By				T. Campbell	T. Campbell	T. Campbell	T. Campbell
	Days After First/Last Applic.				38 38	38 38	38 38	38 38
	Trt-Eval Interval				28 DA-A	28 DA-A	28 DA-A	28 DA-A
	ARM Action Codes				P	P	P	P
	Number of Decimals				0	0	0	0
1	UNTREATED CONTROL				0 c	0 b	0 b	0 b
2	LIBERTY	29	oz/a	A	25 abc	45 a	59 a	97 a
	N-PAK	2.5	% v/v	A				
3	LIBERTY	29	oz/a	A	70 a	66 a	58 a	100 a
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
4	LIBERTY	29	oz/a	A	46 abc	45 a	58 a	100 a
	CLASSIC	0.33	oz/a	A				
	N-PAK	2.5	% v/v	A				
5	LIBERTY	29	oz/a	A	10 bc	55 a	83 a	100 a
	DUAL MAGNUM	20	oz/a	A				
	N-PAK	2.5	% v/v	A				
6	LIBERTY	29	oz/a	A	49 abc	60 a	73 a	100 a
	DUAL MAGNUM	20	oz/a	A				
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
7	LIBERTY	29	oz/a	A	28 abc	28 a	63 a	100 a
	PREFIX	2.2	pt/a	A				
	N-PAK	2.5	% v/v	A				
8	LIBERTY	29	oz/a	A	56 ab	45 a	48 a	95 a
	PREFIX	2.2	pt/a	A				
	SCEPTER	1.4	oz/a	A				
	N-PAK	2.5	% v/v	A				
	LSD P=.05				32.4	26.5	24.1	5.9
	Standard Deviation				22.0	18.0	16.4	4.0
	CV				62.17	41.91	29.92	4.66
	Bartlett's X2				9.037	3.287	9.907	17.198
	P(Bartlett's X2)				0.172	0.772	0.129	0.001*
	Skewness				0.3837	-0.1932	-0.8103	-2.3236*
	Kurtosis				-1.3615	-1.0744	-0.1261	3.7224*
	Replicate F				1.249	1.011	1.690	0.689
	Replicate Prob(F)				0.3174	0.4076	0.1997	0.5690
	Treatment F				4.697	5.418	8.970	301.300
	Treatment Prob(F)				0.0027	0.0012	0.0001	0.0001

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Purdue Weed Science

Trial ID: 17S-SEPAC-Soy-01 Location: SEPAC Trial Year: 2017
Protocol ID: 17S-SEPAC-Soy-01 Investigator: Dr. Bill Johnson
Project ID: 17C05H048 Study Director: Taylor Campbell
Sponsor Contact: Joseph Argentine - AMVAC

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
SETPU, Setaria pumila, yellow foxtail = US
AMBEL, Ambrosia artemisiifolia, Common ragweed = US
XANST, Xanthium strumarium, Common cocklebur = US
IPOHE, Ipomoea hederacea, ivy-leaf morning glory = US
Crop Code
GLXMA, BSOY, Glycine max, Soybean = US
Rating Type
CONTRO = control / burndown or knockdown
PHYGEN = phytotoxicity - general / injury
Rating Unit
% = percent
ARM Action Codes
P = Rating scale of 0 to 100 (e.g. % control or injury)