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Post residual control in soybeans with V-10206.

Trial ID: 10S-THP-CTS-76 Protocol ID: 10S-THP-CTS-76
 Location: Throckmorton Study Director: White/Marquardt
 Project ID: Investigator: Dr. Bill Johnson
 Sponsor Contact: Valent - Eric Ott

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: 3-24-2010

Trial Location

City: Lafayette
State/Prov.: IN
Postal Code: 47909
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: Throckmorton Purdue Ag Center

Role: Purdue Ag Center

Organization: Purdue University

Address 1: 8343 US 231 S

Phone No.: 765-538-3422

Fax No.: 765-538-3423

City: Lafayette

State/Prov.: IN

Postal Code: 47909

E-mail: jayyoung@purdue.edu

Country: US

Crop Description

Crop 1: GLXMA Glycine max Soybean

Variety: ASGROW AG2939

Description: Roundup Ready

BBCH Scale: BSOY

Planting Date: 5-28-2010

Row Spacing, Unit: 30 IN

Soil Temperature, Unit: 73 F

Emergence Date: 6-3-2010

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi

Common Name: Giant foxtail

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida

Common Name: Giant ragweed

Pest 3 Type: W **Code:** CHEAL Chenopodium album

Common Name: Common lambsquarters

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: CONTIL conventional-till

Replications: 4

Study Design: RACOB� Randomized Complete Block (RCB)

Untreated Arrangement: INCLUDED single control randomized in each block

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Soil Description

Description Name: TPAC Field 5
% OM: 2.3 **Texture:** SIL silt loam
pH: 6.6 **Soil Name:** Longlois
CEC: 9.9

Application Description

	A
Application Date:	6-25-2010
Time of Day:	8:35 AM
Application Method:	SPRAY
Application Timing:	EAPOWE
Application Placement:	FOLIAR
Applied By:	MH
Air Temperature, Unit:	74 F
% Relative Humidity:	70
Wind Velocity, Unit:	1 MPH
Wind Direction:	S
Dew Presence (Y/N):	Y yes
Soil Temperature, Unit:	70 F
Soil Moisture:	WET
% Cloud Cover:	0

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	BBCH
Stage Majority, Percent:	V5
Height, Unit:	9 IN
Height Minimum, Maximum:	8 10

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SETFA W
Height, Unit:	10.5 IN
Height Minimum, Maximum:	5 16
Density, Unit:	150 YD2
Pest 2 Code, Type, Scale:	AMBTR W
Height, Unit:	12.5 IN
Height Minimum, Maximum:	7 18
Density, Unit:	18 YD2
Pest 3 Code, Type, Scale:	CHEAL W
Height, Unit:	3 IN
Height Minimum, Maximum:	2 4
Density, Unit:	10 YD2

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Application Equipment	
	A
Appl. Equipment:	CO2 Backpack
Operating Pressure, Unit:	17 PSI
Nozzle Type:	Flat Fan
Nozzle Size:	XR11002
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	6
Boom Length, Unit:	7.5 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3 MPH
Carrier:	MEIGS
Water Hardness (ppm CaCO3):	150
Spray Volume, Unit:	15 GAL/AC
Mix Size, Unit:	1.8 Liters
Propellant:	CO2
Tank Mix (Y/N):	N no

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Post residual control in soybeans with V-10206.

Trial ID: 10S-THP-CTS-76 Protocol ID: 10S-THP-CTS-76
 Location: Throckmorton Study Director: White/Marquardt
 Project ID: Investigator: Dr. Bill Johnson
 Sponsor Contact: Valent - Eric Ott

Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed	W Weed			
Pest Code	SETFA	AMBTR		SETFA	AMBTR	AMARE	ABUTH			
Pest Scientific Name	Setaria faberi	Ambrosia trifi>		Setaria faberi	Ambrosia trifi>	Amaranthus ret>	Abutilon theop>			
Pest Name	Giant foxtail	Giant ragweed		Giant foxtail	Giant ragweed	Redroot pigweed	Velvetleaf			
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										
Description										
Rating Date	7-2-2010	7-2-2010	7-2-2010	7-8-2010	7-8-2010	7-8-2010	7-8-2010			
Rating Type	PHYLMA	PHYNLS	STUNT	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1	1			
Crop Stage Majority	V4									
Pest Stage Majority	14"	24"		20"	24"	12"	8"			
Pest Density, Unit	150 YD2	2 YD2		120 YD2	4 YD2	5 YD2	3 YD2			
Assessed By	MW	MW	MW							
Trt Treatment	Rate	Appl								
No. Name	Rate	Unit	Code	1	2	3	4	5	6	7
1 Untreated Check				0.0 c	0.0 c	0.0 a	0.0 b	0.0 b	0.0 b	0.0 b
2 Roundup PowerMax 4.5 SL AMS - Liquid	0.77 lb ae/a 2.5 lb ai/a	A A		4.0 bc	0.0 c	0.0 a	98.0 a	88.8 a	88.3 a	92.0 a
3 Resource (0.86 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.0202 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	A A A		0.0 c	4.5 b	0.0 a	98.0 a	87.5 a	88.5 a	95.5 a
4 V-10206 (85 WG) Resource (0.86 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.08 lb ai/a 0.0202 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	A A A A		8.0 abc	5.5 b	3.8 a	99.0 a	93.8 a	99.0 a	95.5 a
5 Prefix (5.29 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.66 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	A A A		10.0 ab	9.3 a	3.8 a	98.0 a	91.3 a	99.0 a	89.8 a
6 MON 63410 (3 CS) Roundup PowerMax 4.5 SL AMS - Liquid	1.13 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	A A A		3.3 bc	0.0 c	0.0 a	99.0 a	88.8 a	98.0 a	88.5 a
7 V-10206 (85 WG) Resource (0.86 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.106 lb ai/a 0.0202 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	A A A A		11.8 a	5.0 b	2.5 a	98.0 a	89.8 a	99.0 a	88.8 a
LSD (P=.05)				5.60	1.20	4.36	2.31	8.69	8.59	9.70
Standard Deviation				3.77	0.81	2.94	1.55	5.85	5.78	6.53
CV				71.32	23.36	205.65	1.84	7.59	7.08	8.31
Bartlett's X2				2.158	0.673	0.853	0.0	5.533	7.41	0.535
P(Bartlett's X2)				0.707	0.714	0.653	.	0.354	0.025*	0.991
Replicate F				0.885	0.491	0.276	0.632	1.114	1.820	1.719
Replicate Prob(F)				0.4677	0.6930	0.8420	0.6041	0.3696	0.1797	0.1988
Treatment F				6.242	78.455	1.552	2290.500	135.535	158.194	113.525
Treatment Prob(F)				0.0011	0.0001	0.2182	0.0001	0.0001	0.0001	0.0001

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			
Pest Code	IPOHE	CHEAL				AMBTR	AMARE			
Pest Scientific Name	Ipomoea hederata	Chenopodium al-				Ambrosia trifi>	Amaranthus ret>			
Pest Name	Ivyleaf mornin>	Common lambsqu>			GRASSES	Giant ragweed	Redroot pigweed			
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										
Description										
Rating Date	7-8-2010	7-8-2010	7-8-2010	7-8-2010	7-20-2010	7-20-2010	7-20-2010			
Rating Type	CONTRO	CONTRO	PHYLMA	PHYNLS	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1	1			
Crop Stage Majority										
Pest Stage Majority	12"	10"			40"	48"	30"			
Pest Density, Unit	4 YD2	3 YD2			150 YD2	5 YD2	2 YD2			
Assessed By					MW	MW	MW			
Trt Treatment	Rate	Appl								
No. Name	Rate	Unit	Code	8	9	10	11	12	13	14
1 Untreated Check				0.0 c	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b
2 Roundup PowerMax 4.5 SL AMS - Liquid	0.77 lb ae/a 2.5 lb ai/a	A A		63.8 b	99.0 a	7.5 a	0.0 b	96.0 a	91.3 a	90.8 a
3 Resource (0.86 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.0202 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	A A A		83.8 ab	95.8 a	5.0 ab	3.8 a	94.8 a	83.8 a	81.3 a
4 V-10206 (85 WG) Resource (0.86 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.08 lb ai/a 0.0202 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	A A A A		83.8 ab	99.0 a	10.5 a	6.8 a	98.0 a	88.8 a	92.3 a
5 Prefix (5.29 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.66 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	A A A		92.3 a	99.0 a	8.0 a	7.3 a	97.5 a	90.0 a	88.5 a
6 MON 63410 (3 CS) Roundup PowerMax 4.5 SL AMS - Liquid	1.13 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	A A A		63.8 b	93.3 a	5.8 ab	0.8 b	96.3 a	93.5 a	91.0 a
7 V-10206 (85 WG) Resource (0.86 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.106 lb ai/a 0.0202 lb ai/a 0.77 lb ae/a 2.5 lb ai/a	A A A A		81.3 ab	99.0 a	12.5 a	6.8 a	98.0 a	90.3 a	94.5 a
LSD (P=.05)	14.53	4.86	5.39	2.74	3.21	9.26	11.44			
Standard Deviation	9.78	3.27	3.63	1.84	2.16	6.23	7.70			
CV	14.61	3.91	51.58	51.06	2.6	8.12	10.01			
Bartlett's X2	15.756	0.667	5.831	0.824	8.583	9.052	5.288			
P(Bartlett's X2)	0.008*	0.414	0.323	0.935	0.127	0.107	0.382			
Replicate F	0.815	0.223	3.560	1.049	3.059	0.590	1.557			
Replicate Prob(F)	0.5020	0.8793	0.0350	0.3950	0.0548	0.6297	0.2344			
Treatment F	41.230	510.197	4.976	13.211	1150.340	118.959	78.739			
Treatment Prob(F)	0.0001	0.0001	0.0036	0.0001	0.0001	0.0001	0.0001			

