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To evaluate F9387 premix herbicide tank mixed with glyphosate for crop safety and weed control in RR corn

Trial ID: 13S-THP-CTC-06 Protocol ID: 13S-THP-CTC-06
 Location: Field Study Director: Shiv D Sharma
 Project ID: NA13-1115B Investigator: Dr. Bill Johnson
 Sponsor Contact: FMC - Joe Reed

General Trial Information

Study Director: Shiv D Sharma
Investigator: Dr. Bill Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: E established
Initiation Date: Mar-18-2013 **Planned Completion Date:** Sep-10-2013

Trial Location

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

Keywords: Weed control, crop safety, Fluthiacet methyl, mesotrione

Objectives:

1. To evaluate bioefficacy of F9387 a premix prototype tank mixed with glyphosate on glyphosate resistant waterhemp, common and giant ragweed and other broadspectrum of weeds.
2. To examine crop safety of corn

Personnel

Study Director: Shiv D Sharma
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: ZEAMX Zea mays Corn
Variety: DEKALB DKC61-21 **Description:** RR/LL
BBCH Scale: BCOR **Planting Date:** May-9-2013
Planting Method: SEEDED seeded **Rate, Unit:** 32000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Soil Moisture: DRY dry **Soil Temperature, Unit:** 69 F
Emergence Date: May-18-2013

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Pest Description

- Pest 1 Type:** W **Code:** AMATA *Amaranthus tamariscinus*
Common Name: Common waterhemp
- Pest 2 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed
- Pest 3 Type:** W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed
- Pest 4 Type:** W **Code:** IPOHE *Ipomoea hederacea*
Common Name: Ivyleaf morningglory
- Pest 5 Type:** W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters
- Pest 6 Type:** W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth
- Pest 7 Type:** W **Code:** KCHSC *Kochia scoparia*
Common Name: Kochia
- Pest 8 Type:** W **Code:** HELAN *Helianthus annuus*
Common Name: Common sunflower
Description: volunteer or wild
- Pest 9 Type:** W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
- Pest10 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

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
Application Date:	May-9-2013	Jun-4-2013
Time of Day:	AM	8:20 AM
Application Method:	SPRAY	SPRAY
Application Timing:	ATPLAN	EAPOWE
Application Placement:	SOIL	FOLIAR
Applied By:	MW	MW
Air Temperature, Unit:	73 F	61 F
% Relative Humidity:	49	65
Wind Velocity, Unit:	6.3 MPH	2.5 MPH
Wind Direction:	SW	E
Dew Presence (Y/N):	Y yes	Y yes
Soil Temperature, Unit:	69 F	59 F
Soil Moisture:	DRY	WET
% Cloud Cover:	95	5

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Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:		BBCH
Stage Majority, Percent:		V3

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMATA W	AMATA W
Pest 2 Code, Type, Scale:	AMBEL W	AMBEL W
Pest 3 Code, Type, Scale:	AMBTR W	AMBTR W
Height Minimum, Maximum:		1 5
Density, Unit:		13 YD2
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W
Pest 5 Code, Type, Scale:	CHEAL W	CHEAL W
Height, Unit:		1 IN
Density, Unit:		5 YD2
Pest 6 Code, Type, Scale:	AMAPA W	AMAPA W
Pest 7 Code, Type, Scale:	KCHSC W	KCHSC W
Pest 8 Code, Type, Scale:	HELAN W	HELAN W
Pest 9 Code, Type, Scale:	SETFA W	SETFA W
Height Minimum, Maximum:		1 4
Density, Unit:		10 FT2
Pest10 Code, Type, Scale:	ABUTH W	ABUTH W
Height, Unit:		1.5 IN
Density, Unit:		2 YD2

Application Equipment

	A	B
Appl. Equipment:	CO2 FORD	CO2 FORD
Equipment Type:	SPTRMO	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

Equipment Comment: Treatments will be applied by Backpack Knapshak Sprayer with CO2 pressurized tank

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To evaluate F9387 premix herbicide tank mixed with glyphosate for crop safety and weed control in RR corn

Trial ID: 13S-THP-CTC-06 Protocol ID: 13S-THP-CTC-06
 Location: Field Study Director: Shiv D Sharma
 Project ID: NA13-1115B Investigator: Dr. Bill Johnson
 Sponsor Contact: FMC - Joe Reed

