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Panther + NUP-14013 Weed Control

Trial ID: 14S-THP-CTS-49 Protocol ID: 14S-THP-CTS-49
 Location: Throckmorton Study Director:
 Project ID: H 2014 104 IN Investigator: Dr. Bill Johnson
 Sponsor Contact: Nufarm - Bob Bruss

General Trial Information

Investigator: Dr. Bill Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: E established

Trial Location

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

Personnel

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

Cooperator/Landowner

Cooperator: Throckmorton Purdue Ag Center **Role:** Purdue Ag Center
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 2933 **Description:** RR2
BBCH Scale: BSOY **Planting Date:** May-23-2014
Planting Method: SEEDED seeded **Rate, Unit:** 130000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN
Seed Bed: FINE fine
Soil Moisture: WET wet **Emergence Date:** May-29-2014

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:** CHEAL Chenopodium album
Common Name: Common lambsquarters

Pest 4 Type: W **Code:** ABUTH Abutilon theophrasti
Common Name: velvetleaf

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 4B
% OM: 2.9 **Texture:** SIL silt loam
pH: 6.2 **Soil Name:** Toronto-Millbrook
CEC: 13.3

Application Description

	A	B	C
Application Date:	May-8-2014	May-26-2014	Jun-13-2014
Time of Day:	AM	AM	AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	EARPRE	PREMCR	
Application Placement:	BROADC	BROADC	BROADC
Air Temperature, Unit:	74 F	59 F	65 F
% Relative Humidity:	62	86	66
Wind Velocity, Unit:	10 mph	0 mph	4.5 mph
Wind Direction:	SW		NW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	64 F		70 F
Soil Moisture:	Dry	WET	Dry
% Cloud Cover:	15	80	5

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:		BBCH	BBCH
Stage Majority, Percent:		00	12

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Height Minimum, Maximum:			1 6
Density, Unit:			3 FT2
Pest 2 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Height Minimum, Maximum:			1 4
Density, Unit:			2 YD2
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W
Stage Majority, Percent:		2	
Height Minimum, Maximum:			1 3
Density, Unit:			2 YD2
Pest 4 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Height Minimum, Maximum:			2 5
Density, Unit:			2 YD2

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Application Equipment

	A	B	C
Appl. Equipment:	CO2 FORD	CO2 FORD	CO2 FORD
Equipment Type:	SPTRMO	SPTRMO	SPTRMO
Operation Pressure, Unit:	25 PSI	25 PSI	
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	XR 100 02	XR 100 02	XR 100 02
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Nozzles/Row:	6	6	6
Boom Length, Unit:	10 FT	10 FT	10 FT
Ground Speed, Unit:	2.1 MPH	2.1 MPH	2.1 MPH
Carrier:	MEIGS	MEIGS	MEIGS
Spray Volume, Unit:	20 gal/ac	20 gal/ac	20 gal/ac
Mix Size, Unit:	2.5 liters	2.5 liters	2.5 liters
Propellant:	CO2	CO2	CO2

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 Location: Throckmorton Study Director:
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Reps: 4

Plots: 10 by 30 feet

Spray vol: 20 gal/ac

Mix size: 2.5 liters (min 2.0856)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Appl Description	Amt Product to Measure	Rep 1	2	3	4
1	Untreated Check											101	405	702	805
2	Panther (51 WDG)	51 %		WG	1.53 oz ai/a		3 oz/a	EARPRE	A	EPP14	2.808 g/mx	102	404	602	804
3	NUP-14013 (7.62 EC)	7.62 LBA/GAL		EC	20.3 oz ai/a		1.33 pt/a	EARPRE	A	EPP14	20.81 ml/mx	104	502	704	901
4	Fierce (76 WG)	76 %		WG	2.85 oz ai/a		3.75 oz/a	EARPRE	A	EPP14	3.511 g/mx	105	402	605	904
5	Panther (51 WDG)	51 %		WG	1.02 oz ai/a		2 oz/a	EARPRE	A	EPP14	1.872 g/mx	201	505	705	905
	NUP-14013 (7.62 EC)	7.62 LBA/GAL		EC	15.2 oz ai/a		1 pt/a	EARPRE	A	EPP14	15.58 ml/mx				
6	Panther (51 WDG)	51 %		WG	1.53 oz ai/a		3 oz/a	EARPRE	A	EPP14	2.808 g/mx	202	501	802	1005
	NUP-14013 (7.62 EC)	7.62 LBA/GAL		EC	22.9 oz ai/a		1.5 pt/a	EARPRE	A	EPP14	23.48 ml/mx				
7	Panther (51 WDG)	51 %		WG	1.02 oz ai/a		2 oz/a	EARPRE	A	EPP14	1.872 g/mx	204	401	601	902
	NUP-14013 (7.62 EC)	7.62 LBA/GAL		EC	20.3 oz ai/a		1.33 pt/a	EARPRE	A	EPP14	20.81 ml/mx				
8	Panther (51 WDG)	51 %		WG	1.53 oz ai/a		3 oz/a	EARPRE	A	EPP14	2.808 g/mx	205	305	604	1004
	NUP-14013 (7.62 EC)	7.62 LBA/GAL		EC	30.5 oz ai/a		2 pt/a	EARPRE	A	EPP14	31.27 ml/mx				
9	Panther (51 WDG)	51 %		WG	1.53 oz ai/a		3 oz/a	PREMCR	B	3 DAP	2.808 g/mx	301	304	701	1001
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 oz/a	PREMCR	B	3 DAP	31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal	PREMCR	B	3 DAP	62.49 ml/mx				
10	NUP-14013 (7.62 EC)	7.62 LBA/GAL		EC	20.3 oz ai/a		1.33 pt/a	PREMCR	B	3 DAP	20.81 ml/mx	302	504	801	1002
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 oz/a	PREMCR	B	3 DAP	31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal	PREMCR	B	3 DAP	62.49 ml/mx				
11	Fierce (76 WG)	76 %		WG	2.28 oz ai/a		3 oz/a	PREMCR	B	3 DAP	2.808 g/mx	103	403	606	1006
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 oz/a	PREMCR	B	3 DAP	31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal	PREMCR	B	3 DAP	62.49 ml/mx				
12	Panther (51 WDG)	51 %		WG	1.02 oz ai/a		2 oz/a	PREMCR	B	3 DAP	1.872 g/mx	106	306	706	903
	NUP-14013 (7.62 EC)	7.62 LBA/GAL		EC	15.2 oz ai/a		1 pt/a	PREMCR	B	3 DAP	15.58 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 oz/a	PREMCR	B	3 DAP	31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal	PREMCR	B	3 DAP	62.49 ml/mx				
13	Panther (51 WDG)	51 %		WG	1.53 oz ai/a		3 oz/a	PREMCR	B	3 DAP	2.808 g/mx	203	506	603	906
	NUP-14013 (7.62 EC)	7.62 LBA/GAL		EC	22.9 oz ai/a		1.5 pt/a	PREMCR	B	3 DAP	23.48 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 oz/a	PREMCR	B	3 DAP	31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal	PREMCR	B	3 DAP	62.49 ml/mx				
14	Panther (51 WDG)	51 %		WG	1.02 oz ai/a		2 oz/a	PREMCR	B	3 DAP	1.872 g/mx	206	406	803	806
	NUP-14013 (7.62 EC)	7.62 LBA/GAL		EC	20.3 oz ai/a		1.33 pt/a	PREMCR	B	3 DAP	20.81 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 oz/a	PREMCR	B	3 DAP	31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal	PREMCR	B	3 DAP	62.49 ml/mx				
15	Panther (51 WDG)	51 %		WG	1.53 oz ai/a		3 oz/a	PREMCR	B	3 DAP	2.808 g/mx	303	503	703	1003
	NUP-14013 (7.62 EC)	7.62 LBA/GAL		EC	30.5 oz ai/a		2 pt/a	PREMCR	B	3 DAP	31.27 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 oz/a	PREMCR	B	3 DAP	31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal	PREMCR	B	3 DAP	62.49 ml/mx				

