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Cinch Applied Postemergence to Soybean Plus Synchrony or Classic

Trial ID: 12S-SEP-NTS-02 Protocol ID: 12S-SEP-NTS-02
 Location: SEPAC Study Director: Paul Marquardt
 Project ID: #US 116/12/01: USA-12-116 Investigator: Dr. Bill Johnson
 Sponsor Contact: Helen Flanigan

General Trial Information

Study Director: Paul Marquardt **Title:** Research Associate
Investigator: Dr. Bill Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: E established
Initiation Date: 3-9-2012

Trial Location

City: Butleville
State/Prov.: IN
Postal Code: 47223
Country: USA

Personnel

Study Director: Paul Marquardt **Title:** Research Associate
Affiliation: Purdue University
Address: 915 W. State Street
Location: West Lafayette, IN
Postal Code: 47907 **E-mail:** pmarquar@purdue.edu
Phone No.: 765-494-0891 **Mobile No.:** 765-409-6369
Investigator: Dr. Bill Johnson **Title:** Professor
Affiliation: Purdue University
Address: 915 W. State Street
Location: West Lafayette, IN
Postal Code: 47907 **E-mail:** wgj@purdue.edu
Phone No.: 765-494-4656 **Mobile No.:** 765-404-9801

Cooperator/Landowner

Cooperator: Don Biehle **Role:** Director
Organization: Southeast Purdue Agricultural Center **Org. Type:** University
Address 1: 4425 E. CR 350 N
City: Butleville **Phone No.:** 812-458-6977
State/Prov: IN **Fax No.:** 812-458-6979
Postal Code: 47223 **Mobile No.:** 812-592-8426
Country: USA United States **E-mail:** biehled@purdue.edu

Crop Description

Crop 1: GLXMA Glycine max Soybean
Description: Roundup Ready
BBCH Scale: BSOY
Planting Date: 5-3-2012
Planting Method: DIRDRI direct drilled
Rate, Unit: 140000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN **Spacing Within Row, Unit:** 2 IN
Seed Bed: MEDIUM medium **Soil Temperature, Unit:** 70 F
Soil Moisture: MOIST **Emergence Date:** 5-8-2012
Harvest Date: 10-25-2012 **Harvest Equipment:** Gleaner F3
Harvested Width, Unit: 10 FT **Harvested Length, Unit:** 25 FT
% Standard Moisture: 13.0 **Moisture Meter:** Carter 3" Blade
Weighing Equipment: HM400 Double Bucket

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Pest Description

Pest 1 Type: W **Code:** XANST *Xanthium strumarium*
Common Name: Heart-leaf cocklebur

Pest 2 Type: W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida

Pest 3 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Canada horseweed

Pest 4 Type: W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed

Pest 5 Type: W **Code:** ALLVI *Allium vineale*
Common Name: Wild garlic

Pest 6 Type: W **Code:** IPOHE *Ipomoea hederacea*
Common Name: Ivyleaf morningglory

Site and Design

Plot Width, Unit: 10 FT
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT²
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: NOTILL no-till
Study Design: RACOB1 Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Description	Rate	Rate Unit	Tank Mix
1.	4-19-2012	Roundup PowerMax	4.5	LB/GAL	L	BURNDOWN	22	OZ/A	yes
2.	4-19-2012	2,4-D LV4	4	LB/GAL	L	BURNDOWN	1	LB A/A	yes

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	B
Application Date:	5-3-2012	6-7-2012
Time of Day:	10:00 AM	10 AM
Application Method:	SPRAY	SPRAY
Application Timing:	ATPLAN	ATPLAN
Application Placement:	FOLIAR	FOLIAR
Applied By:	TL	TL
Air Temperature, Unit:	78 F	78 F
% Relative Humidity:	79	76
Wind Velocity, Unit:	4.8 MPH	1.8 MPH
Wind Direction:	W	NW
Dew Presence (Y/N):	N no	Y yes
Soil Temperature, Unit:	70 F	69 F
Soil Moisture:	MOIST	DRY
% Cloud Cover:	75	0

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Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:	00 100	14 100
Height, Unit:		4.5 IN
Height Minimum, Maximum:		4 5