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	Rep 2	Rep 3	Rep 4
1	Untreated Check											101	405	702	805
2	ROUNDUP POWERMAX AMS - Liquid	5.5 LB/GAL	SL		22 fl oz/a	0.95 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx	102	404	602	804
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
3	LIBERTY 280 SL AMS - Liquid	2.34 LB/GAL	SL		22 fl oz/a	0.402 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx	104	502	704	901
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
4	F9387-1 ROUNDUP POWERMAX AMS - Liquid	4 LB/GAL	SC		2.5 fl oz/a	0.078 lb ai/a		EAPOWE B	4"	Weeds	2.441 ml/mx	105	402	605	904
		5.5 LB/GAL	SL		22 fl oz/a	0.95 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
5	F9387-1 ROUNDUP POWERMAX AMS - Liquid	4 LB/GAL	SC		3.15 fl oz/a	0.098 lb ai/a		EAPOWE B	4"	Weeds	3.076 ml/mx	201	505	705	905
		5.5 LB/GAL	SL		22 fl oz/a	0.95 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
6	CADET ROUNDUP POWERMAX AMS - Liquid	0.91 LB/GAL	EC		0.75 fl oz/a	0.00533 lb ai/a		EAPOWE B	4"	Weeds	0.7324 ml/mx	202	501	802	1005
		5.5 LB/GAL	SL		22 fl oz/a	0.95 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
7	CALLISTO ROUNDUP POWERMAX AMS - Liquid	4 LB/GAL	SC		3.0 fl oz/a	0.094 lb ai/a		EAPOWE B	4"	Weeds	2.93 ml/mx	204	401	601	902
		5.5 LB/GAL	SL		22 fl oz/a	0.95 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
8	F9387-1 LIBERTY 280 SL AMS - Liquid	4 LB/GAL	SC		2.5 fl oz/a	0.078 lb ai/a		EAPOWE B	4"	Weeds	2.441 ml/mx	205	305	604	1004
		2.34 LB/GAL	SL		22 fl oz/a	0.402 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
9	F9387-1 LIBERTY 280 SL AMS - Liquid	4 LB/GAL	SC		3.15 fl oz/a	0.098 lb ai/a		EAPOWE B	4"	Weeds	3.076 ml/mx	301	304	701	1001
		2.34 LB/GAL	SL		22 fl oz/a	0.402 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
10	CADET LIBERTY 280 SL AMS - Liquid	0.91 LB/GAL	EC		0.75 fl oz/a	0.00533 lb ai/a		EAPOWE B	4"	Weeds	0.7324 ml/mx	302	504	801	1002
		2.34 LB/GAL	SL		22 fl oz/a	0.402 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
11	F9387-1 AATREX ROUNDUP POWERMAX AMS - Liquid	4 LB/GAL	SC		2.5 fl oz/a	0.078 lb ai/a		EAPOWE B	4"	Weeds	2.441 ml/mx	103	403	606	1006
		4 LB/GAL	SC		16 fl oz/a	0.5 lb ai/a		EAPOWE B	4"	Weeds	15.62 ml/mx				
		5.5 LB/GAL	SL		22 fl oz/a	0.95 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
12	F9387-1 AATREX LIBERTY 280 SL AMS - Liquid	4 LB/GAL	SC		2.5 fl oz/a	0.077 lb ai/a		EAPOWE B	4"	Weeds	2.441 ml/mx	106	306	706	903
		4 LB/GAL	SC		16 fl oz/a	0.5 lb ai/a		EAPOWE B	4"	Weeds	15.62 ml/mx				
		2.34 LB/GAL	SL		22 fl oz/a	0.402 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
13	ANTHEM ATZ F9387-1 ROUNDUP POWERMAX AMS - Liquid	4.5 LB/GAL	SE		24 fl oz/a	0.84 lb ai/a		ATPLAN A			23.44 ml/mx	203	506	603	906
		4 LB/GAL	SC		3 fl oz/a	0.094 lb ai/a		EAPOWE B	4"	Weeds	2.93 ml/mx				
		5.5 LB/GAL	SL		22 fl oz/a	0.95 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
14	ANTHEM F9387-1 AATREX ROUNDUP POWERMAX AMS - Liquid	2.15 LB/GAL	SE		8 fl oz/a	0.134 lb ai/a		ATPLAN A			7.812 ml/mx	206	406	803	806
		4 LB/GAL	SC		2.5 fl oz/a	0.078 lb ai/a		EAPOWE B	4"	Weeds	2.441 ml/mx				
		4 LB/GAL	SC		16 fl oz/a	0.5 lb ai/a		EAPOWE B	4"	Weeds	15.62 ml/mx				
		5.5 LB/GAL	SL		22 fl oz/a	0.95 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				
15	STATUS herbicide ROUNDUP POWERMAX AMS - Liquid	56 %W/W	DF		2.5 oz/a	0.0875 lb ai/a		EAPOWE B	4"	Weeds	2.34 g/mx	303	503	703	1003
		5.5 LB/GAL	SL		22 fl oz/a	0.95 lb ai/a		EAPOWE B	4"	Weeds	21.48 ml/mx				
		3.4 LB/GAL	SL		2.5 % v/v	8.5 lb ai/100 gal		EAPOWE B	4"	Weeds	62.49 ml/mx				