Sort Order: Treatment

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Pest Type	W Weed	W Weed	W Weed		W Weed	W Weed		
Pest Code	AMBTR	SETFA	CHEAL		SETFA	AMBTR		
Pest Scientific Name	Ambrosia trifi>	Setaria faberi	Chenopodium al>		Setaria faberi	Ambrosia trifi>		
Pest Name	Giant ragweed	Giant foxtail	Common lambsqu>		Giant foxtail	Giant ragweed		
Crop Code				GLXMA				
BBCB Scale				BSOY				
Crop Scientific Name				Glycine max				
Crop Name				Soybean				
Rating Date	Jun-9-2014	Jun-9-2014	Jun-9-2014	Jun-9-2014	Jun-23-2014	Jun-23-2014		
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO		
Rating Unit	%	%	%		%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT		1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority	V1	V1	V1		V3	V3		
Pest Stage Majority	1-12"	1-4"	1-3"		12"	30"		
Pest Density, Unit	4 FT2	3 FT2	5 YD2		7 FT2	4 YD2		
Days After First/Last Applic.	32 14	32 14	32 14	32 14	46 10	46 10		
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	17 DP-1	31 DP-1	31 DP-1		
Days After Emergence	11 DE-1	11 DE-1	11 DE-1	11 DE-1	25 DE-1	25 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	1	2	3	4	5	6
1 Untreated Check		101	0.0	0.0	0.0	0.0	0.0	0.0
		405	0.0	0.0	0.0	0.0	0.0	0.0
		702	0.0	0.0	0.0	0.0	0.0	0.0
		805	0.0	0.0	0.0	0.0	0.0	0.0
		Mean =	0.0	0.0	0.0	0.0	0.0	0.0
2 Panther (51 WDG)	1.53 oz ai/a	A 102	60.0	0.0	99.0	0.0	70.0	75.0
		404	40.0	50.0	99.0	0.0	87.0	20.0
		602	60.0	0.0	99.0	0.0	80.0	70.0
		804	40.0	0.0	99.0	0.0	60.0	65.0
		Mean =	50.0	12.5	99.0	0.0	74.3	57.5
3 NUP-14013 (7.62 EC)	20.3 oz ai/a	A 104	10.0	70.0	90.0	0.0	90.0	0.0
		502	50.0	90.0	80.0	0.0	96.0	60.0
		704	0.0	99.0	60.0	0.0	99.0	0.0
		901	0.0	99.0	99.0	0.0	99.0	0.0
		Mean =	15.0	89.5	82.3	0.0	96.0	15.0
4 Fierce (76 WG)	2.85 oz ai/a	A 105	80.0	80.0	95.0	0.0	99.0	83.0
		402	60.0	95.0	99.0	0.0	95.0	74.0
		605	70.0	95.0	99.0	0.0	95.0	75.0
		904	95.0	95.0	99.0	0.0	95.0	86.0
		Mean =	76.3	91.3	98.0	0.0	96.0	79.5
5 Panther (51 WDG)	1.02 oz ai/a	A 201	20.0	99.0	99.0	0.0	99.0	40.0
NUP-14013 (7.62 EC)	15.2 oz ai/a	A 505	30.0	75.0	99.0	0.0	90.0	50.0
		705	30.0	99.0	99.0	0.0	95.0	40.0
		905	80.0	95.0	99.0	0.0	97.0	85.0
		Mean =	40.0	92.0	99.0	0.0	95.3	53.8
6 Panther (51 WDG)	1.53 oz ai/a	A 202	80.0	97.0	99.0	0.0	95.0	60.0
NUP-14013 (7.62 EC)	22.9 oz ai/a	A 501	70.0	99.0	99.0	0.0	99.0	70.0
		802	30.0	99.0	99.0	0.0	99.0	65.0
		1005	65.0	90.0	99.0	0.0	99.0	84.0
		Mean =	61.3	96.3	99.0	0.0	98.0	69.8

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code	AMBTR	SETFA	CHEAL	SETFA	AMBTR	
Pest Scientific Name	Ambrosia trifi>	Setaria faberi	Chenopodium al>	Setaria faberi	Ambrosia trifi>	
Pest Name	Giant ragweed	Giant foxtail	Common lambsqu>	Giant foxtail	Giant ragweed	
Crop Code				GLXMA		
BBCH Scale				BSOY		
Crop Scientific Name				Glycine max		
Crop Name				Soybean		
Rating Date	Jun-9-2014	Jun-9-2014	Jun-9-2014	Jun-9-2014	Jun-23-2014	
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	
Rating Unit	%	%	%		%	
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT		1 PLOT	
Number of Subsamples	1	1	1	1	1	
Crop Stage Majority	V1	V1	V1		V3	
Pest Stage Majority	1-12"	1-4"	1-3"		30"	
Pest Density, Unit	4 FT2	3 FT2	5 YD2		7 FT2	
Days After First/Last Applic.	32 14	32 14	32 14	32 14	46 10	
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	17 DP-1	31 DP-1	
Days After Emergence	11 DE-1	11 DE-1	11 DE-1	11 DE-1	25 DE-1	
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code Plot	1	2	3	4
7 Panther (51 WDG)	1.02 oz ai/a	A 204	30.0	85.0	99.0	0.0
NUP-14013 (7.62 EC)	20.3 oz ai/a	A 401	60.0	99.0	99.0	0.0
		601	50.0	95.0	99.0	0.0
		902	30.0	99.0	99.0	0.0
		Mean =	42.5	94.5	99.0	0.0
8 Panther (51 WDG)	1.53 oz ai/a	A 205	90.0	85.0	99.0	0.0
NUP-14013 (7.62 EC)	30.5 oz ai/a	A 305	70.0	99.0	99.0	0.0
		604	80.0	98.0	99.0	0.0
		1004	85.0	90.0	99.0	0.0
		Mean =	81.3	93.0	99.0	0.0
9 Panther (51 WDG)	1.53 oz ai/a	B 301	75.0	99.0	99.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 304	80.0	99.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 701	90.0	95.0	99.0	0.0
		1001	80.0	99.0	99.0	0.0
		Mean =	81.3	98.0	99.0	0.0
10 NUP-14013 (7.62 EC)	20.3 oz ai/a	B 302	0.0	99.0	99.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 504	40.0	99.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 801	0.0	99.0	99.0	0.0
		1002	0.0	99.0	99.0	0.0
		Mean =	10.0	99.0	99.0	0.0
11 Fierce (76 WG)	2.28 oz ai/a	B 103	98.0	98.0	99.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 403	75.0	99.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 606	95.0	99.0	99.0	0.0
		1006	98.0	99.0	99.0	0.0
		Mean =	91.5	98.8	99.0	0.0
12 Panther (51 WDG)	1.02 oz ai/a	B 106	90.0	99.0	99.0	0.0
NUP-14013 (7.62 EC)	15.2 oz ai/a	B 306	95.0	99.0	99.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 706	85.0	99.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 903	60.0	99.0	99.0	0.0
		Mean =	82.5	99.0	99.0	0.0
13 Panther (51 WDG)	1.53 oz ai/a	B 203	98.0	99.0	99.0	0.0
NUP-14013 (7.62 EC)	22.9 oz ai/a	B 506	80.0	99.0	99.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 603	95.0	99.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 906	99.0	99.0	99.0	0.0
		Mean =	93.0	99.0	99.0	0.0

