

Ohio State University
Horticulture and Crop Science

TO DETERMINE THE EFFICACY AND SELECTIVITY OF ALERT WHEN APPLIED PRE TO SOYBEAN IN 2012.

Title No. 2:

Trial ID: 12 PRES1 Protocol ID: 12 PRES1
 Location: Western Branch Study Director: Bryan Reeb
 Project ID: HGLXMACLOM1201 Investigator: Dr. Mark M. Loux
 Sponsor Contact: Brent Jacobson, Cheminova

General Trial Information

Study Director: Bryan Reeb Title: Research Technician
 Investigator: Dr. Mark M. Loux Title: Professor

Trial Location

City: South Charleston Latitude of LL Corner °: 39.86009 N
 State/Prov.: Ohio Longitude of LL Corner °: 83.67003 W
 Postal Code: 45368
 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

Crop Description

Crop 1: GLXMA Glycine max Soybean
 Variety: AG3731 Description: RR
 BBCH Scale: BSOY Planting Date: May-28-2012
 Planting Method: PLNTD Rate, Unit: 155000 S/A
 Depth, Unit: 0.75 IN
 Row Spacing, Unit: 15 IN
 Seed Bed: MEDIUM medium Soil Temperature, Unit: 79 F
 Soil Moisture: DRY dry Emergence Date: Jun-11-2012

Pest Description

Pest 1 Type: W Code: SETFA *Setaria faberi*
 Common Name: Giant foxtail

Pest 2 Type: W Code: ECHCG *Echinochloa crus-galli*
 Common Name: Common barnyardgrass

Pest 3 Type: W Code: ABUTH *Abutilon theophrasti*
 Common Name: Velvetleaf

Pest 4 Type: W Code: CHEAL *Chenopodium album*
 Common Name: Common lambsquarters

Pest 5 Type: W Code: IPOHE *Ipomoea hederacea*
 Common Name: Ivyleaf morningglory

Pest 6 Type: W Code: AMBTR *Ambrosia trifida*
 Common Name: Giant ragweed

Pest 7 Type: W Code: AMARE *Amaranthus retroflexus*
 Common Name: Redroot pigweed

Site and Design

Plot Width, Unit: 9.5 FT Site Type: FIELD field
 Plot Length, Unit: 40 FT Experimental Unit: 1 PLOT plot
 Plot Area, Unit: 380 FT2 Tillage Type: CONTIL conventional-till
 Replications: 4 Study Design: RACOB Randomized Complete Block (RCB)
 Untreated Arrangement: INCLUDED single control randomized in each block

No. Previous Crop Year

1. CORN 2011

Maintenance

No.	Date	Maintenance Treatment Name	Rate	Unit
1.	Jul-19-2012	ROUND UP POWERMAX	22	OZ
2.	Jul-19-2012	N-PAK AMS	2.5	%

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Soil Description

Description Name: F-8 East
 % OM: 2.4 Texture: SICL silty clay loam
 pH: 6.2 Soil Name: Kokomo
 CEC: 16 Fert. Level: G good
 Soil Drainage: G good

Application Description

A
 Application Date: May-28-2012
 Time of Day: 6:30PM
 Application Method: SPRAY
 Application Timing: ATPL
 Application Placement: BROSOI
 Air Temperature, Unit: 84 F
 % Relative Humidity: 70
 Wind Velocity, Unit: 3 MPH
 Wind Direction: W
 Dew Presence (Y/N): N no
 Soil Temperature, Unit: 79 F
 Soil Moisture: DRY
 % Cloud Cover: 90
 Next Rain Occurred On: May-31-2012

Crop Stage At Each Application

A
 Crop 1 Code, BBCH Scale: GLXMA BSOY

Pest Stage At Each Application

A
 Pest 1 Code, Type, Scale: SETFA W
 Density, Unit: 100 M2
 Pest 2 Code, Type, Scale: ECHCG W
 Density, Unit: 10 M2
 Pest 3 Code, Type, Scale: ABUTH W
 Density, Unit: 1 M2
 Pest 4 Code, Type, Scale: CHEAL W
 Density, Unit: 2 M2
 Pest 5 Code, Type, Scale: IPOHE W
 Density, Unit: 3 M2
 Pest 6 Code, Type, Scale: AMBTR W
 Density, Unit: 2 M2
 Pest 7 Code, Type, Scale: AMARE W
 Density, Unit: 50 M2