Sort Order: Treatment

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Trial ID: 13S-THP-CTC-06 Protocol ID: 13S-THP-CTC-06
 Location: Field Study Director: Shiv D Sharma
 Project ID: NA13-1115B Investigator: Dr. Bill Johnson
 Sponsor Contact: FMC - Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed		W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL	ABUTH		SETFA	AMBTR
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Chenopodium album	Abutilon theophrasti		Setaria faberi	Ambrosia trifida
Pest Name	Giant foxtail	Giant ragweed	Common lambsquarters	Velvetleaf		Giant foxtail	Giant ragweed
Crop Code					ZEAMX	ZEAMX	ZEAMX
BBCH Scale					BCOR	BCOR	BCOR
Crop Scientific Name					Zea mays	Zea mays	Zea mays
Crop Name					Corn	Corn	Corn
Rating Date	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-18-2013	Jun-18-2013
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYNEC	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1	1
Crop Stage Majority					V5	V6	V6
Pest Stage Majority	8 IN	20 IN	5 IN	4 IN		18 IN	30 IN
Pest Density, Unit	15 FT2	7 YD2	2 FT2	1 YD2		20 FT2	5 YD2
Assessed By	MW	MW	MW	MW	MW	MW	MW
Days After First/Last Applic.	36 10	36 10	36 10	36 10	36 10	40 14	40 14
Plant-Eval Interval	36 DP-1	36 DP-1	36 DP-1	36 DP-1	36 DP-1	40 DP-1	40 DP-1
Days After Emergence	27 DE-1	27 DE-1	27 DE-1	27 DE-1	27 DE-1	31 DE-1	31 DE-1
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	1	2	3	4	5
1 Untreated Check		101	0.0	0.0	0.0	0.0	0.0
		405	0.0	0.0	0.0	0.0	0.0
		702	0.0	0.0	0.0	0.0	0.0
		805	0.0	0.0	0.0	0.0	0.0
		Mean =	0.0	0.0	0.0	0.0	0.0
2 ROUNDUP POWERMAX	22 fl oz/a B	102	95.0	85.0	99.0	99.0	0.0
AMS - Liquid	2.5 % v/v B	404	93.0	90.0	99.0	99.0	0.0
		602	99.0	87.0	90.0	99.0	0.0
		804	99.0	80.0	99.0	99.0	0.0
		Mean =	96.5	85.5	96.8	99.0	0.0
3 LIBERTY 280 SL	22 fl oz/a B	104	95.0	90.0	90.0	60.0	0.0
AMS - Liquid	2.5 % v/v B	502	99.0	95.0	99.0	80.0	0.0
		704	93.0	93.0	85.0	99.0	0.0
		901	99.0	80.0	95.0	85.0	3.0
		Mean =	96.5	89.5	92.3	81.0	0.8
4 F9387-1	2.5 fl oz/a B	105	97.0	90.0	99.0	99.0	3.0
ROUNDUP POWERMAX	22 fl oz/a B	402	95.0	93.0	99.0	99.0	5.0
AMS - Liquid	2.5 % v/v B	605	97.0	93.0	99.0	99.0	0.0
		904	87.0	85.0	99.0	99.0	3.0
		Mean =	94.0	90.3	99.0	99.0	2.8
5 F9387-1	3.15 fl oz/a B	201	97.0	90.0	99.0	99.0	0.0
ROUNDUP POWERMAX	22 fl oz/a B	505	95.0	97.0	99.0	99.0	3.0
AMS - Liquid	2.5 % v/v B	705	95.0	85.0	99.0	99.0	5.0
		905	97.0	90.0	99.0	90.0	3.0
		Mean =	96.0	90.5	99.0	96.8	2.8
6 CADET	0.75 fl oz/a B	202	95.0	80.0	99.0	99.0	5.0
ROUNDUP POWERMAX	22 fl oz/a B	501	97.0	80.0	90.0	90.0	5.0
AMS - Liquid	2.5 % v/v B	802	99.0	75.0	99.0	99.0	5.0
		1005	97.0	80.0	99.0	99.0	5.0
		Mean =	97.0	78.8	96.8	96.8	5.0