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	W Weed AMBTR Ambrosia trifi> Giant ragweed	W Weed SETFA Setaria faberi Giant foxtail	W Weed CHEAL Chenopodium al> Common lambsqu>		W Weed SETFA Setaria faberi Giant foxtail	W Weed AMBTR Ambrosia trifi> Giant ragweed
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	Jun-9-2014	Jun-9-2014	Jun-9-2014	Jun-9-2014	Jun-23-2014	Jun-23-2014
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%		%	%
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT		1 PLOT	1 PLOT
Number of Subsamples	1	1	1	1	1	1
Crop Stage Majority	V1	V1	V1		V3	V3
Pest Stage Majority	1-12"	1-4"	1-3"		12"	30"
Pest Density, Unit	4 FT2	3 FT2	5 YD2		7 FT2	4 YD2
Days After First/Last Applic.	32 14	32 14	32 14	32 14	46 10	46 10
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	17 DP-1	31 DP-1	31 DP-1
Days After Emergence	11 DE-1	11 DE-1	11 DE-1	11 DE-1	25 DE-1	25 DE-1
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code Plot	1	2	3	4
14 Panther (51 WDG)	1.02 oz ai/a	B 206	85.0	99.0	99.0	0.0
NUP-14013 (7.62 EC)	20.3 oz ai/a	B 406	80.0	99.0	97.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 803	97.0	99.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 806	97.0	99.0	99.0	0.0
		Mean =	89.8	99.0	98.5	0.0
15 Panther (51 WDG)	1.53 oz ai/a	B 303	70.0	80.0	99.0	0.0
NUP-14013 (7.62 EC)	30.5 oz ai/a	B 503	95.0	99.0	99.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 703	90.0	99.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1003	80.0	99.0	99.0	0.0
		Mean =	83.8	94.3	99.0	0.0

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Pest Type	W Weed				W Weed		W Weed	
Pest Code	CHEAL				SETFA		AMBTR	
Pest Scientific Name	Chenopodium al>				Setaria faberi		Ambrosia trifi>	
Pest Name	Common lambsqu>				Giant foxtail		Giant ragweed	
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	
Rating Date	Jun-23-2014		Jun-23-2014		Jun-23-2014		Jul-22-2014	
Rating Type	CONTRO		PHYSTU		PHYLMA		PHYCHL	
Rating Unit	%		%		%		%	
Sample Size, Unit	1	PLOT	1	PLOT	1	PLOT	1	PLOT
Number of Subsamples	1		1		1		1	
Crop Stage Majority	V3		V3		V3		V3	
Pest Stage Majority	7"		7"		7"		22"	
Pest Density, Unit	3 FT2		3 FT2		3 FT2		5 YD2	
Days After First/Last Applic.	46 10		46 10		46 10		75 39	
Plant-Eval Interval	31 DP-1		31 DP-1		31 DP-1		60 DP-1	
Days After Emergence	25 DE-1		25 DE-1		25 DE-1		54 DE-1	
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	7	8	9	10	11	12
1 Untreated Check		101	0.0	0.0	0.0	0.0	0.0	0.0
		405	0.0	0.0	0.0	0.0	0.0	0.0
		702	0.0	0.0	0.0	0.0	0.0	0.0
		805	0.0	0.0	0.0	0.0	0.0	0.0
		Mean =	0.0	0.0	0.0	0.0	0.0	0.0
2 Panther (51 WDG)	1.53 oz ai/a	A 102	99.0	0.0	0.0	3.0	93.0	60.0
		404	99.0	0.0	0.0	0.0	60.0	20.0
		602	99.0	0.0	3.0	3.0	60.0	40.0
		804	99.0	5.0	0.0	0.0	50.0	70.0
		Mean =	99.0	1.3	0.8	1.5	65.8	47.5
3 NUP-14013 (7.62 EC)	20.3 oz ai/a	A 104	60.0	0.0	0.0	0.0	99.0	40.0
		502	70.0	0.0	5.0	4.0	80.0	50.0
		704	60.0	0.0	3.0	0.0	90.0	30.0
		901	99.0	0.0	0.0	0.0	95.0	20.0
		Mean =	72.3	0.0	2.0	1.0	91.0	35.0
4 Fierce (76 WG)	2.85 oz ai/a	A 105	99.0	0.0	0.0	3.0	99.0	85.0
		402	99.0	0.0	0.0	0.0	70.0	60.0
		605	99.0	0.0	0.0	0.0	92.0	75.0
		904	99.0	0.0	0.0	0.0	95.0	94.0
		Mean =	99.0	0.0	0.0	0.8	89.0	78.5
5 Panther (51 WDG)	1.02 oz ai/a	A 201	99.0	0.0	0.0	0.0	95.0	20.0
NUP-14013 (7.62 EC)	15.2 oz ai/a	A 505	99.0	0.0	0.0	0.0	85.0	50.0
		705	99.0	0.0	3.0	0.0	90.0	40.0
		905	99.0	0.0	5.0	0.0	90.0	87.0
		Mean =	99.0	0.0	2.0	0.0	90.0	49.3
6 Panther (51 WDG)	1.53 oz ai/a	A 202	99.0	0.0	3.0	0.0	93.0	70.0
NUP-14013 (7.62 EC)	22.9 oz ai/a	A 501	99.0	0.0	4.0	3.0	95.0	65.0
		802	99.0	3.0	3.0	0.0	70.0	40.0
		1005	99.0	0.0	0.0	0.0	93.0	85.0
		Mean =	99.0	0.8	2.5	0.8	87.8	65.0