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	XANST W	XANST W
Stage Majority, Percent:	09 100	14 100
Height, Unit:	1 IN	4.5 IN
Height Minimum, Maximum:	1 1	1 8
Density, Unit:	5 YD2	15 YD2
Pest 2 Code, Type, Scale:	SIDSP W	SIDSP W
Stage Majority, Percent:	09 100	13 100
Height, Unit:	1 IN	2.5 IN
Height Minimum, Maximum:	1 1	1 4
Density, Unit:	12.5 YD2	25 YD2
Pest 3 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:	30 100	30 100
Height, Unit:	2 IN	3.5 IN
Height Minimum, Maximum:	1 3	1 6
Density, Unit:	1.5 YD2	2.5 YD2
Pest 4 Code, Type, Scale:	AMBEL W	AMBEL W
Stage Majority, Percent:	11 100	14 100
Height, Unit:	1.5 IN	4.5 IN
Height Minimum, Maximum:	1 2	1 8
Density, Unit:	1.5 YD2	2.5
Pest 5 Code, Type, Scale:	ALLVI W	ALLVI W
Stage Majority, Percent:	21 100	
Height, Unit:	13 IN	
Height Minimum, Maximum:	8 18	
Density, Unit:	10 YD2	
Pest 6 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:	09 100	
Height, Unit:	1 IN	
Height Minimum, Maximum:	1 1	
Density, Unit:	1.5 YD2	

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Application Equipment

	A	B
Appl. Equipment:	CO2 Backpack	CO2 Backpack
Equipment Type:	SPRBAC	SPRBAC
Operation Pressure, Unit:	17 PSI	17 PSI
Nozzle Type:	Flat Fan	Flat Fan
Nozzle Size:	XR11002	XR11002
Nozzle Spacing, Unit:	15 IN	15 IN
Nozzles/Row:	8	
Boom Length, Unit:	10 FT	10 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	H2O	H2O
Water Hardness (ppm CaCO3):	150	150
Spray Volume, Unit:	15 GAL/AC	15 gal/ac
Mix Size, Unit:	1.8 Liters	1.8 liters
Propellant:	CO2	CO2
Tank Mix (Y/N):	N no	N no

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 Sponsor Contact: Helen Flanigan

Pest Type		W Weed	W Weed	W Weed		W Weed	W Weed	W Weed			
Pest Code		XANST	SIDSP	ERICA		XANST	SIDSP	ERICA			
Pest Scientific Name		Xanthium strum>	Sida spinosa	Conyza canadens>		Xanthium strum>	Sida spinosa	Conyza canadens>			
Pest Name		Heart-leaf coc>	Prickly sida	Canada horsewe>		Heart-leaf coc>	Prickly sida	Canada horsewe>			
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA			
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean			
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931			
Description	4 IN	4 IN	4 IN	4 IN	8 IN	8 IN	8 IN	8 IN			
Part Rated	PLOT C	PLOT P	PLOT P	PLOT P	PLOT C	PLOT P	PLOT P	PLOT P			
Rating Date	5-31-2012	5-31-2012	5-31-2012	5-31-2012	6-14-2012	6-14-2012	6-14-2012	6-14-2012			
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1	1	1			
Crop Stage Majority	13	13	13	13	14	14	14	14			
Pest Stage Majority		1-4 IN	1-3 IN	1-4 IN		1-18 IN	1-6 IN	1-12 IN			
Pest Density, Unit		5 M2	30 M2	2.5 M2		5.5 M2	30 M2	5.5 M2			
Assessed By	PM/JS	PM/JS	PM/JS	PM/JS	PM/JR	PM/JR	PM/JR	PM/JR			
Days After First/Last Applic.	28 28	28 28	28 28	28 28	42 7	42 7	42 7	42 7			
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A		42 DP-1	42 DP-1	42 DP-1			
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1	28 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1			
Days After Emergence	23 DE-1	23 DE-1	23 DE-1	23 DE-1	37 DE-1	37 DE-1	37 DE-1	37 DE-1			
ARM Action Codes											
Number of Decimals											
Trt No.	Treatment Name	Rate	Appl								
		Rate Unit	Code	1	2	3	4	5	6	7	8
1	UNTREATED			0.0 a	0.0 b	0.0 c	0.0 b	0.0 b	0.0 b	0.0 b	0.0 d
2	Envive 3.5 oz Synchrony XP 29.8 g ai/ha A Valor 71.5 g ai/ha A Cinch 1070 g ai/ha B Synchrony XP 7.46 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B			0.0 a	98.8 a	97.3 a	81.3 a	5.0 a	100.0 a	98.0 a	76.3 abc
3	Envive 3.5 oz Synchrony XP 29.8 g ai/ha A Valor 71.5 g ai/ha A Cinch 1070 g ai/ha B Classic 5.8 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B			0.0 a	99.5 a	94.5 a	73.8 a	5.0 a	100.0 a	97.0 a	66.3 bc
4	Envive 3.5 oz Synchrony XP 29.8 g ai/ha A Valor 71.5 g ai/ha A Cinch 1070 g ai/ha B Classic 8.8 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B			0.0 a	98.8 a	93.3 ab	77.5 a	3.8 a	100.0 a	94.0 a	80.0 abc

