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TO DETERMINE THE EFFICACY AND SELECTIVITY OF ALERT WHEN APPLIED PRE TO SOYBEAN IN 2011.

Trial ID: 11S-THP-CTS-32 Protocol ID: 11S-THP-CTS-202
 Location: Throckmorton Study Director: White/Marquardt
 Project ID: HGLXMACLOM1101 Investigator: Dr. Bill Johnson
 Sponsor Contact: Cheminova - Jim Barrentine

General Trial Information

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

Discipline: H herbicide
Trial Status: E established
Initiation Date: 4-8-2011

Trial Location

City: Lafayette
State/Prov.: IN
Postal Code: 47909
Country: USA

Keywords: ALERT, CLOMAZONE , SOYBEAN, DAWN, FOMESAFEN, EFFICACY, SELECTIVITY, PRE, GRASS AND BROADLEAF WEEDS

Objectives:

DETERMINE SPECTRUM OF WEEDS CONTROL WITH TANK MIX OF ALERT + DAWN APPLIED PRE TO SOYBEAN

Personnel

Study Director: White/Marquardt **Title:** Research Associate

Affiliation: Purdue University
Address: 915 W State Street
Location: West Lafayette, IN, USA
Postal Code: 47907 **E-mail:** mdwhite@purdue.edu
Phone No.: 765-494-0891
Investigator: Dr. Bill Johnson **Title:** Professor

Affiliation: Purdue University
Address: 915 W State Street
Location: West Lafayette, IN, USA
Postal Code: 47907 **E-mail:** wji@purdue.edu
Phone No.: 765-494-4656 **Mobile No.:** 765-404-9801

Cooperator: Throckmorton Purdue Ag Center **Role:** Purdue Ag Center
Cooperator/Landowner

Organization: Purdue University
Address 1: 8343 US 231 S
City: Lafayette **Phone No.:** 765-538-3422
State/Prov: IN **Fax No.:** 765-538-3423
Postal Code: 47909 **E-mail:** jayyoung@purdue.edu
Country: USA United States

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Asgrow AG2931 **Description:** RR2
BBCH Scale: BSOY **Planting Date:** 5-10-2011
Planting Method: PLANTD planted **Rate, Unit:** 124000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Emergence Date: 5-16-2011

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Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Pest 2 Type: W **Code:** ABUTH Abutilon theophrasti
Common Name: Velvetleaf

Pest 3 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail

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:** RACOB1 Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: TPAC -Field 4A
% OM: 3.1 **Texture:** SIL silt loam
pH: 6 **Soil Name:** Toronto-Millbrook
CEC: 11.1

Application Description

	A	B
Application Date:	5-11-2011	6-28-2011
Time of Day:	9:40 AM	9 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREMCR	MIPOCR
Application Placement:	FOLIAR	FOLIAR
Applied By:	MW	BM
Air Temperature, Unit:	81 F	72 F
% Relative Humidity:	65	61
Wind Velocity, Unit:	2.0 MPH	2.3 MPH
Wind Direction:	E	
Dew Presence (Y/N):	Y yes	Y yes
Soil Temperature, Unit:	68 F	71 F
Soil Moisture:	DRY	DRY
% Cloud Cover:	30	25

Crop Stage At Each Application

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

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Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W
Height, Unit:		3.75 FT
Height Minimum, Maximum:		3.5 4
Density, Unit:		5 YD2
Pest 2 Code, Type, Scale:	ABUTH W	ABUTH W
Height, Unit:		5.5 IN
Height Minimum, Maximum:		4 7
Density, Unit:		5 YD2
Pest 3 Code, Type, Scale:	SETFA W	SETFA W
Height, Unit:		5.5 IN
Height Minimum, Maximum:		3 8
Density, Unit:		30 YD2

Application Equipment

	A	B
Appl. Equipment:	CO2 FORD	CO2 FORD
Equipment Type:	FORD	SPTRMO
Nozzle Type:	FLAT FAN	FLAT FAN
Nozzle Size:	XR 100 02	XR 100 02
Nozzle Spacing, Unit:	20 IN	20 IN
Nozzles/Row:	6	6
Boom Length, Unit:	10 FT	10 FT
Boom Height, Unit:	20 IN	20 IN
Ground Speed, Unit:	2.1 MPH	2.1 MPH
Carrier:	MEIGS	MEIGS
Spray Volume, Unit:	20 gal/ac	20 gal/ac
Mix Size, Unit:	2.5 liters	2.5 liters
Propellant:	CO2	CO2

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 Location: Throckmorton Study Director: White/Marquardt
 Project ID: HGLXMACLOM1101 Investigator: Dr. Bill Johnson
 Sponsor Contact: Cheminova - Jim Barrentine