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Pest Type	W Weed				W Weed				W Weed	
Pest Code	CHEAL				SETFA				AMBTR	
Pest Scientific Name	Chenopodium al>				Setaria faberi				Ambrosia trifi>	
Pest Name	Common lambsqu>				Giant foxtail				Giant ragweed	
Crop Code	GLXMA		GLXMA		GLXMA		GLXMA		GLXMA	
BBCH Scale	BSOY		BSOY		BSOY		BSOY		BSOY	
Crop Scientific Name	Glycine max		Glycine max		Glycine max		Glycine max		Glycine max	
Crop Name	Soybean		Soybean		Soybean		Soybean		Soybean	
Rating Date	Jun-23-2014		Jun-23-2014		Jun-23-2014		Jul-22-2014		Jul-22-2014	
Rating Type	CONTRO		PHYSTU		PHYLMA		PHYCHL		CONTRO	
Rating Unit	%		%		%		%		%	
Sample Size, Unit	1	PLOT	1	PLOT	1	PLOT	1	PLOT	1	PLOT
Number of Subsamples	1		1		1		1		1	
Crop Stage Majority	V3		V3		V3		V3			
Pest Stage Majority	7"						22"		40"	
Pest Density, Unit	3 FT2						5 FT2		5 YD2	
Days After First/Last Applic.	46 10		46 10		46 10		75 39		75 39	
Plant-Eval Interval	31 DP-1		31 DP-1		31 DP-1		60 DP-1		60 DP-1	
Days After Emergence	25 DE-1		25 DE-1		25 DE-1		54 DE-1		54 DE-1	
Trt Treatment	Rate	Appl								
No. Name	Rate Unit	Code Plot	7	8	9	10	11	12		
7 Panther (51 WDG)	1.02 oz ai/a	A 204	99.0	0.0	0.0	0.0	85.0	20.0		
NUP-14013 (7.62 EC)	20.3 oz ai/a	A 401	99.0	5.0	5.0	3.0	80.0	20.0		
		601	99.0	0.0	0.0	3.0	84.0	55.0		
		902	99.0	0.0	0.0	0.0	95.0	20.0		
		Mean =	99.0	1.3	1.3	1.5	86.0	28.8		
8 Panther (51 WDG)	1.53 oz ai/a	A 205	99.0	0.0	3.0	4.0	90.0	87.0		
NUP-14013 (7.62 EC)	30.5 oz ai/a	A 305	95.0	0.0	0.0	0.0	87.0	70.0		
		604	99.0	0.0	5.0	3.0	85.0	80.0		
		1004	99.0	0.0	3.0	0.0	90.0	80.0		
		Mean =	98.0	0.0	2.8	1.8	88.0	79.3		
9 Panther (51 WDG)	1.53 oz ai/a	B 301	99.0	0.0	6.0	0.0	90.0	50.0		
Roundup PowerMax 4.5 SL	18 oz ae/a	B 304	99.0	0.0	4.0	0.0	60.0	75.0		
AMS - Liquid	8.5 lb ai/100 gal	B 701	99.0	0.0	5.0	0.0	40.0	80.0		
		1001	99.0	0.0	5.0	0.0	50.0	75.0		
		Mean =	99.0	0.0	5.0	0.0	60.0	70.0		
10 NUP-14013 (7.62 EC)	20.3 oz ai/a	B 302	99.0	5.0	5.0	3.0	99.0	0.0		
Roundup PowerMax 4.5 SL	18 oz ae/a	B 504	99.0	0.0	5.0	0.0	90.0	10.0		
AMS - Liquid	8.5 lb ai/100 gal	B 801	99.0	0.0	5.0	0.0	99.0	20.0		
		1002	99.0	0.0	5.0	0.0	80.0	0.0		
		Mean =	99.0	1.3	5.0	0.8	92.0	7.5		
11 Fierce (76 WG)	2.28 oz ai/a	B 103	99.0	0.0	0.0	0.0	99.0	80.0		
Roundup PowerMax 4.5 SL	18 oz ae/a	B 403	99.0	0.0	6.0	0.0	93.0	60.0		
AMS - Liquid	8.5 lb ai/100 gal	B 606	99.0	5.0	5.0	0.0	94.0	84.0		
		1006	99.0	0.0	5.0	0.0	99.0	87.0		
		Mean =	99.0	1.3	4.0	0.0	96.3	77.8		
12 Panther (51 WDG)	1.02 oz ai/a	B 106	99.0	0.0	0.0	0.0	97.0	83.0		
NUP-14013 (7.62 EC)	15.2 oz ai/a	B 306	99.0	0.0	3.0	0.0	99.0	94.0		
Roundup PowerMax 4.5 SL	18 oz ae/a	B 706	99.0	5.0	8.0	0.0	97.0	83.0		
AMS - Liquid	8.5 lb ai/100 gal	B 903	99.0	3.0	7.0	0.0	90.0	70.0		
		Mean =	99.0	2.0	4.5	0.0	95.8	82.5		
13 Panther (51 WDG)	1.53 oz ai/a	B 203	99.0	5.0	8.0	6.0	95.0	95.0		
NUP-14013 (7.62 EC)	22.9 oz ai/a	B 506	99.0	0.0	7.0	0.0	99.0	60.0		
Roundup PowerMax 4.5 SL	18 oz ae/a	B 603	99.0	0.0	9.0	0.0	97.0	87.0		
AMS - Liquid	8.5 lb ai/100 gal	B 906	99.0	0.0	6.0	0.0	95.0	92.0		
		Mean =	99.0	1.3	7.5	1.5	96.5	83.5		

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Pest Type	W Weed				W Weed		W Weed	
Pest Code	CHEAL				SETFA		AMBTR	
Pest Scientific Name	Chenopodium al>				Setaria faberi		Ambrosia trifi>	
Pest Name	Common lambsqu>				Giant foxtail		Giant ragweed	
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	
Rating Date	Jun-23-2014		Jun-23-2014		Jun-23-2014		Jul-22-2014	
Rating Type	CONTRO		PHYSTU		PHYLMA		CONTRO	
Rating Unit	%		%		%		%	
Sample Size, Unit	1 PLOT		1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples	1		1		1		1	
Crop Stage Majority	V3		V3		V3		V3	
Pest Stage Majority	7"		7"		7"		22"	
Pest Density, Unit	3 FT2		3 FT2		3 FT2		5 YD2	
Days After First/Last Applic.	46 10		46 10		46 10		75 39	
Plant-Eval Interval	31 DP-1		31 DP-1		31 DP-1		60 DP-1	
Days After Emergence	25 DE-1		25 DE-1		25 DE-1		54 DE-1	
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	7	8	9	10	11	12
14 Panther (51 WDG)	1.02 oz ai/a	B 206	99.0	0.0	4.0	0.0	97.0	90.0
NUP-14013 (7.62 EC)	20.3 oz ai/a	B 406	99.0	3.0	6.0	0.0	94.0	80.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 803	99.0	5.0	9.0	0.0	98.0	90.0
AMS - Liquid	8.5 lb ai/100 gal	B 806	99.0	0.0	7.0	0.0	95.0	80.0
		Mean =	99.0	2.0	6.5	0.0	96.0	85.0
15 Panther (51 WDG)	1.53 oz ai/a	B 303	99.0	3.0	5.0	0.0	83.0	60.0
NUP-14013 (7.62 EC)	30.5 oz ai/a	B 503	99.0	0.0	7.0	0.0	97.0	84.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 703	99.0	5.0	10.0	0.0	93.0	78.0
AMS - Liquid	8.5 lb ai/100 gal	B 1003	99.0	0.0	9.0	0.0	95.0	65.0
		Mean =	99.0	2.0	7.8	0.0	92.0	71.8