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type		W Weed	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code		XANST	SIDSP	ERICA		XANST	SIDSP	ERICA		
Pest Scientific Name		Xanthium strum>	Sida spinosa	Conyza canad>		Xanthium strum>	Sida spinosa	Conyza canad>		
Pest Name		Heart-leaf coc>	Prickly sida	Canada horsewe>		Heart-leaf coc>	Prickly sida	Canada horsewe>		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931		
Description	4 IN	4 IN	4 IN	4 IN	8 IN	8 IN	8 IN	8 IN		
Part Rated	PLOT C	PLOT P	PLOT P	PLOT P	PLOT C	PLOT P	PLOT P	PLOT P		
Rating Date	5-31-2012	5-31-2012	5-31-2012	5-31-2012	6-14-2012	6-14-2012	6-14-2012	6-14-2012		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1	1		
Crop Stage Majority	13	13	13	13	14	14	14	14		
Pest Stage Majority		1-4 IN	1-3 IN	1-4 IN		1-18 IN	1-6 IN	1-12 IN		
Pest Density, Unit		5 M2	30 M2	2.5 M2		5.5 M2	30 M2	5.5 M2		
Assessed By	PM/JS	PM/JS	PM/JS	PM/JS	PM/JR	PM/JR	PM/JR	PM/JR		
Days After First/Last Applic.	28 28	28 28	28 28	28 28	42 7	42 7	42 7	42 7		
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A		42 DP-1	42 DP-1	42 DP-1		
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1	28 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1		
Days After Emergence	23 DE-1	23 DE-1	23 DE-1	23 DE-1	37 DE-1	37 DE-1	37 DE-1	37 DE-1		
ARM Action Codes										
Number of Decimals										
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit	Unit	Unit	Unit	Unit	Unit	Unit		
		Code	Code	Code	Code	Code	Code	Code		
		1	2	3	4	5	6	7		
		8								
5	Envide 3.5 oz Synchrony XP Valor Cinch Abundit N-Pak AMS	29.8 g ai/ha A 71.5 g ai/ha A 1070 g ai/ha B 1120 g ai/ha B 2240 g ai/ha B	0.0 a	100.0 a	92.5 ab	89.0 a	3.8 a	100.0 a	93.8 a	86.3 abc
6	Envide 3.5 oz Synchrony XP Valor Abundit N-Pak AMS	29.8 g ai/ha A 71.5 g ai/ha A 1120 g ai/ha B 2240 g ai/ha B	0.0 a	99.5 a	90.0 ab	76.3 a	0.0 b	100.0 a	96.5 a	62.0 c
7	Canopy Cinch Synchrony XP Abundit N-Pak AMS	210 g ai/ha A 1070 g ai/ha B 7.46 g ai/ha B 1120 g ai/ha B 2240 g ai/ha B	0.0 a	98.8 a	89.5 ab	93.8 a	5.0 a	100.0 a	92.0 a	95.0 ab
8	Canopy Cinch Classic Abundit N-Pak AMS	210 g ai/ha A 1070 g ai/ha B 5.8 g ai/ha B 1120 g ai/ha B 2240 g ai/ha B	0.0 a	98.8 a	92.0 ab	100.0 a	3.8 a	100.0 a	95.3 a	100.0 a
9	Canopy Cinch Classic Abundit N-Pak AMS	210 g ai/ha A 1070 g ai/ha B 8.8 g ai/ha B 1120 g ai/ha B 2240 g ai/ha B	0.0 a	100.0 a	86.3 ab	92.5 a	5.0 a	100.0 a	90.5 a	91.8 abc
10	Canopy Cinch Abundit N-Pak AMS	210 g ai/ha A 1070 g ai/ha B 1120 g ai/ha B 2240 g ai/ha B	0.0 a	97.5 a	78.8 b	98.8 a	3.8 a	100.0 a	91.8 a	98.8 a