Application Equipment

A
 Appl. Equipment: Backpack
 Equipment Type: SPRBAC
 Operation Pressure, Unit: 44 PSI
 Nozzle Type: AIXR
 Nozzle Size: 110015
 Nozzle Spacing, Unit: 18 IN
 Boom Length, Unit: 10 FT
 Boom Height, Unit: 18 IN
 Ground Speed, Unit: 3 MPH
 Carrier: WATER
 Spray Volume, Unit: 15 gal/ac
 Mix Size, Unit: 2 Liters
 Propellant: COMCO2

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Pest Type						W Weed	W Weed	W Weed			
Pest Code						SETFA	AMBTR	AMARE			
Pest Scientific Name						Setaria faberi	Ambrosia trifida	Amaranthus retrofractus			
Pest Name						Giant foxtail	Giant ragweed	Redroot pigweed			
Crop Code		GLXMA	GLXMA								
BBCH Scale		BSOY	BSOY								
Crop Scientific Name		Glycine max	Glycine max								
Crop Name		Soybean	Soybean								
Rating Date		Jun-11-2012	Jun-19-2012			Jun-19-2012	Jun-19-2012	Jun-19-2012			
Rating Type		PHYGEN	PHYGEN			CONTRO	CONTRO	CONTRO			
Rating Unit		%	%			%	%	%			
Number of Subsamples		1	1			1	1	1			
Days After First/Last Applic.		14 14	22 22			22 22	22 22	22 22			
Trt-Eval Interval		14 DA-A	22 DA-A			22 DA-A	22 DA-A	22 DA-A			
Plant-Eval Interval		14 DP-1	22 DP-1			22 DP-1	22 DP-1	22 DP-1			
Days After Emergence		0 DE-1	8 DE-1			8 DE-1	8 DE-1	8 DE-1			
Number of Decimals		0	0			0	0	0			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5
1	ALERT	0.50 lb ai/a	21.3 floz/a		ATPL	A	0 a	0 a	43 b	45 c	33 c
2	ALERT	0.75 lb ai/a	32 floz/a		ATPL	A	0 a	0 a	54 ab	50 c	30 c
3	ALERT	1.0 lb ai/a	42.7 floz/a		ATPL	A	0 a	0 a	70 a	59 bc	35 c
4	ALERT	0.50 lb ai/a	21.3 floz/a		ATPL	A	0 a	0 a	70 a	89 a	88 a
4	DAWN	0.375 lb ai/a	24 floz/a		ATPL	A					
5	ALERT	0.75 lb ai/a	32 floz/a		ATPL	A	0 a	0 a	70 a	85 a	88 a
5	DAWN	0.375 lb ai/a	24 floz/a		ATPL	A					
6	DUAL II MAGNUM	1.0 lb ai/a	16.8 floz/a		ATPL	A	0 a	0 a	48 b	55 bc	53 b
7	PREFIX	1.32 lb ai/a	32 floz/a		ATPL	A	0 a	0 a	56 ab	68 b	88 a
8	UNTREATED						0 a	0 a	0 c	0 d	0 d
	LSD (P=.05)						0.0	0.0	16.3	17.2	14.8
	Standard Deviation						0.0	0.0	11.1	11.7	10.1
	CV						0.0	0.0	21.58	20.73	19.55
	Replicate F						0.000	0.000	4.956	0.138	1.773
	Replicate Prob(F)						1.0000	1.0000	0.0093	0.9363	0.1831
	Treatment F						0.000	0.000	17.766	22.464	42.936
	Treatment Prob(F)						1.0000	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
 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							
Pest Code	IPOHE	ABUTH	SETFA	AMBTR							
Pest Scientific Name	Ipomoea hederata>	Abutilon theop>	Setaria faberi	Ambrosia trifida>							
Pest Name	Ivyleaf mornin>	velvetleaf	Giant foxtail	Giant ragweed							
Crop Code			GLXMA								
BBCH Scale			BSOY								
Crop Scientific Name			Glycine max								
Crop Name			Soybean								
Rating Date	Jun-19-2012	Jun-19-2012	Jul-2-2012	Jul-2-2012							
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO							
Rating Unit	%	%	%	%							
Number of Subsamples	1	1	1	1							
Days After First/Last Applic.	22 22	22 22	35 35	35 35							