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Pest Type				W Weed		
Pest Code				CHEAL		
Pest Scientific Name				Chenopodium al>		
Pest Name				Common lambsqu>		
Crop Code				GLXMA	GLXMA	GLXMA
BBCH Scale				BSOY	BSOY	BSOY
Crop Scientific Name				Glycine max	Glycine max	Glycine max
Crop Name				Soybean	Soybean	Soybean
Rating Date				Jul-22-2014	Jul-22-2014	Sep-29-2014
Rating Type				CONTRO	PHYSTU	YIELD
Rating Unit				%	%	bu/ac
Sample Size, Unit				1 PLOT	1 PLOT	
Number of Subsamples				1	1	1
Crop Stage Majority						
Pest Stage Majority				24"		
Pest Density, Unit				2 YD2		
Days After First/Last Applic.				75 39	75 39	144 108
Plant-Eval Interval				60 DP-1	60 DP-1	129 DP-1
Days After Emergence				54 DE-1	54 DE-1	123 DE-1
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code Plot		13	14	15
1 Untreated Check		101		0.0	7.0	65.40
		405		0.0	5.0	67.20
		702		0.0	10.0	57.10
		805		0.0	2.0	73.00
		Mean =		0.0	6.0	65.68
2 Panther (51 WDG)	1.53 oz ai/a	A 102		99.0	0.0	75.90
		404		99.0	2.0	66.60
		602		99.0	0.0	64.20
		804		95.0	0.0	75.30
		Mean =		98.0	0.5	70.50
3 NUP-14013 (7.62 EC)	20.3 oz ai/a	A 104		99.0	10.0	68.10
		502		70.0	0.0	71.20
		704		99.0	15.0	50.40
		901		99.0	10.0	53.90
		Mean =		91.8	8.8	60.90
4 Fierce (76 WG)	2.85 oz ai/a	A 105		99.0	0.0	72.60
		402		99.0	0.0	61.60
		605		90.0	0.0	66.60
		904		99.0	0.0	77.30
		Mean =		96.8	0.0	69.53
5 Panther (51 WDG)	1.02 oz ai/a	A 201		99.0	5.0	58.20
NUP-14013 (7.62 EC)	15.2 oz ai/a	A 505		99.0	0.0	73.80
		705		85.0	2.0	65.90
		905		99.0	0.0	73.00
		Mean =		95.5	1.8	67.73
6 Panther (51 WDG)	1.53 oz ai/a	A 202		99.0	0.0	67.40
NUP-14013 (7.62 EC)	22.9 oz ai/a	A 501		99.0	0.0	75.80
		802		99.0	0.0	69.00
		1005		70.0	0.0	64.70
		Mean =		91.8	0.0	69.23

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Trt No.	Treatment	Rate	Appl Code	Plot	13	14	15
7	Panther (51 WDG)	1.02 oz ai/a	A	204	90.0	0.0	66.90
	NUP-14013 (7.62 EC)	20.3 oz ai/a	A	401	99.0	3.0	73.80
				601	99.0	0.0	75.90
				902	99.0	5.0	68.20
				Mean =	96.8	2.0	71.20
8	Panther (51 WDG)	1.53 oz ai/a	A	205	99.0	0.0	62.90
	NUP-14013 (7.62 EC)	30.5 oz ai/a	A	305	95.0	2.0	63.60
				604	99.0	2.0	60.50
				1004	99.0	2.0	65.80
				Mean =	98.0	1.5	63.20
9	Panther (51 WDG)	1.53 oz ai/a	B	301	99.0	0.0	74.20
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	304	99.0	0.0	68.80
	AMS - Liquid	8.5 lb ai/100 gal	B	701	99.0	5.0	58.90
				1001	99.0	0.0	68.50
				Mean =	99.0	1.3	67.60
10	NUP-14013 (7.62 EC)	20.3 oz ai/a	B	302	80.0	0.0	61.70
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	504	99.0	2.0	66.70
	AMS - Liquid	8.5 lb ai/100 gal	B	801	60.0	0.0	76.50
				1002	99.0	0.0	66.90
				Mean =	84.5	0.5	67.95
11	Fierce (76 WG)	2.28 oz ai/a	B	103	99.0	0.0	76.60
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	403	99.0	0.0	57.30
	AMS - Liquid	8.5 lb ai/100 gal	B	606	99.0	5.0	67.60
				1006	99.0	0.0	73.50
				Mean =	99.0	1.3	68.75
12	Panther (51 WDG)	1.02 oz ai/a	B	106	99.0	0.0	89.20
	NUP-14013 (7.62 EC)	15.2 oz ai/a	B	306	99.0	2.0	64.20
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	706	95.0	0.0	75.80
	AMS - Liquid	8.5 lb ai/100 gal	B	903	99.0	0.0	58.20
				Mean =	98.0	0.5	71.85
13	Panther (51 WDG)	1.53 oz ai/a	B	203	99.0	3.0	60.30
	NUP-14013 (7.62 EC)	22.9 oz ai/a	B	506	99.0	0.0	80.00
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	603	99.0	0.0	57.60
	AMS - Liquid	8.5 lb ai/100 gal	B	906	99.0	0.0	74.80
				Mean =	99.0	0.8	68.18

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Pest Type	W Weed		
Pest Code	CHEAL		
Pest Scientific Name	Chenopodium al>		
Pest Name	Common lambsqu>		
Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	Jul-22-2014	Jul-22-2014	Sep-29-2014
Rating Type	CONTRO	PHYSTU	YIELD
Rating Unit	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1
Crop Stage Majority			
Pest Stage Majority	24"		
Pest Density, Unit	2 YD2		
Days After First/Last Applic.	75 39	75 39	144 108
Plant-Eval Interval	60 DP-1	60 DP-1	129 DP-1
Days After Emergence	54 DE-1	54 DE-1	123 DE-1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code Plot	
			13 14 15
14 Panther (51 WDG)	1.02 oz ai/a	B 206	99.0 0.0 80.00
NUP-14013 (7.62 EC)	20.3 oz ai/a	B 406	99.0 3.0 74.10
Roundup PowerMax 4.5 SL	18 oz ae/a	B 803	99.0 2.0 70.70
AMS - Liquid	8.5 lb ai/100 gal	B 806	99.0 0.0 76.80
		Mean =	99.0 1.3 75.40
15 Panther (51 WDG)	1.53 oz ai/a	B 303	99.0 0.0 62.40
NUP-14013 (7.62 EC)	30.5 oz ai/a	B 503	99.0 0.0 59.80
Roundup PowerMax 4.5 SL	18 oz ae/a	B 703	99.0 4.0 61.10
AMS - Liquid	8.5 lb ai/100 gal	B 1003	99.0 0.0 68.80
		Mean =	99.0 1.0 63.03