Pest Type			W Weed AMBTR	W Weed SETFA	W Weed IPOHE	W Weed SETFA	W Weed AMBTR			
Pest Code			Ambrosia trifi>	Setaria faberi	Ipomoea heder>	Setaria faberi	Ambrosia trifi>			
Pest Scientific Name			Giant ragweed	Giant foxtail	Ivyleaf mornin>	Giant foxtail	Giant ragweed			
Pest Name	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA			
Crop Code	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY			
BBCH Scale	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max			
Crop Scientific Name										
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean			
Rating Date	5-24-2011	6-9-2011	6-16-2011	6-16-2011	6-16-2011	6-29-2011	6-29-2011			
Rating Type	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1	1			
Crop Stage Majority	VC	V3	V5	V5	V5	V5	V5			
Pest Stage Majority			1-18 IN	1-12 IN	1-6 IN	24 IN	40 IN			
Pest Density, Unit			7.5 YD2	15 YD2	1.5 YD2	40 YD2	15 YD2			
Assessed By	RT/JR	RT/JR	AR	AR	AR	AR	AR			
Days After First/Last Applic.	13 13	29 29	36 36	36 36	36 36	49 1	49 1			
Trt-Eval Interval	13 DA-A									
Plant-Eval Interval	14 DP-1	30 DP-1	37 DP-1	37 DP-1	37 DP-1	50 DP-1	50 DP-1			
Days After Emergence	8 DE-1	24 DE-1	31 DE-1	31 DE-1	31 DE-1	44 DE-1	44 DE-1			
Trt Treatment	Rate	Unit	Appl Code	1	2	3	4	5	6	7
1 UNTREATED				0.0 a	0.0 c	0.0 c	0.0 b	0.0 b	0.0 b	0.0 c
2 ALERT	0.50 lb ai/a	A		0.0 a	0.3 c	40.0 ab	91.3 a	100.0 a	93.8 a	25.0 bc
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								
3 ALERT	0.75 lb ai/a	A		0.0 a	0.3 c	50.0 ab	97.5 a	95.0 a	95.0 a	36.3 bc
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								
4 ALERT	1.0 lb ai/a	A		0.0 a	0.0 c	38.8 ab	98.8 a	100.0 a	92.5 a	20.0 bc
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								
5 ALERT	0.50 lb ai/a	A		0.0 a	1.0 c	72.0 a	99.5 a	100.0 a	93.8 a	43.8 ab
DAWN	0.25 lb ai/a	A								
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								
6 ALERT	0.50 lb ai/a	A		0.0 a	0.8 c	65.0 a	96.3 a	96.3 a	95.0 a	42.5 ab
DAWN	0.375 lb ai/a	A								
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								
7 ALERT	0.75 lb ai/a	A		0.0 a	1.5 c	67.0 a	99.5 a	100.0 a	95.0 a	45.0 ab
DAWN	0.25 lb ai/a	A								
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								
8 ALERT	0.75 lb ai/a	A		0.0 a	0.5 c	78.8 a	99.5 a	97.5 a	95.0 a	72.5 a
DAWN	0.375 lb ai/a	A								
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								
9 DUAL II MAGNUM	1.0 lb ai/a	A		0.0 a	3.3 b	21.3 bc	90.3 a	85.0 a	93.8 a	7.5 bc
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								

