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Resolve preplant interval to non-STS soybean

Trial ID: 10S-SEP-NTS-43 Protocol ID: 10S-SEP-NTS-43
Location: SEPAC Study Director: Paul Marquardt/Mike White
Project ID: Investigator: Dr. Bill Johnson
Sponsor Contact: Helen Flanigan

General Trial Information

Study Director: Paul Marquardt/Mike White **Title:** Research Associate
Investigator: Dr. William G. Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: E established
Initiation Date: 3-10-2010

Trial Location

City: Butlerville
State/Prov.: IN
Postal Code: 47223-0216
Country: USA

Personnel

Study Director: Paul Marquardt/Mike White **Title:** Research Associate
Affiliation: Purdue University
Address: 915 W. State St., Botany and Plant Pathology
Location: West Lafayette, IN
Postal Code: 47907 **E-mail:** pmarquar@purdue.edu
Phone No.: 765-494-4621 **Mobile No.:** 765-409-6369
Investigator: Dr. William G. Johnson **Title:** Professor
Affiliation: Purdue University
Address: 915 W. State St.
Location: West Lafayette, IN USA
Postal Code: 47907 **E-mail:** wgj@purdue.edu
Phone No.: 765-494-4656

Cooperator/Landowner

Cooperator: Southeastern-Purdue Ag Center **Role:** Cooperator
Organization: Purdue University
Address 1: 4425 E Co. Rd. 350 N
Phone No.: 1-812-458-6977
City: Butlerville **Fax No.:** 1-812-458-6979
State/Prov: IN
Postal Code: 477223-021 **E-mail:** biehled@purdue.edu
Country: USA United States

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Asgrow AG2939 **Description:** Roundup Ready
BBCH Scale: BSOY **Planting Date:** 5-10-2010
Planting Method: DIRDRI direct drilled **Rate, Unit:** 161000 S/A
Depth, Unit: 1.0 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM medium **Soil Temperature, Unit:** 57 F
Soil Moisture: SLIWET slightly wet **Emergence Date:** 5-19-2010
Harvest Date: 11-11-2010 **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: Carter Double Bucket

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

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Field Prep./Maintenance:

3-16-10: Blanket of Roundup PowerMax (0.77 lb ae/a) and 2,4-D Ester (0.5 lb ai/a) to burndown existing weeds.
4-29-10: Blanket of Roundup PowerMax (0.77 lb ae/a) and 2,4-D Ester (0.5 lb ai/a) to burndown existing weeds.
6-17-10: Blanket of Roundup PowerMax (0.77 lb ae/a) and 2,4-D Ester (0.5 lb ai/a) to burndown existing weeds.

Soil Description

Description Name: SEPAC Field U4-6
% OM: 1.8 **Texture:** SIL silt loam
pH: 5.6 **Soil Name:** Avonburg
CEC: 6.7

Application Description

	A	B	C	D
Application Date:	3-16-2010	4-1-2010	4-13-2010	4-29-2010
Time of Day:	0945-1005	0920-0925	0920-0940	0920-0930
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	60 DPP	45 DPP	30 DPP	15 DPP
Application Placement:	SOIL	SOIL	SOIL	SOIL
Applied By:	RT	RH	PM	RT
Air Temperature, Unit:	52 F	65 F	68 F	59 F
% Relative Humidity:	66	49	46	56
Wind Velocity, Unit:	3.5 MPH	5.5 MPH	1 MPH	3.3 MPH
Wind Direction:	NE	SW	SE	S
Dew Presence (Y/N):	Y yes	N no	N no	Y yes
Soil Temperature, Unit:	42 F		55 F	50 F
Soil Moisture:	WET	MOIST	DRY	MOIST
% Cloud Cover:	10	0	5	5