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SETFA	AMBTR	CHEAL	ABUTH	SETFA	AMBTR			
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>	Abutilon theop>	Setaria faberi	Ambrosia trifi>			
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Velvetleaf	Giant foxtail	Giant ragweed			
Crop Code					ZEAMX	ZEAMX	ZEAMX		
BBCH Scale					BCOR	BCOR	BCOR		
Crop Scientific Name					Zea mays	Zea mays	Zea mays		
Crop Name					Corn	Corn	Corn		
Rating Date	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-18-2013	Jun-18-2013		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYNEC	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority					V5	V6	V6		
Pest Stage Majority	8 IN	20 IN	5 IN	4 IN		18 IN	30 IN		
Pest Density, Unit	15 FT2	7 YD2	2 FT2	1 YD2		20 FT2	5 YD2		
Assessed By	MW	MW	MW	MW	MW	MW	MW		
Days After First/Last Applic.	36 10	36 10	36 10	36 10	36 10	40 14	40 14		
Plant-Eval Interval	36 DP-1	36 DP-1	36 DP-1	36 DP-1	36 DP-1	40 DP-1	40 DP-1		
Days After Emergence	27 DE-1	27 DE-1	27 DE-1	27 DE-1	27 DE-1	31 DE-1	31 DE-1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code Plot	1	2	3	4	5	6	7
7 CALLISTO	3.0 fl oz/a B	204	97.0	93.0	99.0	99.0	0.0	93.0	93.0
ROUNDUP POWERMAX	22 fl oz/a B	401	93.0	95.0	99.0	99.0	0.0	93.0	90.0
AMS - Liquid	2.5 % v/v B	601	95.0	90.0	99.0	99.0	0.0	95.0	90.0
		902	99.0	90.0	99.0	99.0	0.0	97.0	95.0
		Mean =	96.0	92.0	99.0	99.0	0.0	94.5	92.0
8 F9387-1	2.5 fl oz/a B	205	99.0	97.0	99.0	99.0	5.0	95.0	95.0
LIBERTY 280 SL	22 fl oz/a B	305	97.0	95.0	99.0	99.0	5.0	93.0	90.0
AMS - Liquid	2.5 % v/v B	604	97.0	90.0	99.0	99.0	5.0	95.0	87.0
		1004	99.0	93.0	99.0	99.0	5.0	95.0	85.0
		Mean =	98.0	93.8	99.0	99.0	5.0	94.5	89.3
9 F9387-1	3.15 fl oz/a B	301	95.0	90.0	99.0	99.0	5.0	93.0	90.0
LIBERTY 280 SL	22 fl oz/a B	304	97.0	95.0	99.0	99.0	3.0	93.0	90.0
AMS - Liquid	2.5 % v/v B	701	99.0	95.0	95.0	99.0	3.0	93.0	93.0
		1001	97.0	95.0	99.0	99.0	3.0	95.0	87.0
		Mean =	97.0	93.8	98.0	99.0	3.5	93.5	90.0
10 CADET	0.75 fl oz/a B	302	95.0	85.0	99.0	99.0	7.0	87.0	85.0
LIBERTY 280 SL	22 fl oz/a B	504	80.0	95.0	99.0	70.0	5.0	70.0	87.0
AMS - Liquid	2.5 % v/v B	801	95.0	80.0	90.0	99.0	7.0	90.0	70.0
		1002	95.0	75.0	90.0	90.0	7.0	93.0	75.0
		Mean =	91.3	83.8	94.5	89.5	6.5	85.0	79.3
11 F9387-1	2.5 fl oz/a B	103	97.0	95.0	99.0	99.0	3.0	97.0	95.0
AATREX	16 fl oz/a B	403	95.0	95.0	99.0	99.0	3.0	93.0	95.0
ROUNDUP POWERMAX	22 fl oz/a B	606	95.0	95.0	99.0	99.0	3.0	87.0	90.0
AMS - Liquid	2.5 % v/v B	1006	95.0	90.0	99.0	99.0	0.0	93.0	85.0
		Mean =	95.5	93.8	99.0	99.0	2.3	92.5	91.3
12 F9387-1	2.5 fl oz/a B	106	97.0	97.0	99.0	99.0	5.0	93.0	95.0
AATREX	16 fl oz/a B	306	97.0	97.0	99.0	99.0	5.0	90.0	97.0
LIBERTY 280 SL	22 fl oz/a B	706	95.0	97.0	99.0	99.0	5.0	95.0	95.0
AMS - Liquid	2.5 % v/v B	903	95.0	87.0	99.0	99.0	5.0	95.0	85.0
		Mean =	96.0	94.5	99.0	99.0	5.0	93.3	93.0
13 ANTHEM ATZ	24 fl oz/a A	203	99.0	95.0	99.0	99.0	5.0	99.0	95.0
F9387-1	3 fl oz/a B	506	99.0	95.0	99.0	99.0	3.0	99.0	97.0
ROUNDUP POWERMAX	22 fl oz/a B	603	99.0	95.0	99.0	99.0	3.0	99.0	95.0
AMS - Liquid	2.5 % v/v B	906	99.0	95.0	99.0	99.0	5.0	97.0	93.0
		Mean =	99.0	95.0	99.0	99.0	4.0	98.5	95.0