Trt-Eval Interval	22 DA-A	22 DA-A	35 DA-A	35 DA-A							
Plant-Eval Interval	22 DP-1	22 DP-1	35 DP-1	35 DP-1							
Days After Emergence	8 DE-1	8 DE-1	21 DE-1	21 DE-1							
Number of Decimals	0	0	0	0							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	6	7	8	9	10
1	ALERT	0.50 lb ai/a	21.3 floz/a		ATPL	A	33 a	100 a	0 a	70 ab	5 c
2	ALERT	0.75 lb ai/a	32 floz/a		ATPL	A	33 a	100 a	0 a	75 ab	0 c
3	ALERT	1.0 lb ai/a	42.7 floz/a		ATPL	A	40 a	100 a	0 a	89 a	5 c
4	ALERT	0.50 lb ai/a	21.3 floz/a		ATPL	A	33 a	96 ab	0 a	58 bc	28 b
4	DAWN	0.375 lb ai/a	24 floz/a		ATPL	A					
5	ALERT	0.75 lb ai/a	32 floz/a		ATPL	A	38 a	93 ab	0 a	70 ab	65 a
5	DAWN	0.375 lb ai/a	24 floz/a		ATPL	A					
6	DUAL II MAGNUM	1.0 lb ai/a	16.8 floz/a		ATPL	A	35 a	89 b	0 a	50 c	5 c
7	PREFIX	1.32 lb ai/a	32 floz/a		ATPL	A	38 a	43 c	0 a	50 c	30 b
8	UNTREATED						0 b	0 d	0 a	0 d	0 c
LSD (P=.05)							12.1	8.8	0.0	19.2	19.4
Standard Deviation							8.2	6.0	0.0	13.1	13.2
CV							26.54	7.68	0.0	22.68	76.87
Replicate F							1.283	2.294	0.000	2.343	0.782
Replicate Prob(F)							0.3062	0.1074	1.0000	0.1022	0.5174
Treatment F							9.742	152.521	0.000	16.753	11.762
Treatment Prob(F)							0.0001	0.0001	1.0000	0.0001	0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed						
Pest Code	CHEAL	AMARE	ABUTH	IPOHE						
Pest Scientific Name	Chenopodium al>	Amaranthus ret>	Abutilon theop>	Ipomoea heder>						
Pest Name	Common lambsqu>	Redroot pigweed	velvetleaf	Ivyleaf mornin>						
Crop Code										
BBCH Scale										
Crop Scientific Name										
Crop Name										
Rating Date	Jul-2-2012	Jul-2-2012	Jul-2-2012	Jul-2-2012						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	%	%	%	%						
Number of Subsamples	1	1	1	1						
Days After First/Last Applic.	35 35	35 35	35 35	35 35						
Trt-Eval Interval	35 DA-A	35 DA-A	35 DA-A	35 DA-A						
Plant-Eval Interval	35 DP-1	35 DP-1	35 DP-1	35 DP-1						
Days After Emergence	21 DE-1	21 DE-1	21 DE-1	21 DE-1						
Number of Decimals	0	0	0	0						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	11	12	13	14
1	ALERT	0.50 lb ai/a	21.3 floz/a		ATPL	A	80 ab	8 d	100 a	0 a
2	ALERT	0.75 lb ai/a	32 floz/a		ATPL	A	98 a	0 d	100 a	0 a
3	ALERT	1.0 lb ai/a	42.7 floz/a		ATPL	A	99 a	0 d	100 a	0 a
4	ALERT	0.50 lb ai/a	21.3 floz/a		ATPL	A	83 ab	63 ab	100 a	0 a
4	DAWN	0.375 lb ai/a	24 floz/a		ATPL	A				
5	ALERT	0.75 lb ai/a	32 floz/a		ATPL	A	89 ab	78 a	98 a	0 a
5	DAWN	0.375 lb ai/a	24 floz/a		ATPL	A				
6	DUAL II MAGNUM	1.0 lb ai/a	16.8 floz/a		ATPL	A	80 ab	28 c	15 b	0 a
7	PREFIX	1.32 lb ai/a	32 floz/a		ATPL	A	68 b	60 b	25 b	0 a
8	UNTREATED						0 c	0 d	0 c	0 a
	LSD (P=.05)						21.9	16.5	14.6	0.0
	Standard Deviation						14.9	11.2	9.9	0.0
	CV						20.02	38.15	14.76	0.0
	Replicate F						0.761	0.166	0.710	0.000
	Replicate Prob(F)						0.5285	0.9182	0.5571	1.0000
	Treatment F						18.153	33.768	82.743	0.000
	Treatment Prob(F)						0.0001	0.0001	0.0001	1.0000

