

Purdue University

Tackle used as a burndown prior to planting and POST weeds.

Trial ID: 08S-THP-CTS-15 Protocol ID: 08S-THP-CTS-15
 Location: TPAC Study Director: Melissa Kruger
 Project ID: Investigator: Dr. Bill Johnson
 Sponsor Contact:

General Trial Information

Study Director: Melissa Kruger **Title:** Lab Technician VII
Investigator: Dr. William G. Johnson **Title:** Associate Professor

Discipline: H herbicide
Trial Status: F one-year/final
Initiation Date: 6/10/2008 **Planned Completion Date:** 8/12/2008

Trial Location

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

Objectives:

The objective of the trial is to evaluate the efficacy of Tackle used as a burndown prior to planting and POST on weeds.

Personnel

Study Director: Melissa Kruger **Title:** Lab Technician VII
Affiliation: Purdue University
Address: 915 W. State St.
Location: West Lafayette, IN USA
Postal Code: 47907 **E-mail:** mmkruger@purdue.edu
Phone No.: 765-494-4621
Investigator: Dr. William G. Johnson **Title:** Associate Professor
Affiliation: Purdue University
Address: 915 W. State St.
Location: West Lafayette, IN USA
Postal Code: 47907 **E-mail:** wjg@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
City: Lafayette **Fax No.:** 765-538-3423
State/Prov: IN
Postal Code: 47909 **E-mail:** jayyoung@purdue.edu
Country: US

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 3306 **Description:** JD 7200; RR
BBCH Scale: BSOY **Planting Date:** 6/24/2008
Planting Method: DIRDRI direct drilled **Rate, Unit:** 130000 S/A
Depth, Unit: 1.25 IN
Row Spacing, Unit: 30 IN
Soil Temperature, Unit: 86 F
Emergence Date: 7/1/2008

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed
Pest 2 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail
Pest 3 Type: W **Code:** ABUTH Abutilon theophrasti

Common Name: Velvetleaf

Pest 4 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

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

Comment: -1869F

Field Prep./Maintenance:

Fall field was cultivated once

Spring field was disked twice and cultivated once

Soil Description

Description Name: TPAC Field 4B

% OM: 2.9 **Texture:** SIL silt loam

pH: 6.2 **Soil Name:** Toronto-Millbrook

CEC: 13.3 **Fert. Level:** G good

Analyzed By:

A&L Great Lakes Laboratories, Inc. Report #: F04048-0006

Additional Measured Elements

Element	Quantity	Unit
P	34	ppm
K	124	ppm
Mg	430	ppm
Ca	1400	ppm

Moisture and Weather Conditions

Closest Weather Station: On research farm **Distance, Unit:** 0.5 MI

Application Description

	A	B
Application Date:	6/10/2008	7/10/2008
Time of Day:	8:30 PM	11:20 AM
Application Method:	SPRAY	SPRAY
Application Timing:	BRNDWN	POSPOS
Application Placement:	BROFOL	BROFOL
Applied By:	AR MK	VM MK
Air Temperature, Unit:	78 F	83 F
% Relative Humidity:	67	45
Wind Velocity, Unit:	1 MPH	3 MPH
Wind Direction:	W	SW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	77 F	24 C
Soil Moisture:	MOIST	MOIST
% Cloud Cover:	0	20

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:	N/A	V1
Height, Unit:		3 IN
Height Minimum, Maximum:		2 4

Pest Stage At Each Application

	A	B
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Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:	3 node	
Stage Minimum, Percent:	Coty	
Stage Maximum, Percent:	5 node	
Height, Unit:	10 IN	30 IN
Height Minimum, Maximum:	0 18	12 48
Density, Unit:	75 YD2	34 YD2
Pest 2 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:	2 lf	
Stage Minimum, Percent:	1 lf	
Stage Maximum, Percent:	4 lf	
Height, Unit:	5 IN	12 IN
Height Minimum, Maximum:	1 6	6 18
Density, Unit:	50 FT2	175 FT2
Pest 3 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:	1 lf	
Stage Minimum, Percent:	Coty	
Stage Maximum, Percent:	2 lf	
Height, Unit:	1 IN	10 IN
Height Minimum, Maximum:	0 2	6 12
Density, Unit:	3 YD2	4 YD2
Pest 4 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:	2 lf	
Stage Minimum, Percent:	2 lf	
Stage Maximum, Percent:	4lf	
Height, Unit:	2 IN	
Height Minimum, Maximum:	0 3	
Density, Unit:	1 YD2	

Application Equipment

	A	B
Appl. Equipment:	CO2 Backpack	CO2 Backpack
Operating 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:	6	6
Boom Length, Unit:	7.5 FT	7.5 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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Tackle used as a burndown prior to planting and POST weeds.