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Panther + NUP-14013 Weed Control

Trial ID: 14S-THP-CTS-49 Protocol ID: 14S-THP-CTS-49
Location: Throckmorton Study Director:
Project ID: H 2014 104 IN Investigator: Dr. Bill Johnson
Sponsor Contact: Nufarm - Bob Bruss

Pest Type

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

Pest Code

AMBTR, Ambrosia trifida, = US
SETFA, Setaria faberi, = US
CHEAL, Chenopodium album, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

CONTRO = control / burndown or knockdown
PHYGEN = phytotoxicity - general / injury
PHYSTU = phytotoxicity - stunting
PHYLMA = phytotoxicity - leaf malformation
PHYCHL = phytotoxicity - chlorosis
YIELD = yield

Rating Unit

% = percent
bu/ac = bushels per acre

PLOT = total plot

FT2 = per square foot

YD2 = per square yard

Plant-Eval Interval

17 DP-1 = 1 GLXMA May-23-2014
31 DP-1 = 1 GLXMA May-23-2014
60 DP-1 = 1 GLXMA May-23-2014
129 DP-1 = 1 GLXMA May-23-2014

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Panther + NUP-14013 Weed Control

Trial ID: 14S-THP-CTS-49 Protocol ID: 14S-THP-CTS-49
 Location: Throckmorton Study Director:
 Project ID: H 2014 104 IN Investigator: Dr. Bill Johnson
 Sponsor Contact: Nufarm - Bob Bruss

Pest Type	W Weed	W Weed	W Weed		W Weed	W Weed		
Pest Code	AMBTR	SETFA	CHEAL		SETFA	AMBTR		
Pest Scientific Name	Ambrosia trifi>	Setaria faberi	Chenopodium al>		Setaria faberi	Ambrosia trifi>		
Pest Name	Giant ragweed	Giant foxtail	Common lambsqu>		Giant foxtail	Giant ragweed		
Crop Code				GLXMA				
BBCH Scale				BSOY				
Crop Scientific Name				Glycine max				
Crop Name				Soybean				
Rating Date	Jun-9-2014	Jun-9-2014	Jun-9-2014	Jun-9-2014	Jun-23-2014	Jun-23-2014		
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO		
Rating Unit	%	%	%		%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT		1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority	V1	V1	V1		V3	V3		
Pest Stage Majority	1-12"	1-4"	1-3"		12"	30"		
Pest Density, Unit	4 FT2	3 FT2	5 YD2		7 FT2	4 YD2		
Days After First/Last Applic.	32 14	32 14	32 14	32 14	46 10	46 10		
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	17 DP-1	31 DP-1	31 DP-1		
Days After Emergence	11 DE-1	11 DE-1	11 DE-1	11 DE-1	25 DE-1	25 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
1 Untreated Check			0.0 d	0.0 c	0.0 c	0.0 a	0.0 c	0.0 e
2 Panther (51 WDG)	1.53 oz ai/a	A	50.0 bc	12.5 b	99.0 a	0.0 a	74.3 b	57.5 bcd
3 NUP-14013 (7.62 EC)	20.3 oz ai/a	A	15.0 d	89.5 a	82.3 b	0.0 a	96.0 a	15.0 e
4 Fierce (76 WG)	2.85 oz ai/a	A	76.3 ab	91.3 a	98.0 a	0.0 a	96.0 a	79.5 abc
5 Panther (51 WDG)	1.02 oz ai/a	A	40.0 c	92.0 a	99.0 a	0.0 a	95.3 a	53.8 cd
NUP-14013 (7.62 EC)	15.2 oz ai/a	A						
6 Panther (51 WDG)	1.53 oz ai/a	A	61.3 abc	96.3 a	99.0 a	0.0 a	98.0 a	69.8 a-d
NUP-14013 (7.62 EC)	22.9 oz ai/a	A						
7 Panther (51 WDG)	1.02 oz ai/a	A	42.5 c	94.5 a	99.0 a	0.0 a	95.3 a	48.8 d
NUP-14013 (7.62 EC)	20.3 oz ai/a	A						
8 Panther (51 WDG)	1.53 oz ai/a	A	81.3 ab	93.0 a	99.0 a	0.0 a	98.0 a	81.5 abc
NUP-14013 (7.62 EC)	30.5 oz ai/a	A						
9 Panther (51 WDG)	1.53 oz ai/a	B	81.3 ab	98.0 a	99.0 a	0.0 a	98.0 a	88.8 a
Roundup PowerMax 4.5 SL	18 oz ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
10 NUP-14013 (7.62 EC)	20.3 oz ai/a	B	10.0 d	99.0 a	99.0 a	0.0 a	99.0 a	82.8 abc
Roundup PowerMax 4.5 SL	18 oz ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
11 Fierce (76 WG)	2.28 oz ai/a	B	91.5 a	98.8 a	99.0 a	0.0 a	99.0 a	94.0 a
Roundup PowerMax 4.5 SL	18 oz ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
12 Panther (51 WDG)	1.02 oz ai/a	B	82.5 ab	99.0 a	99.0 a	0.0 a	99.0 a	90.5 a
NUP-14013 (7.62 EC)	15.2 oz ai/a	B						
Roundup PowerMax 4.5 SL	18 oz ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
13 Panther (51 WDG)	1.53 oz ai/a	B	93.0 a	99.0 a	99.0 a	0.0 a	99.0 a	92.8 a
NUP-14013 (7.62 EC)	22.9 oz ai/a	B						
Roundup PowerMax 4.5 SL	18 oz 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 AMBTR	W Weed SETFA	W Weed CHEAL		W Weed SETFA	W Weed AMBTR		
Pest Code								
Pest Scientific Name	Ambrosia trifi>	Setaria faberi	Chenopodium al>		Setaria faberi	Ambrosia trifi>		
Pest Name	Giant ragweed	Giant foxtail	Common lambsqu>		Giant foxtail	Giant ragweed		
Crop Code				GLXMA				
BBCH Scale				BSOY				
Crop Scientific Name				Glycine max				
Crop Name				Soybean				
Rating Date	Jun-9-2014	Jun-9-2014	Jun-9-2014	Jun-9-2014	Jun-23-2014	Jun-23-2014		
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO		
Rating Unit	%	%	%		%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT		1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority	V1	V1	V1		V3	V3		
Pest Stage Majority	1-12"	1-4"	1-3"		12"	30"		
Pest Density, Unit	4 FT2	3 FT2	5 YD2		7 FT2	4 YD2		
Days After First/Last Applic.	32 14	32 14	32 14	32 14	46 10	46 10		
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	17 DP-1	31 DP-1	31 DP-1		
Days After Emergence	11 DE-1	11 DE-1	11 DE-1	11 DE-1	25 DE-1	25 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
14 Panther (51 WDG)	1.02 oz ai/a	B	89.8 a	99.0 a	98.5 a	0.0 a	99.0 a	92.8 a
NUP-14013 (7.62 EC)	20.3 oz ai/a	B						
Roundup PowerMax 4.5 SL	18 oz ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
15 Panther (51 WDG)	1.53 oz ai/a	B	83.8 ab	94.3 a	99.0 a	0.0 a	95.0 a	86.8 ab
NUP-14013 (7.62 EC)	30.5 oz ai/a	B						
Roundup PowerMax 4.5 SL	18 oz ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
LSD (P=.05)	22.50	12.38	6.25	0.00	6.06	19.93		
Standard Deviation	15.74	8.66	4.37	0.00	4.24	13.95		
CV	26.3	10.35	4.79	0.0	4.74	20.23		
Bartlett's X2	12.998	34.44	19.541	0.0	20.944	46.831		
P(Bartlett's X2)	0.448	0.001*	0.001*	.	0.007*	0.001*		
Replicate F	0.150	2.006	0.929	0.000	1.130	0.409		
Replicate Prob(F)	0.9293	0.1278	0.4352	1.0000	0.3477	0.7476		
Treatment F	16.298	53.574	137.066	0.000	144.449	17.379		
Treatment Prob(F)	0.0001	0.0001	0.0001	1.0000	0.0001	0.0001		