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			AMBTR	SETFA	IPOHE	SETFA	AMBTR
Pest Scientific Name			Ambrosia trifi>	Setaria faberi	Ipomoea heder>	Setaria faberi	Ambrosia trifi>
Pest Name			Giant ragweed	Giant foxtail	Ivyleaf mornin>	Giant foxtail	Giant 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
Rating Date	5-24-2011	6-9-2011	6-16-2011	6-16-2011	6-16-2011	6-29-2011	6-29-2011
Rating Type	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1	1
Crop Stage Majority	VC	V3	V5	V5	V5	V5	V5
Pest Stage Majority			1-18 IN	1-12 IN	1-6 IN	24 IN	40 IN
Pest Density, Unit			7.5 YD2	15 YD2	1.5 YD2	40 YD2	15 YD2
Assessed By	RT/JR	RT/JR	AR	AR	AR	AR	AR
Days After First/Last Applic.	13 13	29 29	36 36	36 36	36 36	49 1	49 1
Trt-Eval Interval	13 DA-A						
Plant-Eval Interval	14 DP-1	30 DP-1	37 DP-1	37 DP-1	37 DP-1	50 DP-1	50 DP-1
Days After Emergence	8 DE-1	24 DE-1	31 DE-1	31 DE-1	31 DE-1	44 DE-1	44 DE-1
Trt No.	1	2	3	4	5	6	7
Treatment Name							
Rate							
Unit							
Appl Code							
10 PREFIX	0.0 a	4.5 a	42.5 ab	86.3 a	100.0 a	95.0 a	22.5 bc
Roundup PowerMax 4.5 SL	1.68 lb ai/a						
AMS - Liquid	0.77 lb ae/a						
	8.5 lb ai/100 gal						
LSD (P=.05)	0.00	1.14	26.59	8.88	12.35	3.11	24.74
Standard Deviation	0.00	0.78	18.32	6.12	8.51	2.15	17.05
CV	0.0	65.34	38.55	7.13	9.74	2.53	54.12
Bartlett's X2	0.0	5.638	11.701	34.23	7.863	2.454	4.055
P(Bartlett's X2)	.	0.583	0.165	0.001*	0.049*	0.484	0.852
Replicate F	0.000	0.759	2.881	1.284	1.319	0.497	1.021
Replicate Prob(F)	1.0000	0.5269	0.0542	0.3000	0.2886	0.6871	0.3989
Treatment F	0.000	14.892	7.112	99.516	53.206	772.900	6.087
Treatment Prob(F)	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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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	
Rating Date			10-10-2011	
Rating Type				YIELD
Rating Unit				bu/ac
Number of Subsamples				1
Crop Stage Majority				
Pest Stage Majority				
Pest Density, Unit				
Assessed By				
Days After First/Last Applic.			152	104
Trt-Eval Interval				
Plant-Eval Interval			153	DP-1
Days After Emergence			147	DE-1
Trt No.	Treatment Name	Rate	Unit	Appl Code
1	UNTREATED			8
				5.45 d
2	ALERT	0.50 lb ai/a	A	
	Roundup PowerMax 4.5 SL	0.77 lb ae/a	B	
	AMS - Liquid	8.5 lb ai/100 gal	B	
				44.83 abc
3	ALERT	0.75 lb ai/a	A	
	Roundup PowerMax 4.5 SL	0.77 lb ae/a	B	
	AMS - Liquid	8.5 lb ai/100 gal	B	
				48.53 abc
4	ALERT	1.0 lb ai/a	A	
	Roundup PowerMax 4.5 SL	0.77 lb ae/a	B	
	AMS - Liquid	8.5 lb ai/100 gal	B	
				37.60 c
5	ALERT	0.50 lb ai/a	A	
	DAWN	0.25 lb ai/a	A	
	Roundup PowerMax 4.5 SL	0.77 lb ae/a	B	
	AMS - Liquid	8.5 lb ai/100 gal	B	
				59.15 ab
6	ALERT	0.50 lb ai/a	A	
	DAWN	0.375 lb ai/a	A	
	Roundup PowerMax 4.5 SL	0.77 lb ae/a	B	
	AMS - Liquid	8.5 lb ai/100 gal	B	
				58.05 abc
7	ALERT	0.75 lb ai/a	A	
	DAWN	0.25 lb ai/a	A	
	Roundup PowerMax 4.5 SL	0.77 lb ae/a	B	
	AMS - Liquid	8.5 lb ai/100 gal	B	
				48.50 abc
8	ALERT	0.75 lb ai/a	A	
	DAWN	0.375 lb ai/a	A	
	Roundup PowerMax 4.5 SL	0.77 lb ae/a	B	
	AMS - Liquid	8.5 lb ai/100 gal	B	
				62.05 a
9	DUAL II MAGNUM	1.0 lb ai/a	A	
	Roundup PowerMax 4.5 SL	0.77 lb ae/a	B	
	AMS - Liquid	8.5 lb ai/100 gal	B	
				38.90 bc

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
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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	
Rating Date			10-10-2011	
Rating Type			YIELD	
Rating Unit			bu/ac	
Number of Subsamples			1	
Crop Stage Majority				
Pest Stage Majority				
Pest Density, Unit				
Assessed By				
Days After First/Last Applic.			152 104	
Trt-Eval Interval				
Plant-Eval Interval			153 DP-1	
Days After Emergence			147 DE-1	
Trt Treatment		Rate	Appl	
No. Name		Rate Unit	Code	8
10 PREFIX		1.68 lb ai/a	A	53.45 abc
Roundup PowerMax 4.5 SL		0.77 lb ae/a	B	
AMS - Liquid		8.5 lb ai/100 gal	B	
LSD (P=.05)				13.183
Standard Deviation				9.068
CV				19.86
Bartlett's X2				14.786
P(Bartlett's X2)				0.097
Replicate F				5.891
Replicate Prob(F)				0.0033
Treatment F				13.025
Treatment Prob(F)				0.0001

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Protocol ID: 11S-THP-CTS-202

Location: Throckmorton
Project ID: HGLXMACLOM1101Study Director: White/Marquardt
Investigator: Dr. Bill Johnson

Sponsor Contact: Cheminova - Jim Barrentine

Pest Type

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

Pest Code

AMBTR, Ambrosia trifida, = US

SETFA, Setaria faberi, = US

IPOHE, Ipomoea hederacea, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

YIELD = yield

Rating Unit

% = percent

bu/ac = bushels per acre

YD2 = per square yard

Plant-Eval Interval

14 DP-1 = 1 GLXMA 5-10-2011

30 DP-1 = 1 GLXMA 5-10-2011

37 DP-1 = 1 GLXMA 5-10-2011

50 DP-1 = 1 GLXMA 5-10-2011

153 DP-1 = 1 GLXMA 5-10-2011