Purdue University

Pest Type	W Weed	W Weed	W Weed	W Weed		W Weed	W Weed		
Pest Code	SETFA	AMBTR	CHEAL	ABUTH		SETFA	AMBTR		
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>	Abutilon theop>		Setaria faberi	Ambrosia trifi>		
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Velvetleaf		Giant foxtail	Giant ragweed		
Crop Code						ZEAMX	ZEAMX		
BBCH Scale						BCOR	BCOR		
Crop Scientific Name						Zea mays	Zea mays		
Crop Name						Corn	Corn		
Rating Date	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-18-2013	Jun-18-2013		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYNEC	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority						V5	V6		
Pest Stage Majority	8 IN	20 IN	5 IN	4 IN		18 IN	30 IN		
Pest Density, Unit	15 FT2	7 YD2	2 FT2	1 YD2		20 FT2	5 YD2		
Assessed By	MW	MW	MW	MW	MW	MW	MW		
Days After First/Last Applic.	36 10	36 10	36 10	36 10	36 10	40 14	40 14		
Plant-Eval Interval	36 DP-1	36 DP-1	36 DP-1	36 DP-1	36 DP-1	40 DP-1	40 DP-1		
Days After Emergence	27 DE-1	27 DE-1	27 DE-1	27 DE-1	27 DE-1	31 DE-1	31 DE-1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code Plot	1	2	3	4	5	6	7
14 ANTHEM	8 fl oz/a A	206	99.0	99.0	99.0	99.0	3.0	99.0	97.0
F9387-1	2.5 fl oz/a B	406	99.0	95.0	99.0	99.0	3.0	99.0	95.0
AATREX	16 fl oz/a B	803	99.0	97.0	99.0	99.0	5.0	99.0	95.0
ROUNDUP POWERMAX	22 fl oz/a B	806	97.0	95.0	99.0	99.0	3.0	99.0	90.0
AMS - Liquid	2.5 % v/v B								
		Mean =	98.5	96.5	99.0	99.0	3.5	99.0	94.3
15 STATUS herbicide	2.5 oz/a B	303	97.0	95.0	97.0	99.0	0.0	95.0	93.0
ROUNDUP POWERMAX	22 fl oz/a B	503	95.0	85.0	99.0	99.0	0.0	95.0	93.0
AMS - Liquid	2.5 % v/v B	703	95.0	85.0	95.0	99.0	0.0	90.0	90.0
		1003	99.0	90.0	99.0	99.0	0.0	97.0	85.0
		Mean =	96.5	88.8	97.5	99.0	0.0	94.3	90.3

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Pest Type	W Weed	W Weed	W Weed		W Weed	W Weed			
Pest Code	CHEAL	AMARE	ABUTH		SETFA	AMBTR			
Pest Scientific Name	Chenopodium al>	Amaranthus ret>	Abutilon theop>		Setaria faberi	Ambrosia trifi>			
Pest Name	Common lambsqu>	Redroot pigweed	velvetleaf		Giant foxtail	Giant ragweed			
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX			
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR			
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays			
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn			
Rating Date	Jun-18-2013	Jun-18-2013	Jun-18-2013	Jun-18-2013	Jul-8-2013	Jul-8-2013			
Rating Type	CONTRO	CONTRO	CONTRO	PHYNEC	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1			
Crop Stage Majority	V6	V6	V6	V6					
Pest Stage Majority	12 IN	13 IN			40 IN	60 IN			
Pest Density, Unit	3 YD2	5 YD2			30 FT2	8 YD2			
Assessed By	MW	MW	MW	MW	MW	MW			
Days After First/Last Applic.	40 14	40 14	40 14	40 14	60 34	60 34			
Plant-Eval Interval	40 DP-1	40 DP-1	40 DP-1	40 DP-1	60 DP-1	60 DP-1			
Days After Emergence	31 DE-1	31 DE-1	31 DE-1	31 DE-1	51 DE-1	51 DE-1			
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	Plot	8	9	10	11	12	13
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 ROUNDUP POWERMAX	22 fl oz/a B		102	99.0	97.0	99.0	0.0	87.0	80.0
AMS - Liquid	2.5 % v/v B		404	99.0	95.0	99.0	0.0	85.0	85.0
			602	95.0	99.0	95.0	0.0	93.0	80.0
			804	90.0	99.0	99.0	0.0	95.0	85.0
			Mean =	95.8	97.5	98.0	0.0	90.0	82.5
3 LIBERTY 280 SL	22 fl oz/a B		104	95.0	95.0	70.0	0.0	90.0	80.0
AMS - Liquid	2.5 % v/v B		502	90.0	99.0	80.0	0.0	95.0	85.0
			704	90.0	85.0	80.0	3.0	93.0	60.0
			901	99.0	93.0	70.0	0.0	95.0	75.0
			Mean =	93.5	93.0	75.0	0.8	93.3	75.0
4 F9387-1	2.5 fl oz/a B		105	95.0	99.0	99.0	3.0	90.0	93.0
ROUNDUP POWERMAX	22 fl oz/a B		402	99.0	95.0	99.0	3.0	95.0	85.0
AMS - Liquid	2.5 % v/v B		605	99.0	99.0	99.0	3.0	95.0	95.0
			904	95.0	99.0	99.0	3.0	93.0	93.0
			Mean =	97.0	98.0	99.0	3.0	93.3	91.5
5 F9387-1	3.15 fl oz/a B		201	99.0	99.0	99.0	0.0	95.0	95.0
ROUNDUP POWERMAX	22 fl oz/a B		505	99.0	99.0	99.0	3.0	93.0	95.0
AMS - Liquid	2.5 % v/v B		705	99.0	99.0	99.0	0.0	95.0	95.0
			905	99.0	99.0	99.0	0.0	95.0	93.0
			Mean =	99.0	99.0	99.0	0.8	94.5	94.5
6 CADET	0.75 fl oz/a B		202	95.0	99.0	99.0	5.0	93.0	87.0
ROUNDUP POWERMAX	22 fl oz/a B		501	90.0	90.0	75.0	5.0	93.0	85.0
AMS - Liquid	2.5 % v/v B		802	85.0	99.0	99.0	5.0	90.0	80.0
			1005	99.0	99.0	99.0	5.0	93.0	87.0
			Mean =	92.3	96.8	93.0	5.0	92.3	84.8