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Pest Type	W Weed				W Weed	W Weed	W Weed		
Pest Code	CHEAL				SETFA	AMBTR	CHEAL		
Pest Scientific Name	Chenopodium al>				Setaria faberi	Ambrosia trifi>	Chenopodium al>		
Pest Name	Common lambsqu>				Giant foxtail	Giant ragweed	Common lambsqu>		
Crop Code		GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCB Scale		BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name		Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name		Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Rating Date	Jun-23-2014	Jun-23-2014	Jun-23-2014	Jun-23-2014	Jul-22-2014	Jul-22-2014	Jul-22-2014		
Rating Type	CONTRO	PHYSTU	PHYLMA	PHYCHL	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority	V3	V3	V3	V3					
Pest Stage Majority	7"				22"	40"	24"		
Pest Density, Unit	3 FT2				5 FT2	5 YD2	2 YD2		
Days After First/Last Applic.	46 10	46 10	46 10	46 10	75 39	75 39	75 39		
Plant-Eval Interval	31 DP-1	31 DP-1	31 DP-1	31 DP-1	60 DP-1	60 DP-1	60 DP-1		
Days After Emergence	25 DE-1	25 DE-1	25 DE-1	25 DE-1	54 DE-1	54 DE-1	54 DE-1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	7	8	9	10	11	12	13
1 Untreated Check			0.0 c	0.0 a	0.0 d	0.0 a	0.0 c	0.0 f	0.0 b
2 Panther (51 WDG)	1.53 oz ai/a	A	99.0 a	1.3 a	0.8 cd	1.5 a	65.8 b	47.5 cd	98.0 a
3 NUP-14013 (7.62 EC)	20.3 oz ai/a	A	72.3 b	0.0 a	2.0 cd	1.0 a	91.0 a	35.0 d	91.8 a
4 Fierce (76 WG)	2.85 oz ai/a	A	99.0 a	0.0 a	0.0 d	0.8 a	89.0 a	78.5 abc	96.8 a
5 Panther (51 WDG)	1.02 oz ai/a	A	99.0 a	0.0 a	2.0 cd	0.0 a	90.0 a	49.3 bcd	95.5 a
NUP-14013 (7.62 EC)	15.2 oz ai/a	A							
6 Panther (51 WDG)	1.53 oz ai/a	A	99.0 a	0.8 a	2.5 bcd	0.8 a	87.8 a	65.0 abc	91.8 a
NUP-14013 (7.62 EC)	22.9 oz ai/a	A							
7 Panther (51 WDG)	1.02 oz ai/a	A	99.0 a	1.3 a	1.3 cd	1.5 a	86.0 a	28.8 de	96.8 a
NUP-14013 (7.62 EC)	20.3 oz ai/a	A							
8 Panther (51 WDG)	1.53 oz ai/a	A	98.0 a	0.0 a	2.8 bcd	1.8 a	88.0 a	79.3 abc	98.0 a
NUP-14013 (7.62 EC)	30.5 oz ai/a	A							
9 Panther (51 WDG)	1.53 oz ai/a	B	99.0 a	0.0 a	5.0 abc	0.0 a	60.0 b	70.0 abc	99.0 a
Roundup PowerMax 4.5 SL	18 oz ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
10 NUP-14013 (7.62 EC)	20.3 oz ai/a	B	99.0 a	1.3 a	5.0 abc	0.8 a	92.0 a	7.5 ef	84.5 a
Roundup PowerMax 4.5 SL	18 oz ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
11 Fierce (76 WG)	2.28 oz ai/a	B	99.0 a	1.3 a	4.0 a-d	0.0 a	96.3 a	77.8 abc	99.0 a
Roundup PowerMax 4.5 SL	18 oz ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
12 Panther (51 WDG)	1.02 oz ai/a	B	99.0 a	2.0 a	4.5 abc	0.0 a	95.8 a	82.5 ab	98.0 a
NUP-14013 (7.62 EC)	15.2 oz ai/a	B							
Roundup PowerMax 4.5 SL	18 oz ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
13 Panther (51 WDG)	1.53 oz ai/a	B	99.0 a	1.3 a	7.5 a	1.5 a	96.5 a	83.5 ab	99.0 a
NUP-14013 (7.62 EC)	22.9 oz ai/a	B							
Roundup PowerMax 4.5 SL	18 oz ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							