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Pest Type		W Weed	W Weed	W Weed		W Weed	W Weed	W Weed			
Pest Code		XANST	SIDSP	ERICA		XANST	SIDSP	ERICA			
Pest Scientific Name		Xanthium strum>	Sida spinosa	Conyza canaden>		Xanthium strum>	Sida spinosa	Conyza canaden>			
Pest Name		Heart-leaf coc>	Prickly sida	Canada horsewe>		Heart-leaf coc>	Prickly sida	Canada horsewe>			
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA			
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean			
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931			
Description	4 IN	4 IN	4 IN	4 IN	8 IN	8 IN	8 IN	8 IN			
Part Rated	PLOT C	PLOT P	PLOT P	PLOT P	PLOT C	PLOT P	PLOT P	PLOT P			
Rating Date	5-31-2012	5-31-2012	5-31-2012	5-31-2012	6-14-2012	6-14-2012	6-14-2012	6-14-2012			
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1	1	1			
Crop Stage Majority	13	13	13	13	14	14	14	14			
Pest Stage Majority		1-4 IN	1-3 IN	1-4 IN		1-18 IN	1-6 IN	1-12 IN			
Pest Density, Unit		5 M2	30 M2	2.5 M2		5.5 M2	30 M2	5.5 M2			
Assessed By	PM/JS	PM/JS	PM/JS	PM/JS	PM/JR	PM/JR	PM/JR	PM/JR			
Days After First/Last Applic.	28 28	28 28	28 28	28 28	42 7	42 7	42 7	42 7			
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A							
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1	28 DP-1	42 DP-1	42 DP-1	42 DP-1	42 DP-1			
Days After Emergence	23 DE-1	23 DE-1	23 DE-1	23 DE-1	37 DE-1	37 DE-1	37 DE-1	37 DE-1			
ARM Action Codes											
Number of Decimals											
Trt Treatment	Rate	Appl									
No. Name	Rate	Unit	Code	1	2	3	4	5	6	7	8
11 Canopy	210 g ai/ha	A		0.0 a	95.8 a	85.0 ab	95.8 a	0.0 b	100.0 a	92.0 a	90.8 abc
Abundit	1120 g ai/ha	B									
N-Pak AMS	2240 g ai/ha	B									
LSD (P=.05)	0.00			0.00	4.24	9.59	16.59	1.82	0.00	5.49	19.51
Standard Deviation	0.00			0.00	2.94	6.65	11.49	1.26	0.00	3.81	13.51
CV	0.0			0.0	3.27	8.13	14.38	39.64	0.0	4.45	17.55
Bartlett's X2	0.0			0.0	15.947	15.2	13.709	0.0	0.0	8.542	31.998
P(Bartlett's X2)	.			.	0.026*	0.086	0.09	.	.	0.382	0.001*
Replicate F	0.000			0.000	0.157	1.912	3.197	5.714	0.000	2.161	4.596
Replicate Prob(F)	1.0000			1.0000	0.9242	0.1489	0.0375	0.0032	1.0000	0.1133	0.0092
Treatment F	0.000			0.000	411.720	68.905	23.905	11.286	0.000	223.877	17.736
Treatment Prob(F)	1.0000			1.0000	0.0001	0.0001	0.0001	0.0001	1.0000	0.0001	0.0001