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	CHEAL	AMARE	ABUTH	SETFA	AMBTR
Pest Scientific Name	Chenopodium al>	Amaranthus ret>	Abutilon theop>	Setaria faberi	Ambrosia trifi>
Pest Name	Common lambsqu>	Redroot pigweed	velvetleaf	Giant foxtail	Giant ragweed
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn	Corn	Corn
Rating Date	Jun-18-2013	Jun-18-2013	Jun-18-2013	Jun-18-2013	Jul-8-2013
Rating Type	CONTRO	CONTRO	CONTRO	PHYNEC	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	V6	V6	V6	V6	
Pest Stage Majority	12 IN	13 IN			60 IN
Pest Density, Unit	3 YD2	5 YD2			8 YD2
Assessed By	MW	MW	MW	MW	MW
Days After First/Last Applic.	40 14	40 14	40 14	40 14	60 34
Plant-Eval Interval	40 DP-1	40 DP-1	40 DP-1	40 DP-1	60 DP-1
Days After Emergence	31 DE-1	31 DE-1	31 DE-1	31 DE-1	51 DE-1
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	8	9	10
7 CALLISTO	3.0 fl oz/a B	204	95.0	99.0	99.0
ROUNDUP POWERMAX	22 fl oz/a B	401	95.0	99.0	99.0
AMS - Liquid	2.5 % v/v B	601	99.0	99.0	99.0
		902	99.0	99.0	99.0
		Mean =	97.0	99.0	99.0
8 F9387-1	2.5 fl oz/a B	205	90.0	99.0	99.0
LIBERTY 280 SL	22 fl oz/a B	305	99.0	99.0	99.0
AMS - Liquid	2.5 % v/v B	604	99.0	99.0	99.0
		1004	99.0	99.0	99.0
		Mean =	96.8	99.0	99.0
9 F9387-1	3.15 fl oz/a B	301	95.0	99.0	99.0
LIBERTY 280 SL	22 fl oz/a B	304	99.0	99.0	99.0
AMS - Liquid	2.5 % v/v B	701	90.0	99.0	99.0
		1001	99.0	99.0	99.0
		Mean =	95.8	99.0	99.0
10 CADET	0.75 fl oz/a B	302	99.0	95.0	99.0
LIBERTY 280 SL	22 fl oz/a B	504	90.0	99.0	75.0
AMS - Liquid	2.5 % v/v B	801	60.0	99.0	99.0
		1002	93.0	90.0	85.0
		Mean =	85.5	95.8	89.5
11 F9387-1	2.5 fl oz/a B	103	99.0	99.0	99.0
AATREX	16 fl oz/a B	403	99.0	99.0	99.0
ROUNDUP POWERMAX	22 fl oz/a B	606	99.0	99.0	99.0
AMS - Liquid	2.5 % v/v B	1006	99.0	99.0	99.0
		Mean =	99.0	99.0	99.0
12 F9387-1	2.5 fl oz/a B	106	99.0	99.0	99.0
AATREX	16 fl oz/a B	306	99.0	99.0	99.0
LIBERTY 280 SL	22 fl oz/a B	706	99.0	99.0	99.0
AMS - Liquid	2.5 % v/v B	903	95.0	99.0	95.0
		Mean =	98.0	99.0	98.0
13 ANTHEM ATZ	24 fl oz/a A	203	99.0	99.0	99.0
F9387-1	3 fl oz/a B	506	99.0	99.0	99.0
ROUNDUP POWERMAX	22 fl oz/a B	603	99.0	99.0	99.0
AMS - Liquid	2.5 % v/v B	906	99.0	99.0	99.0
		Mean =	99.0	99.0	99.0

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	CHEAL	AMARE	ABUTH	SETFA	AMBTR
Pest Scientific Name	Chenopodium al>	Amaranthus ret>	Abutilon theop>	Setaria faberi	Ambrosia trifi>
Pest Name	Common lambsqu>	Redroot pigweed	velvetleaf	Giant foxtail	Giant ragweed
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn	Corn	Corn
Rating Date	Jun-18-2013	Jun-18-2013	Jun-18-2013	Jun-18-2013	Jul-8-2013
Rating Type	CONTRO	CONTRO	CONTRO	PHYNEC	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	V6	V6	V6	V6	
Pest Stage Majority	12 IN	13 IN			60 IN
Pest Density, Unit	3 YD2	5 YD2			8 YD2
Assessed By	MW	MW	MW	MW	MW
Days After First/Last Applic.	40 14	40 14	40 14	40 14	60 34
Plant-Eval Interval	40 DP-1	40 DP-1	40 DP-1	40 DP-1	60 DP-1
Days After Emergence	31 DE-1	31 DE-1	31 DE-1	31 DE-1	51 DE-1