Trial ID: 08S-THP-CTS-15 Protocol ID: 08S-THP-CTS-15
 Location: TPAC Study Director: Melissa Kruger
 Project ID: Investigator: Dr. Bill Johnson
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	SETFA	AMBTR	ABUTH	SETFA	AMBTR	ABUTH					
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Abutilon theop>	Setaria faberi	Ambrosia trifi>	Abutilon theop>					
Pest Name	Giant foxtail	Giant ragweed	Velvetleaf	Giant foxtail	Giant ragweed	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	AG 3306	AG 3306	AG 3306	AG 3306	AG 3306	AG 3306	AG 3306				
Description	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR				
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT C				
Rating Date	6/26/2008	6/26/2008	6/26/2008	7/9/2008	7/9/2008	7/9/2008	7/16/2008				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN				
Rating Unit	%	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1	1				
Crop Stage Majority	N/A	N/A	N/A	V1	V1	V1	V2				
Crop Stage Minimum/Maximum				2-4"	2-4"	2-4"	8-10"				
Pest Stage Majority											
Pest Stage Minimum/Maximum	2-14"	2-36"	2-12"	6-18"	12-48"	6-12"					
Pest Density, Unit	175 FT2	34 YD2	4 YD2	175 FT2	34 YD2	4 YD2					
Assessed By	MK	MK	MK	WGJ AR	WGJ AR	WGJ AR	AR JM				
Days After First/Last Applic.	16 16	16 16	16 16	29 29	29 29	29 29	36 6				
Plant-Eval Interval	2 DP-1	2 DP-1	2 DP-1	15 DP-1	15 DP-1	15 DP-1	22 DP-1				
Days After Emergence	-5 DE-	-5 DE-	-5 DE-	8 DE-1	8 DE-1	8 DE-1	15 DE-				
Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4	5	6	7
1	Extreme	0.81	lb ai/a	A	99.8 a	95.0 a	98.0 ab	94.8 a	83.8 ab	86.3 a	0.8 b
	Ammonium Sulfate	17	lb ai/100 gal	A							
	NIS	1	% v/v	A							
2	Tackle	1	lb ai/a	A	99.3 a	98.3 a	99.8 a	94.3 a	91.5 a	100.0 a	0.5 b
3	Tackle	1	lb ai/a	A	98.5 a	90.8 a	100.0 a	92.5 a	80.0 ab	100.0 a	0.3 b
	Ammonium Sulfate	17	lb ai/100 gal	A							
4	Tackle	1	lb ai/a	A	99.3 a	92.5 a	100.0 a	94.5 a	88.8 ab	100.0 a	1.3 b
	Ammonium Sulfate	17	lb ai/100 gal	A							
	NIS	1	% v/v	A							
5	Untreated				0.0 b	0.0 b	0.0 c	0.0 c	0.0 c	0.0 b	0.0 b
6	Tackle	1	lb ai/a	A	98.5 a	93.8 a	99.8 a	93.8 a	85.0 ab	100.0 a	1.0 b
	Ammonium Sulfate	17	lb ai/100 gal	A							
	Tackle	1	lb ai/a	B							
	Ammonium Sulfate	17	lb ai/100 gal	B							
7	Roundup PowerMAX	12.4	oz ae/a	A	98.5 a	90.5 a	98.5 ab	70.0 b	70.0 b	70.0 a	0.3 b
	Ammonium Sulfate	17	lb ai/100 gal	A							
	Tackle	1	lb ai/a	B							
8	Roundup PowerMAX	12.4	oz ae/a	A	99.3 a	91.8 a	96.0 b	78.8 b	77.5 ab	70.0 a	0.8 b
	Ammonium Sulfate	17	lb ai/100 gal	A							
	Tackle	1	lb ai/a	B							
	Ammonium Sulfate	17	lb ai/100 gal	B							
9	Roundup PowerMAX	12.4	oz ae/a	A	99.0 a	91.8 a	98.8 ab	75.0 b	73.8 ab	90.0 a	1.5 b
	Ammonium Sulfate	17	lb ai/100 gal	A							
	Tackle	1	lb ai/a	B							
	Ammonium Sulfate	17	lb ai/100 gal	B							
	NIS	0.125	% v/v	B							