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Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	15	16	17	18	19
1	ALERT	0.50 lb ai/a	21.3 floz/a		ATPL	A	0 a	60 ab	28 c	20 c	0 c
2	ALERT	0.75 lb ai/a	32 floz/a		ATPL	A	0 a	66 ab	28 c	5 cd	0 c
3	ALERT	1.0 lb ai/a	42.7 floz/a		ATPL	A	0 a	81 a	35 c	0 d	0 c
4	ALERT	0.50 lb ai/a	21.3 floz/a		ATPL	A	0 a	68 ab	56 ab	79 a	23 b
4	DAWN	0.375 lb ai/a	24 floz/a		ATPL	A					
5	ALERT	0.75 lb ai/a	32 floz/a		ATPL	A	0 a	76 a	63 a	71 a	48 a
5	DAWN	0.375 lb ai/a	24 floz/a		ATPL	A					
6	DUAL II MAGNUM	1.0 lb ai/a	16.8 floz/a		ATPL	A	0 a	45 b	28 c	48 b	15 bc
7	PREFIX	1.32 lb ai/a	32 floz/a		ATPL	A	0 a	53 b	43 bc	78 a	0 c
8	UNTREATED						0 a	0 c	0 d	0 d	0 c
	LSD (P=.05)						0.0	23.6	16.3	17.8	19.8
	Standard Deviation						0.0	16.1	11.1	12.1	13.4
	CV						0.0	28.65	31.88	32.24	126.4
	Replicate F						0.000	0.624	2.032	0.499	1.964
	Replicate Prob(F)						1.0000	0.6072	0.1401	0.6870	0.1504
	Treatment F						0.000	10.113	12.307	34.081	6.604
	Treatment Prob(F)						1.0000	0.0001	0.0001	0.0001	0.0003

Pest Type W Weed
Pest Code CHEAL
Pest Scientific Name Chenopodium al>
Pest Name Common lambsqu>
Crop Code
BBCH Scale
Crop Scientific Name
Crop Name
Rating Date Jul-16-2012
Rating Type CONTRO
Rating Unit %
Number of Subsamples 1
Days After First/Last Applic. 49 49
Trt-Eval Interval 49 DA-A
Plant-Eval Interval 49 DP-1
Days After Emergence 35 DE-1
Number of Decimals 0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	20
1	ALERT	0.50 lb ai/a	21.3 floz/a		ATPL	A	100 a
2	ALERT	0.75 lb ai/a	32 floz/a		ATPL	A	100 a
3	ALERT	1.0 lb ai/a	42.7 floz/a		ATPL	A	100 a
4	ALERT	0.50 lb ai/a	21.3 floz/a		ATPL	A	96 a
4	DAWN	0.375 lb ai/a	24 floz/a		ATPL	A	
5	ALERT	0.75 lb ai/a	32 floz/a		ATPL	A	98 a
5	DAWN	0.375 lb ai/a	24 floz/a		ATPL	A	
6	DUAL II MAGNUM	1.0 lb ai/a	16.8 floz/a		ATPL	A	99 a
7	PREFIX	1.32 lb ai/a	32 floz/a		ATPL	A	100 a
8	UNTREATED						0 b
	LSD (P=.05)						4.3
	Standard Deviation						2.9
	CV						3.36
	Replicate F						3.316
	Replicate Prob(F)						0.0397
	Treatment F						577.842
	Treatment Prob(F)						0.0001

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	Sponsor Contact: Brent Jacobson, Cheminova

Pest Type

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

Pest CodeSETFA, *Setaria faberi*, = US
AMBTR, *Ambrosia trifida*, = US
AMARE, *Amaranthus retroflexus*, = US
IPOHE, *Ipomoea hederacea*, = US
ABUTH, *Abutilon theophrasti*, = US
CHEAL, *Chenopodium album*, = USCrop CodeGLXMA, BSOY, *Glycine max*, = USRating TypePHYGEN = phytotoxicity - general / injury
CONTRO = control / burndown or knockdownRating Unit

% = percent

Plant-Eval Interval14 DP-1 = 1 GLXMA May-28-2012
22 DP-1 = 1 GLXMA May-28-2012
35 DP-1 = 1 GLXMA May-28-2012
49 DP-1 = 1 GLXMA May-28-2012