Trt	Treatment	Rate	Appl		8	9	10	11	12	13
No.	Name	Rate	Unit	Code	Plot					
14	ANTHEM	8 fl oz/a	A		206	99.0	99.0	99.0	3.0	97.0
	F9387-1	2.5 fl oz/a	B		406	99.0	99.0	99.0	3.0	97.0
	AATREX	16 fl oz/a	B		803	99.0	99.0	99.0	3.0	97.0
	ROUNDUP POWERMAX	22 fl oz/a	B		806	99.0	99.0	99.0	3.0	97.0
	AMS - Liquid	2.5 % v/v	B							
					Mean =	99.0	99.0	99.0	3.0	97.0
15	STATUS herbicide	2.5 oz/a	B		303	90.0	99.0	99.0	0.0	95.0
	ROUNDUP POWERMAX	22 fl oz/a	B		503	99.0	99.0	99.0	0.0	90.0
	AMS - Liquid	2.5 % v/v	B		703	99.0	99.0	99.0	0.0	95.0
					1003	99.0	95.0	97.0	0.0	97.0
					Mean =	96.8	98.0	98.5	0.0	94.3

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Pest Type	W Weed	W Weed							
Pest Code	ABUTH	CHEAL							
Pest Scientific Name	Abutilon theop>	Chenopodium al>							
Pest Name	velvetleaf	Common lambsqu>							
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX				
BBCB Scale	BCOR	BCOR	BCOR	BCOR	BCOR				
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays				
Crop Name	Corn	Corn	Corn	Corn	Corn				
Rating Date	Jul-8-2013	Jul-8-2013	Jul-8-2013	Oct-9-2013	Oct-9-2013				
Rating Type	CONTRO	CONTRO	PHYNEC	MOICON	YIELD				
Rating Unit	%	%		%	bu/ac				
Number of Subsamples	1	1	1	1	1				
Crop Stage Majority									
Pest Stage Majority	42 IN	40 IN							
Pest Density, Unit	2 YD2	4 YD2							
Assessed By	MW	MW	MW						
Days After First/Last Applic.	60 34	60 34	60 34	153 127	153 127				
Plant-Eval Interval	60 DP-1	60 DP-1	60 DP-1	153 DP-1	153 DP-1				
Days After Emergence	51 DE-1	51 DE-1	51 DE-1	144 DE-1	144 DE-1				
Trt No.	Treatment	Rate	Appl Code	Plot	14	15	16	17	18
7	CALLISTO	3.0 fl oz/a	B	204	99.0	95.0	0.0	19.50	233.20
	ROUNDUP POWERMAX	22 fl oz/a	B	401	99.0	99.0	0.0	19.60	239.80
	AMS - Liquid	2.5 % v/v	B	601	99.0	99.0	0.0	19.80	249.50
				902	99.0	99.0	0.0	21.00	243.00
				Mean =	99.0	98.0	0.0	19.98	241.38
8	F9387-1	2.5 fl oz/a	B	205	99.0	95.0	0.0	21.00	238.20
	LIBERTY 280 SL	22 fl oz/a	B	305	99.0	99.0	0.0	22.10	243.40
	AMS - Liquid	2.5 % v/v	B	604	99.0	99.0	0.0	20.00	274.40
				1004	99.0	99.0	0.0	19.80	247.80
				Mean =	99.0	98.0	0.0	20.73	250.95
9	F9387-1	3.15 fl oz/a	B	301	99.0	99.0	0.0	18.50	271.70
	LIBERTY 280 SL	22 fl oz/a	B	304	99.0	99.0	0.0	19.30	229.60
	AMS - Liquid	2.5 % v/v	B	701	99.0	95.0	0.0	20.20	206.90
				1001	99.0	99.0	0.0	19.10	271.50
				Mean =	99.0	98.0	0.0	19.28	244.93
10	CADET	0.75 fl oz/a	B	302	99.0	99.0	0.0	19.40	212.70
	LIBERTY 280 SL	22 fl oz/a	B	504	87.0	85.0	0.0	19.90	207.90
	AMS - Liquid	2.5 % v/v	B	801	99.0	75.0	0.0	19.60	252.70
				1002	95.0	99.0	0.0	20.20	177.30
				Mean =	95.0	89.5	0.0	19.78	212.65
11	F9387-1	2.5 fl oz/a	B	103	99.0	99.0	0.0	18.30	225.90
	AATREX	16 fl oz/a	B	403	99.0	99.0	0.0	20.70	195.70
	ROUNDUP POWERMAX	22 fl oz/a	B	606	99.0	99.0	0.0	20.30	238.00
	AMS - Liquid	2.5 % v/v	B	1006	99.0	99.0	0.0	19.10	247.50
				Mean =	99.0	99.0	0.0	19.60	226.78
12	F9387-1	2.5 fl oz/a	B	106	99.0	99.0	0.0	19.10	164.40
	AATREX	16 fl oz/a	B	306	99.0	99.0	0.0	19.10	201.30
	LIBERTY 280 SL	22 fl oz/a	B	706	99.0	99.0	0.0	19.70	212.70
	AMS - Liquid	2.5 % v/v	B	903	99.0	99.0	0.0	20.80	226.40
				Mean =	99.0	99.0	0.0	19.68	201.20
13	ANTHEM ATZ	24 fl oz/a	A	203	99.0	99.0	0.0	18.90	220.10
	F9387-1	3 fl oz/a	B	506	99.0	99.0	0.0	19.50	242.60
	ROUNDUP POWERMAX	22 fl oz/a	B	603	99.0	99.0	0.0	21.40	252.60
	AMS - Liquid	2.5 % v/v	B	906	99.0	99.0	0.0	19.40	220.50
				Mean =	99.0	99.0	0.0	19.80	233.95