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Pest Type	W Weed	GLXMA	GLXMA	GLXMA	W Weed	W Weed	W Weed		
Pest Code	CHEAL				SETFA	AMBTR	CHEAL		
Pest Scientific Name	Chenopodium al>				Setaria faberi	Ambrosia trifi>	Chenopodium al>		
Pest Name	Common lambsqu>				Giant foxtail	Giant ragweed	Common lambsqu>		
Crop Code		GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCB Scale		BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name		Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name		Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Rating Date	Jun-23-2014	Jun-23-2014	Jun-23-2014	Jun-23-2014	Jul-22-2014	Jul-22-2014	Jul-22-2014		
Rating Type	CONTRO	PHYSTU	PHYLMA	PHYCHL	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority	V3	V3	V3	V3					
Pest Stage Majority	7"				22"	40"	24"		
Pest Density, Unit	3 FT2				5 FT2	5 YD2	2 YD2		
Days After First/Last Applic.	46 10	46 10	46 10	46 10	75 39	75 39	75 39		
Plant-Eval Interval	31 DP-1	31 DP-1	31 DP-1	31 DP-1	60 DP-1	60 DP-1	60 DP-1		
Days After Emergence	25 DE-1	25 DE-1	25 DE-1	25 DE-1	54 DE-1	54 DE-1	54 DE-1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	7	8	9	10	11	12	13
14 Panther (51 WDG)	1.02 oz ai/a	B	99.0 a	2.0 a	6.5 ab	0.0 a	96.0 a	85.0 a	99.0 a
NUP-14013 (7.62 EC)	20.3 oz ai/a	B							
Roundup PowerMax 4.5 SL	18 oz ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
15 Panther (51 WDG)	1.53 oz ai/a	B	99.0 a	2.0 a	7.8 a	0.0 a	92.0 a	71.8 abc	99.0 a
NUP-14013 (7.62 EC)	30.5 oz ai/a	B							
Roundup PowerMax 4.5 SL	18 oz ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
LSD (P=.05)	6.84	2.65	2.63	1.95	13.09	21.26	11.13		
Standard Deviation	4.79	1.85	1.84	1.36	9.16	14.88	7.79		
CV	5.29	214.02	53.63	215.08	11.21	25.91	8.68		
Bartlett's X2	9.14	0.985	7.816	2.59	39.034	12.19	29.605		
P(Bartlett's X2)	0.003*	0.998	0.73	0.92	0.001*	0.512	0.001*		
Replicate F	1.019	0.969	3.795	2.168	2.826	0.898	0.337		
Replicate Prob(F)	0.3940	0.4164	0.0170	0.1061	0.0500	0.4502	0.7990		
Treatment F	117.750	0.756	7.747	0.998	29.772	14.330	41.733		
Treatment Prob(F)	0.0001	0.7071	0.0001	0.4724	0.0001	0.0001	0.0001		

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Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max		
Crop Name	Soybean	Soybean		
Rating Date	Jul-22-2014	Sep-29-2014		
Rating Type	PHYSTU	YIELD		
Rating Unit	%	bu/ac		
Sample Size, Unit	1 PLOT			
Number of Subsamples	1	1		
Crop Stage Majority				
Pest Stage Majority				
Pest Density, Unit				
Days After First/Last Applic.	75 39	144 108		
Plant-Eval Interval	60 DP-1	129 DP-1		
Days After Emergence	54 DE-1	123 DE-1		
Trt No.	Treatment	Rate	Appl Code	
		Rate Unit		
			14	15
1	Untreated Check		6.0 ab	65.68 a
2	Panther (51 WDG)	1.53 oz ai/a	A	0.5 bc
3	NUP-14013 (7.62 EC)	20.3 oz ai/a	A	8.8 a
4	Fierce (76 WG)	2.85 oz ai/a	A	0.0 c
5	Panther (51 WDG)	1.02 oz ai/a	A	1.8 bc
	NUP-14013 (7.62 EC)	15.2 oz ai/a	A	67.73 a
6	Panther (51 WDG)	1.53 oz ai/a	A	0.0 c
	NUP-14013 (7.62 EC)	22.9 oz ai/a	A	69.23 a
7	Panther (51 WDG)	1.02 oz ai/a	A	2.0 bc
	NUP-14013 (7.62 EC)	20.3 oz ai/a	A	71.20 a
8	Panther (51 WDG)	1.53 oz ai/a	A	1.5 bc
	NUP-14013 (7.62 EC)	30.5 oz ai/a	A	63.20 a
9	Panther (51 WDG)	1.53 oz ai/a	B	1.3 bc
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	67.60 a
	AMS - Liquid	8.5 lb ai/100 gal	B	
10	NUP-14013 (7.62 EC)	20.3 oz ai/a	B	0.5 bc
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	67.95 a
	AMS - Liquid	8.5 lb ai/100 gal	B	
11	Fierce (76 WG)	2.28 oz ai/a	B	1.3 bc
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	68.75 a
	AMS - Liquid	8.5 lb ai/100 gal	B	
12	Panther (51 WDG)	1.02 oz ai/a	B	0.5 bc
	NUP-14013 (7.62 EC)	15.2 oz ai/a	B	71.85 a
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	
	AMS - Liquid	8.5 lb ai/100 gal	B	
13	Panther (51 WDG)	1.53 oz ai/a	B	0.8 bc
	NUP-14013 (7.62 EC)	22.9 oz ai/a	B	68.18 a
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	
	AMS - Liquid	8.5 lb ai/100 gal	B	

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Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max		
Crop Name	Soybean	Soybean		
Rating Date	Jul-22-2014	Sep-29-2014		
Rating Type	PHYSTU	YIELD		
Rating Unit	%	bu/ac		
Sample Size, Unit	1 PLOT			
Number of Subsamples	1	1		
Crop Stage Majority				
Pest Stage Majority				
Pest Density, Unit				
Days After First/Last Applic.	75 39	144 108		
Plant-Eval Interval	60 DP-1	129 DP-1		
Days After Emergence	54 DE-1	123 DE-1		
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	14	15
14 Panther (51 WDG)	1.02 oz ai/a	B	1.3 bc	75.40 a
NUP-14013 (7.62 EC)	20.3 oz ai/a	B		
Roundup PowerMax 4.5 SL	18 oz ae/a	B		
AMS - Liquid	8.5 lb ai/100 gal	B		
15 Panther (51 WDG)	1.53 oz ai/a	B	1.0 bc	63.03 a
NUP-14013 (7.62 EC)	30.5 oz ai/a	B		
Roundup PowerMax 4.5 SL	18 oz ae/a	B		
AMS - Liquid	8.5 lb ai/100 gal	B		
LSD (P=.05)			3.36	10.537
Standard Deviation			2.35	7.374
CV			130.6	10.84
Bartlett's X2			23.261	14.66
P(Bartlett's X2)			0.026*	0.402
Replicate F			1.834	1.072
Replicate Prob(F)			0.1557	0.3711
Treatment F			4.150	1.021
Treatment Prob(F)			0.0002	0.4520

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Panther + NUP-14013 Weed Control

Trial ID: 14S-THP-CTS-49 Protocol ID: 14S-THP-CTS-49
 Location: Throckmorton Study Director:
 Project ID: H 2014 104 IN Investigator: Dr. Bill Johnson
 Sponsor Contact: Nufarm - Bob Bruss

Pest Type

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

Pest Code

AMBTR, Ambrosia trifida, = US
 SETFA, Setaria faberi, = US
 CHEAL, Chenopodium album, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

CONTRO = control / burndown or knockdown
 PHYGEN = phytotoxicity - general / injury
 PHYSTU = phytotoxicity - stunting
 PHYLMA = phytotoxicity - leaf malformation
 PHYCHL = phytotoxicity - chlorosis
 YIELD = yield

Rating Unit

% = percent
 bu/ac = bushels per acre

PLOT = total plot

FT2 = per square foot
 YD2 = per square yard

Plant-Eval Interval

17 DP-1 = 1 GLXMA May-23-2014
 31 DP-1 = 1 GLXMA May-23-2014
 60 DP-1 = 1 GLXMA May-23-2014
 129 DP-1 = 1 GLXMA May-23-2014