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Pest Type	W Weed	W Weed	W Weed	
Pest Code	IPOHE	CHEAL	ABUTH	
Pest Scientific Name	Ipomoea hederata	Chenopodium al-	Abutilon theop>	
Pest Name	ivyleaf mornin>	Common lambsqu>	Velvetleaf	
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Crop Variety				
Description				
Rating Date	7-20-2010	7-20-2010	7-20-2010	7-20-2010
Rating Type	CONTRO	CONTRO	CONTRO	PHYLMA
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Crop Stage Majority				
Pest Stage Majority				
Pest Density, Unit				
Assessed By	MW	MW	MW	MW
Trt Treatment	Rate	Appl		
No. Name	Rate	Unit	Code	
1 Untreated Check				15
				16
				17
				18
1 Untreated Check				0.0 b
				0.0 b
				0.0 b
				1.3 b
2 Roundup PowerMax 4.5 SL AMS - Liquid	0.77 lb ae/a A 2.5 lb ai/a A			70.0 a
				95.8 a
				96.8 a
				12.5 a
3 Resource (0.86 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.0202 lb ai/a A 0.77 lb ae/a A 2.5 lb ai/a A			77.5 a
				98.0 a
				96.8 a
				3.8 b
4 V-10206 (85 WG) Resource (0.86 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.08 lb ai/a A 0.0202 lb ai/a A 0.77 lb ae/a A 2.5 lb ai/a A			77.5 a
				98.0 a
				92.0 a
				4.5 b
5 Prefix (5.29 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.66 lb ai/a A 0.77 lb ae/a A 2.5 lb ai/a A			88.5 a
				99.0 a
				88.8 a
				5.3 b
6 MON 63410 (3 CS) Roundup PowerMax 4.5 SL AMS - Liquid	1.13 lb ai/a A 0.77 lb ae/a A 2.5 lb ai/a A			80.0 a
				94.5 a
				94.5 a
				6.0 b
7 V-10206 (85 WG) Resource (0.86 EC) Roundup PowerMax 4.5 SL AMS - Liquid	0.106 lb ai/a A 0.0202 lb ai/a A 0.77 lb ae/a A 2.5 lb ai/a A			81.3 a
				99.0 a
				88.8 a
				4.0 b
LSD (P=.05)				13.33
Standard Deviation				8.98
CV				13.23
Bartlett's X2				7.328
P(Bartlett's X2)				0.197
Replicate F				0.893
Replicate Prob(F)				0.4637
Treatment F				45.917
Treatment Prob(F)				0.0001
				3.81
				2.57
				3.07
				3.914
				0.271
				2.089
				0.1375
				824.740
				0.0001
				7.19
				4.84
				6.08
				4.579
				0.469
				2.335
				0.1082
				212.421
				0.0001
				1.658
				0.2115
				5.252
				0.0028

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Column 1: Weed or volunteer crop; US; US; phytotoxicity - leaf malformation; percent; V4; 14"; per square yard; MW
Column 2: Weed or volunteer crop; US; US; phytotoxicity - necrosis, leaf spot; percent; 24"; per square yard; MW
Column 3: US; STUNT; percent; MW
Column 4: Weed or volunteer crop; US; US; control / burndown or knockdown; percent; 20"; per square yard
Column 5: Weed or volunteer crop; US; US; control / burndown or knockdown; percent; 24"; per square yard
Column 6: Weed or volunteer crop; US; US; control / burndown or knockdown; percent; 12"; per square yard
Column 7: Weed or volunteer crop; US; US; control / burndown or knockdown; percent; 8"; per square yard
Column 8: Weed or volunteer crop; US; US; control / burndown or knockdown; percent; 12"; per square yard
Column 9: Weed or volunteer crop; US; US; control / burndown or knockdown; percent; 10"; per square yard
Column 10: US; phytotoxicity - leaf malformation; percent
Column 11: US; phytotoxicity - necrosis, leaf spot; percent
Column 12: Weed or volunteer crop; US; control / burndown or knockdown; percent; 40"; per square yard; MW
Column 13: Weed or volunteer crop; US; US; control / burndown or knockdown; percent; 48"; per square yard; MW
Column 14: Weed or volunteer crop; US; US; control / burndown or knockdown; percent; 30"; per square yard; MW
Column 15: Weed or volunteer crop; US; US; control / burndown or knockdown; percent; MW
Column 16: Weed or volunteer crop; US; US; control / burndown or knockdown; percent; MW
Column 17: Weed or volunteer crop; US; US; control / burndown or knockdown; percent; MW
Column 18: US; phytotoxicity - leaf malformation; percent; MW