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Pest Type	W Weed		W Weed	W Weed	W Weed	W Weed		W Weed			
Pest Code	AMBEL		XANST	SIDSP	ERICA	AMBEL		XANST			
Pest Scientific Name	Ambrosia artem>		Xanthium strum>	Sida spinosa	Conyza canaden>	Ambrosia artem>		Xanthium strum>			
Pest Name	Common ragweed		Heart-leaf coc>	Prickly sida	Canada horsewe>	Common ragweed		Heart-leaf coc>			
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA			
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean			
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931			
Description	8 IN	12 IN	12 IN	12 IN	12 IN	12 IN	18 IN	18 IN			
Part Rated	PLOT P	PLOT C	PLOT P	PLOT P	PLOT P	PLOT P	PLOT C	PLOT P			
Rating Date	6-14-2012	6-20-2012	6-20-2012	6-20-2012	6-20-2012	6-20-2012	7-5-2012	7-5-2012			
Rating Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO			
Rating Unit	%	%	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1	1	1			
Crop Stage Majority	14	60	60	60	60	60	69	69			
Pest Stage Majority	3-12 IN		1-24 IN	1-6 IN	1-12 IN	3-12 IN		6-24 IN			
Pest Density, Unit	2.5 M2		5.5 M2	30 M2	5.5 M2	2.5 M2		7.5 M2			
Assessed By	PM/JR	PM	PM	PM	PM	PM	PM	PM			
Days After First/Last Applic.	42 7	48 13	48 13	48 13	48 13	48 13	63 28	63 28			
Trt-Eval Interval											
Plant-Eval Interval	42 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	63 DP-1	63 DP-1			
Days After Emergence	37 DE-1	43 DE-1	43 DE-1	43 DE-1	43 DE-1	43 DE-1	58 DE-1	58 DE-1			
ARM Action Codes											
Number of Decimals											
Trt No.	Treatment Name	Rate	Appl								
		Rate Unit	Code	9	10	11	12	13	14	15	16
1	UNTREATED	0.0 b		0.0 b	0.0 b	0.0 b	0.0 b	0.0 d	0.0 b	0.0 a	0.0 b
2	Envive 3.5 oz Synchrony XP 29.8 g ai/ha A Valor 71.5 g ai/ha A Cinch 1070 g ai/ha B Synchrony XP 7.46 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	97.5 a		5.0 a	100.0 a	98.0 a	76.3 abc	97.5 a	0.0 a		98.8 a
3	Envive 3.5 oz Synchrony XP 29.8 g ai/ha A Valor 71.5 g ai/ha A Cinch 1070 g ai/ha B Classic 5.8 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	98.8 a		5.0 a	100.0 a	97.0 a	66.3 bc	98.8 a	0.0 a		100.0 a
4	Envive 3.5 oz Synchrony XP 29.8 g ai/ha A Valor 71.5 g ai/ha A Cinch 1070 g ai/ha B Classic 8.8 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	98.8 a		3.8 a	100.0 a	94.0 a	80.0 abc	98.8 a	0.0 a		96.3 a