Pest Type		W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code		SETFA	AMBTR	ABUTH	SETFA	AMBTR	ABUTH				
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Abutilon theop>	Setaria faberi	Ambrosia trifi>	Abutilon theop>				
Pest Name		Giant foxtail	Giant ragweed	Velvetleaf	Giant foxtail	Giant ragweed	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	AG 3306	AG 3306	AG 3306	AG 3306	AG 3306	AG 3306	AG 3306				
Description	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR				
Part Rated	PLOT C	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P				
Rating Date	7/23/2008	7/23/2008	7/23/2008	7/23/2008	8/12/2008	8/12/2008	8/12/2008				
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1	1				
Crop Stage Majority	V3-V4	V3-V4	V3-V4	V3-V4	R2-R4	R2-R4	R2-R4				
Crop Stage Minimum/Maximum	6-9"	6-9"	6-9"	6-9"	18-24"	18-24"	18-24"				
Pest Stage Majority					3-8 LF	5-20 N	4-5 N				
Pest Stage Minimum/Maximum		12-36"	2-6'	12-48"	24-48"	24-84"	6-18"				
Pest Density, Unit		175 YD2	34 YD2	4 YD2	73 YD2	38 YD2	1 YD2				
Assessed By	VMD	VMD	VMD	VMD	PM/JM	PM/JM	PM/JM				
Days After First/Last Applic.	43 13	43 13	43 13	43 13	63 33	63 33	63 33				
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1	29 DP-1	49 DP-1	49 DP-1	49 DP-1				
Days After Emergence	22 DE-	22 DE-	22 DE-	22 DE-	42 DE-	42 DE-	42 DE-				
Trt No.	Treatment Name	Rate	Unit	Appl Code	8	9	10	11	12	13	14
1	Extreme	0.81	lb ai/a	A	2.8 a	88.8 b	90.0 a	99.8 a	26.3 b	43.8 b	77.5 a
	Ammonium Sulfate	17	lb ai/100 gal	A							
	NIS	1	% v/v	A							
2	Tackle	1	lb ai/a	A	1.3 a	85.3 b	90.8 a	100.0 a	10.0 c	40.0 b	100.0 a
3	Tackle	1	lb ai/a	A	0.0 a	81.5 c	86.0 a	100.0 a	7.5 c	27.5 b	96.3 a
	Ammonium Sulfate	17	lb ai/100 gal	A							
4	Tackle	1	lb ai/a	A	1.5 a	87.0 b	90.0 a	99.5 a	37.5 b	46.3 b	100.0 a
	Ammonium Sulfate	17	lb ai/100 gal	A							
	NIS	1	% v/v	A							
5	Untreated				0.0 a	0.0 d	0.0 b	0.0 c	0.0 c	0.0 c	0.0 b
6	Tackle	1	lb ai/a	A	0.0 a	100.0 a	98.5 a	100.0 a	94.0 a	95.5 a	100.0 a
	Ammonium Sulfate	17	lb ai/100 gal	A							
	Tackle	1	lb ai/a	B							
	Ammonium Sulfate	17	lb ai/100 gal	B							
7	Roundup PowerMAX	12.4	oz ae/a	A	1.8 a	99.8 a	97.5 a	96.3 b	92.0 a	93.3 a	90.0 a
	Ammonium Sulfate	17	lb ai/100 gal	A							
	Tackle	1	lb ai/a	B							
8	Roundup PowerMAX	12.4	oz ae/a	A	2.0 a	100.0 a	98.8 a	99.8 a	92.0 a	97.5 a	100.0 a
	Ammonium Sulfate	17	lb ai/100 gal	A							
	Tackle	1	lb ai/a	B							
	Ammonium Sulfate	17	lb ai/100 gal	B							
9	Roundup PowerMAX	12.4	oz ae/a	A	2.5 a	100.0 a	98.8 a	99.8 a	90.8 a	96.3 a	100.0 a
	Ammonium Sulfate	17	lb ai/100 gal	A							
	Tackle	1	lb ai/a	B							
	Ammonium Sulfate	17	lb ai/100 gal	B							
	NIS	0.125	% v/v	B							