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY

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Application Equipment

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

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Location: SEPAC Study Director: Paul Marquardt/Mike White
Project ID: Investigator: Dr. Bill Johnson
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Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4	5	6	7	8	9
	Pest Type												
	Pest Code												
	Pest Scientific Name												
	Pest Name												
	Crop Code				GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
	BBCH Scale				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
	Crop Name				Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
	Crop Variety				AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939
	Description						4-5"	6-8"	6-8"	7-10"			
	Rating Date				5-27-2010	5-27-2010	6-4-2010	6-4-2010	6-9-2010	6-17-2010	6-29-2010	11-11-2010	11-11-2010
	Rating Type				PHYSTU	STAND	PHYSTU	STAND	PHYSTU	PHYSTU	PHYSTU	YIELD	MOISTURE
	Rating Unit				%	PER 2 FT	%	PER 2 FT	%	%	%	LB	%
	Number of Subsamples				1	1	1	1	1	1	1	1	1
	Crop Stage Majority						V1	V3	V3	V3	R1		
	Pest Stage Majority												
	Pest Density, Unit												
	Assessed By				WGJ	WGJ	PM	PM	RH	JR	PM		
1	UNTREATED				6.3 b	10.0 a	0.0 b	11.5 a	0.0 c	0.0 c	0.0 c	11.8575356 ab	8.01562008 a
2	Resolve	0.0156	lb ai/a	A	25.0 ab	10.0 a	10.0 b	11.3 a	18.8 bc	21.3 b	12.5 bc	12.0590890 ab	7.81178696 a
3	Resolve	0.0313	lb ai/a	A	22.5 ab	9.3 a	11.3 b	12.3 a	18.3 bc	23.0 b	15.0 bc	10.8632022 b	8.18673216 a
4	Resolve	0.0156	lb ai/a	B	17.5 ab	11.3 a	5.0 b	11.0 a	10.8 bc	13.0 bc	2.5 c	15.1764866 a	7.81556732 a
5	Resolve	0.0313	lb ai/a	B	17.5 ab	13.5 a	5.5 b	12.0 a	18.8 bc	18.0 bc	16.3 bc	10.9169437 b	7.46732214 a
6	Resolve	0.0156	lb ai/a	C	22.5 ab	11.5 a	6.8 b	11.8 a	16.3 bc	23.0 b	15.0 bc	12.6100076 ab	7.65915518 a
7	Resolve	0.0313	lb ai/a	C	28.8 ab	10.8 a	20.0 b	10.8 a	33.8 ab	32.0 ab	25.0 b	9.0223226 b	7.97857269 a
8	Resolve	0.0156	lb ai/a	D	15.0 b	11.8 a	10.0 b	11.0 a	17.5 bc	18.3 bc	16.3 bc	11.5887978 b	7.78433353 a
9	Resolve	0.0313	lb ai/a	D	46.3 a	7.8 a	43.8 a	7.8 a	45.8 a	42.5 a	45.0 a	6.1199309 c	7.95588621 a
	LSD (P=.05)				19.34	4.88	17.60	4.08	16.64	13.75	12.95	2.49371053	0.640450303
	Standard Deviation				13.25	3.35	12.06	2.79	11.40	9.42	8.87	1.70864313	0.438824370
	CV				59.27	31.44	96.71	25.32	57.09	44.4	54.15	15.34	5.59
	Bartlett's X2				7.701	3.253	17.604	6.912	20.39	5.262	6.99	7.326	21.379
	P(Bartlett's X2)				0.463	0.917	0.007*	0.546	0.005*	0.628	0.43	0.502	0.006*
	Replicate F				1.311	2.240	2.121	2.721	1.845	2.551	4.644	2.986	0.946
	Replicate Prob(F)				0.2937	0.1095	0.1241	0.0668	0.1660	0.0794	0.0107	0.0511	0.4341
	Treatment F				2.788	0.967	4.610	0.901	5.246	6.264	8.718	8.534	0.930
	Treatment Prob(F)				0.0246	0.4840	0.0017	0.5310	0.0007	0.0002	0.0001	0.0001	0.5098

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.

Column 1: US; AG 2939; phytotoxicity - stunting; percent; WGJ
Column 2: US; AG 2939; STAND; PER 2 FT; WGJ
Column 3: US; AG 2939; phytotoxicity - stunting; percent; V1; PM
Column 4: US; AG 2939; STAND; PER 2 FT; V3; PM
Column 5: US; AG 2939; phytotoxicity - stunting; percent; V3; RH
Column 6: US; AG 2939; phytotoxicity - stunting; percent; V3; JR
Column 7: US; AG 2939; phytotoxicity - stunting; percent; R1; PM
Column 8: US; AG 2939; yield; pound

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Pest Type	
Pest Code	
Pest Scientific Name	
Pest Name	
Crop Code	GLXMA
BBCH Scale	BSOY
Crop Scientific Name	Glycine max
Crop Name	Soybean
Crop Variety	AG 2939
Description	
Rating Date	11-11-2010
Rating Type	YIELD
Rating Unit	BU
Number of Subsamples	1
Crop Stage Majority	
Pest Stage Majority	
Pest Density, Unit	
Assessed By	

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	10
1	UNTREATED				36.4 b
2	Resolve	0.0156	lb ai/a	A	37.1 b
3	Resolve	0.0313	lb ai/a	A	33.3 b
4	Resolve	0.0156	lb ai/a	B	46.7 a
5	Resolve	0.0313	lb ai/a	B	33.7 b
6	Resolve	0.0156	lb ai/a	C	38.9 b
7	Resolve	0.0313	lb ai/a	C	27.7 b
8	Resolve	0.0156	lb ai/a	D	35.7 b
9	Resolve	0.0313	lb ai/a	D	18.8 c

LSD (P=.05)	7.67
Standard Deviation	5.25
CV	15.34
Bartlett's X2	7.371
P(Bartlett's X2)	0.497
Replicate F	3.004
Replicate Prob(F)	0.0502
Treatment F	8.575
Treatment Prob(F)	0.0001

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Column 9: US; AG 2939; MOISTURE; percent
Column 10: US; AG 2939; yield; bushel