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Pest Type	W Weed		W Weed		W Weed		W Weed		W Weed	
Pest Code	AMBEL		XANST		SIDSP		ERICA		AMBEL	
Pest Scientific Name	Ambrosia artem>		Xanthium strum>		Sida spinosa		Conyza canad>		Ambrosia artem>	
Pest Name	Common ragweed		Heart-leaf coc>		Prickly sida		Canada horsewe>		Common ragweed	
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931
Description	8 IN	12 IN	12 IN	12 IN	12 IN	12 IN	12 IN	12 IN	18 IN	18 IN
Part Rated	PLOT P	PLOT C	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT C	PLOT P
Rating Date	6-14-2012	6-20-2012	6-20-2012	6-20-2012	6-20-2012	6-20-2012	6-20-2012	6-20-2012	7-5-2012	7-5-2012
Rating Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO
Rating Unit	%	%	%	%	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1	1	1	1	1
Crop Stage Majority	14	60	60	60	60	60	60	60	69	69
Pest Stage Majority	3-12 IN		1-24 IN	1-6 IN	1-12 IN	3-12 IN		6-24 IN		
Pest Density, Unit	2.5 M2		5.5 M2	30 M2	5.5 M2	2.5 M2		7.5 M2		
Assessed By	PM/JR	PM	PM	PM	PM	PM	PM	PM	PM	PM
Days After First/Last Applic.	42 7	48 13	48 13	48 13	48 13	48 13	48 13	48 13	63 28	63 28
Trt-Eval Interval										
Plant-Eval Interval	42 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	63 DP-1	63 DP-1
Days After Emergence	37 DE-1	43 DE-1	43 DE-1	43 DE-1	43 DE-1	43 DE-1	43 DE-1	43 DE-1	58 DE-1	58 DE-1
ARM Action Codes										
Number of Decimals										
Trt Treatment	Rate	Appl								
No. Name	Rate Unit	Code	9	10	11	12	13	14	15	16
5 Envice 3.5 oz Synchrony XP 29.8 g ai/ha A Valor 71.5 g ai/ha A Cinch 1070 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	100.0 a		3.8 a	100.0 a	93.8 a	86.3 abc	100.0 a	0.0 a	100.0 a	
6 Envice 3.5 oz Synchrony XP 29.8 g ai/ha A Valor 71.5 g ai/ha A Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	76.3 a		0.0 b	100.0 a	96.5 a	62.0 c	76.3 a	0.0 a	100.0 a	
7 Canopy 210 g ai/ha A Cinch 1070 g ai/ha B Synchrony XP 7.46 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	95.0 a		5.0 a	100.0 a	92.0 a	95.0 ab	95.0 a	0.0 a	100.0 a	
8 Canopy 210 g ai/ha A Cinch 1070 g ai/ha B Classic 5.8 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	94.0 a		3.8 a	100.0 a	95.3 a	100.0 a	94.0 a	0.0 a	100.0 a	
9 Canopy 210 g ai/ha A Cinch 1070 g ai/ha B Classic 8.8 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	97.5 a		5.0 a	100.0 a	90.5 a	91.8 abc	97.5 a	0.0 a	100.0 a	
10 Canopy 210 g ai/ha A Cinch 1070 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	87.5 a		3.8 a	100.0 a	91.8 a	98.8 a	87.5 a	0.0 a	98.0 a	

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Pest Type	W Weed		W Weed		W Weed		W Weed		W Weed			
Pest Code	AMBEL		XANST		SIDSP		ERICA		AMBEL			
Pest Scientific Name	Ambrosia artem>		Xanthium strum>		Sida spinosa		Conyza canad>		Ambrosia artem>			
Pest Name	Common ragweed		Heart-leaf coc>		Prickly sida		Canada horsewe>		Common ragweed			
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931		
Description	8 IN	12 IN	12 IN	12 IN	12 IN	12 IN	12 IN	12 IN	18 IN	18 IN		
Part Rated	PLOT P	PLOT C	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT C	PLOT P		
Rating Date	6-14-2012	6-20-2012	6-20-2012	6-20-2012	6-20-2012	6-20-2012	6-20-2012	6-20-2012	7-5-2012	7-5-2012		
Rating Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1	1	1	1		
Crop Stage Majority	14	60	60	60	60	60	60	60	69	69		
Pest Stage Majority	3-12 IN		1-24 IN	1-6 IN	1-12 IN	3-12 IN		6-24 IN				
Pest Density, Unit	2.5 M2		5.5 M2	30 M2	5.5 M2	2.5 M2		7.5 M2				
Assessed By	PM/JR	PM	PM	PM	PM	PM	PM	PM	PM	PM		
Days After First/Last Applic.	42 7	48 13	48 13	48 13	48 13	48 13	48 13	48 13	63 28	63 28		
Trt-Eval Interval												
Plant-Eval Interval	42 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	48 DP-1	63 DP-1	63 DP-1		
Days After Emergence	37 DE-1	43 DE-1	43 DE-1	43 DE-1	43 DE-1	43 DE-1	43 DE-1	43 DE-1	58 DE-1	58 DE-1		
ARM Action Codes												
Number of Decimals												
Trt No.	Treatment Name	Rate	Appl Unit	Code	9	10	11	12	13	14	15	16
11	Canopy	210 g ai/ha	A		95.8 a	0.0 b	100.0 a	92.0 a	90.8 abc	95.8 a	0.0 a	97.5 a
	Abundit	1120 g ai/ha	B									
	N-Pak AMS	2240 g ai/ha	B									
LSD (P=.05)		15.07			1.82	0.00	5.49	19.51	15.07	0.00	4.50	
Standard Deviation		10.44			1.26	0.00	3.81	13.51	10.44	0.00	3.12	
CV		12.2			39.64	0.0	4.45	17.55	12.2	0.0	3.46	
Bartlett's X2		32.299			0.0	0.0	8.542	31.998	32.299	0.0	3.351	
P(Bartlett's X2)		0.001*			.	.	0.382	0.001*	0.001*	.	0.341	
Replicate F		1.876			5.714	0.000	2.161	4.596	1.876	0.000	0.665	
Replicate Prob(F)		0.1549			0.0032	1.0000	0.1133	0.0092	0.1549	1.0000	0.5800	
Treatment F		31.266			11.286	0.000	223.877	17.736	31.266	0.000	368.316	
Treatment Prob(F)		0.0001			0.0001	1.0000	0.0001	0.0001	0.0001	1.0000	0.0001	