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	ABUTH	SETFA	AMBTR	ABUTH	
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Abutilon theop>	Setaria faberi	Ambrosia trifi>	Abutilon theop>	
Pest Name	Giant foxtail	Giant ragweed	Velvetleaf	Giant foxtail	Giant ragweed	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	AG 3306	AG 3306	AG 3306	AG 3306	AG 3306	AG 3306	AG 3306
Description	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR	JD 7200; RR
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT C
Rating Date	6/26/2008	6/26/2008	6/26/2008	7/9/2008	7/9/2008	7/9/2008	7/16/2008
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN
Rating Unit	%	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1	1
Crop Stage Majority	N/A	N/A	N/A	V1	V1	V1	V2
Crop Stage Minimum/Maximum				2-4"	2-4"	2-4"	8-10"
Pest Stage Majority							
Pest Stage Minimum/Maximum	2-14"	2-36"	2-12"	6-18"	12-48"	6-12"	
Pest Density, Unit	175 FT2	34 YD2	4 YD2	175 FT2	34 YD2	4 YD2	
Assessed By	MK	MK	MK	WGJ AR	WGJ AR	WGJ AR	AR JM
Days After First/Last Applic.	16 16	16 16	16 16	29 29	29 29	29 29	36 6
Plant-Eval Interval	2 DP-1	2 DP-1	2 DP-1	15 DP-1	15 DP-1	15 DP-1	22 DP-1
Days After Emergence	-5 DE-	-5 DE-	-5 DE-	8 DE-1	8 DE-1	8 DE-1	15 DE-
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	1	2	3	4	5
10 Roundup PowerMAX	12.4 oz ae/a	A	99.0 a	92.5 a	99.5 a	71.3 b	76.3 ab
Ammonium Sulfate	17 lb ai/100 gal	A					
Extreme	0.81 lb ai/a	B					
Ammonium Sulfate	17 lb ai/100 gal	B					
NIS	0.125 % v/v	B					
LSD (P=.05)			0.86	5.81	2.34	9.14	12.51
Standard Deviation			0.59	4.00	1.61	6.30	8.62
CV			0.66	4.78	1.81	8.23	11.87
Bartlett's X2			4.043	4.15	19.539	10.129	5.731
P(Bartlett's X2)			0.671	0.843	0.003*	0.256	0.677
Replicate F			0.574	5.327	2.093	0.952	2.335
Replicate Prob(F)			0.6367	0.0052	0.1246	0.4293	0.0963
Treatment F			11262.640	217.064	1512.486	83.571	37.450
Treatment Prob(F)			0.0001	0.0001	0.0001	0.0001	0.0001
			19.71	2.13	13.58	1.47	110.88
			17.724	0.023*	2.081	0.1262	7.775
			0.0001	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.

Purdue University

Tackle used as a burndown prior to planting and POST weeds.

Trial ID: 08S-THP-CTS-15	Protocol ID: 08S-THP-CTS-15
Location: TPAC	Study Director: Melissa Kruger
Project ID:	Investigator: Dr. Bill Johnson
Sponsor Contact:	

Pest Type

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

Pest Code

SETFA, Setaria faberi, = US

AMBTR, Ambrosia trifida, = US

ABUTH, Abutilon theophrasti, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

PHYGEN = phytotoxicity - general / injury

Rating Unit

% = percent

FT2 = per square foot

YD2 = per square yard

Plant-Eval Interval

2 DP-1 = 1 6/24/2008

15 DP-1 = 1 6/24/2008

22 DP-1 = 1 6/24/2008

29 DP-1 = 1 6/24/2008

49 DP-1 = 1 6/24/2008