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Pest Type	W Weed	W Weed	W Weed						
Pest Code	SIDSP	ERICA	AMBEL						
Pest Scientific Name	Sida spinosa	Conyza canadensis	Ambrosia artemisiifolia						
Pest Name	Prickly sida	Canada horseweed	Common ragweed						
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931		
Description	18 IN	18 IN	18 IN						
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P		
Rating Date	7-5-2012	7-5-2012	7-5-2012	10-25-2012	10-25-2012	10-25-2012	10-25-2012		
Rating Type	CONTRO	CONTRO	CONTRO	YIELD	MOISTURE	YIELD	YIELD		
Rating Unit	%	%	%	LB	%	BU	KG		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority	69	69	69						
Pest Stage Majority	2-10 IN	6-18 IN	6-30 IN						
Pest Density, Unit	30 M2	5.5 M2	2.5 M2						
Assessed By	PM	PM	PM	PM	PM	PM	PM		
Days After First/Last Applic.	63 28	63 28	63 28	175 140	175 140	175 140	175 140		
Trt-Eval Interval									
Plant-Eval Interval	63 DP-1	63 DP-1	63 DP-1	175 DP-1	175 DP-1	175 DP-1	175 DP-1		
Days After Emergence	58 DE-1	58 DE-1	58 DE-1	170 DE-1	170 DE-1	170 DE-1	170 DE-1		
ARM Action Codes						TY1	TY2		
Number of Decimals						1	1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	17	18	19	20	21	22	23
1 UNTREATED	0.0 b		0.0 b	0.0 b	2.9655097 b	14.7997566 a	8.3 c	557.0 c	
2 Envive 3.5 oz Synchrony XP 29.8 g ai/ha A Valor 71.5 g ai/ha A Cinch 1070 g ai/ha B Synchrony XP 7.46 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	94.5 a		80.0 a	100.0 a	11.6553623 a	11.7667572 a	34.3 ab	2308.7 ab	
3 Envive 3.5 oz Synchrony XP 29.8 g ai/ha A Valor 71.5 g ai/ha A Cinch 1070 g ai/ha B Classic 5.8 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	97.0 a		70.3 a	100.0 a	9.5198355 a	12.1970256 a	27.9 ab	1876.8 ab	
4 Envive 3.5 oz Synchrony XP 29.8 g ai/ha A Valor 71.5 g ai/ha A Cinch 1070 g ai/ha B Classic 8.8 g ai/ha B Abundit 1120 g ai/ha B N-Pak AMS 2240 g ai/ha B	92.5 a		68.8 a	100.0 a	10.5002967 a	12.2844727 a	30.7 ab	2066.8 ab	

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Pest Type	W Weed	W Weed	W Weed						
Pest Code	SIDSP	ERICA	AMBEL						
Pest Scientific Name	Sida spinosa	Conyza canadensis	Ambrosia artemisiifolia						
Pest Name	Prickly sida	Canada horseweed	Common ragweed						
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931		
Description	18 IN	18 IN	18 IN						
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P		
Rating Date	7-5-2012	7-5-2012	7-5-2012	10-25-2012	10-25-2012	10-25-2012	10-25-2012		
Rating Type	CONTRO	CONTRO	CONTRO	YIELD	MOISTURE	YIELD	YIELD		
Rating Unit	%	%	%	LB	%	BU	KG		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority	69	69	69						
Pest Stage Majority	2-10 IN	6-18 IN	6-30 IN						
Pest Density, Unit	30 M2	5.5 M2	2.5 M2						
Assessed By	PM	PM	PM	PM	PM	PM	PM		
Days After First/Last Applic.	63 28	63 28	63 28	175 140	175 140	175 140	175 140		
Trt-Eval Interval									
Plant-Eval Interval	63 DP-1	63 DP-1	63 DP-1	175 DP-1	175 DP-1	175 DP-1	175 DP-1		
Days After Emergence	58 DE-1	58 DE-1	58 DE-1	170 DE-1	170 DE-1	170 DE-1	170 DE-1		
ARM Action Codes						TY1	TY2		
Number of Decimals						1	1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	17	18	19	20	21	22	23
11 Canopy	210 g ai/ha A		82.5 a	82.5 a	97.5 a	11.5479138 a	13.0393051 a	33.5 ab	2255.1 ab
Abundit	1120 g ai/ha B								
N-Pak AMS	2240 g ai/ha B								
LSD (P=.05)	10.30	15.75	11.52	2.09958932	3.40001522	5.97	401.82		
Standard Deviation	7.13	10.91	7.98	1.45409765	2.35472440	4.14	278.29		
CV	8.48	14.64	8.98	14.5	19.36	14.05	14.05		
Bartlett's X2	16.316	20.9	14.413	6.677	49.234	6.986	6.986		
P(Bartlett's X2)	0.061	0.013*	0.002*	0.756	0.001*	0.727	0.727		
Replicate F	4.484	7.299	1.170	0.463	1.112	0.585	0.585		
Replicate Prob(F)	0.0103	0.0008	0.3374	0.7105	0.3597	0.6293	0.6293		
Treatment F	62.429	23.003	55.465	12.069	1.381	13.608	13.608		
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.2361	0.0001	0.0001		

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Cinch Applied Postemergence to Soybean Plus Synchrony or Classic

Trial ID: 12S-SEP-NTS-02 Protocol ID: 12S-SEP-NTS-02
 Location: SEPAC Study Director: Paul Marquardt
 Project ID: #US 116/12/01: USA-12-116 Investigator: Dr. Bill Johnson
 Sponsor Contact: Helen Flanigan

Pest Type

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

Pest Code

XANST, Xanthium strumarium, = US
 SIDSP, Sida spinosa, = US
 ERICA, Conyza canadensis, = US
 AMBEL, Ambrosia artemisiifolia, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Part Rated

PLOT = plot
 C = Crop is Part Rated
 P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown
 YIELD = yield

Rating Unit

% = percent
 LB = pound
 BU = bushel
 KG = kilogram

Crop Stage Majority

13 = Trifoliolate leaf on the 3rd node unfolded
 14 = Trifoliolate leaf on the 4th node unfolded
 60 = First flowers opened (sporadically in population)
 69 = End of flowering: first pods visible (approx. 5 mm length)

M2 = per square meter

Plant-Eval Interval

28 DP-1 = 1 GLXMA 5-3-2012
 42 DP-1 = 1 GLXMA 5-3-2012
 48 DP-1 = 1 GLXMA 5-3-2012
 63 DP-1 = 1 GLXMA 5-3-2012
 175 DP-1 = 1 GLXMA 5-3-2012

ARM Action Codes

TY1 = $2.904 \cdot [20]^{(100-[21])/87}$
 TY2 = $195.2984 \cdot [20]^{(100-[21])/87}$