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Pest Type	W Weed	W Weed			
Pest Code	ABUTH	CHEAL			
Pest Scientific Name	Abutilon theop>	Chenopodium al>			
Pest Name	velvetleaf	Common lambsqu>			
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
BBCB Scale	BCOR	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn	Corn	Corn
Rating Date	Jul-8-2013	Jul-8-2013	Jul-8-2013	Oct-9-2013	Oct-9-2013
Rating Type	CONTRO	CONTRO	PHYNEC	MOICON	YIELD
Rating Unit	%	%		%	bu/ac
Number of Subsamples	1	1	1	1	1
Crop Stage Majority					
Pest Stage Majority	42 IN	40 IN			
Pest Density, Unit	2 YD2	4 YD2			
Assessed By	MW	MW	MW		
Days After First/Last Applic.	60 34	60 34	60 34	153 127	153 127
Plant-Eval Interval	60 DP-1	60 DP-1	60 DP-1	153 DP-1	153 DP-1
Days After Emergence	51 DE-1	51 DE-1	51 DE-1	144 DE-1	144 DE-1
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	14	15	16
14 ANTHEM	8 fl oz/a A	206	99.0	99.0	0.0
F9387-1	2.5 fl oz/a B	406	99.0	99.0	0.0
AATREX	16 fl oz/a B	803	99.0	99.0	0.0
ROUNDUP POWERMAX	22 fl oz/a B	806	99.0	99.0	0.0
AMS - Liquid	2.5 % v/v B				
	Mean =		99.0	99.0	0.0
15 STATUS herbicide	2.5 oz/a B	303	99.0	95.0	0.0
ROUNDUP POWERMAX	22 fl oz/a B	503	99.0	99.0	0.0
AMS - Liquid	2.5 % v/v B	703	99.0	95.0	0.0
		1003	99.0	95.0	0.0
	Mean =		99.0	96.0	0.0
					19.00
					21.00
					19.40
					19.90
					19.83
					258.60
					199.40
					241.80
					243.10
					235.73
					246.00
					231.90
					230.40
					217.40
					231.43

Purdue University

To evaluate F9387 premix herbicide tank mixed with glyphosate for crop safety and weed control in RR corn

Trial ID: 13S-THP-CTC-06 Protocol ID: 13S-THP-CTC-06
Location: Field Study Director: Shiv D Sharma
Project ID: NA13-1115B Investigator: Dr. Bill Johnson
Sponsor Contact: FMC - Joe Reed

Pest Type

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

Pest Code

SETFA, Setaria faberi, = US

AMBTR, Ambrosia trifida, = US

CHEAL, Chenopodium album, = US

ABUTH, Abutilon theophrasti, = US

AMARE, Amaranthus retroflexus, = US

Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

CONTRO = control / burndown or knockdown

PHYNEC = phytotoxicity - necrosis /burn

MOICON = moisture content

YIELD = yield

Rating Unit

% = percent

bu/ac = bushels per acre

FT2 = per square foot

YD2 = per square yard

Plant-Eval Interval

36 DP-1 = 1 ZEAMX May-9-2013

40 DP-1 = 1 ZEAMX May-9-2013

60 DP-1 = 1 ZEAMX May-9-2013

153 DP-1 = 1 ZEAMX May-9-2013

Purdue University

To evaluate F9387 premix herbicide tank mixed with glyphosate for crop safety and weed control in RR corn

Trial ID: 13S-THP-CTC-06 Protocol ID: 13S-THP-CTC-06
 Location: Field Study Director: Shiv D Sharma
 Project ID: NA13-1115B Investigator: Dr. Bill Johnson
 Sponsor Contact: FMC - Joe Reed

Pest Type	W Weed	W Weed	W Weed	W Weed		W Weed	W Weed		
Pest Code	SETFA	AMBTR	CHEAL	ABUTH		SETFA	AMBTR		
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>	Abutilon theop>		Setaria faberi	Ambrosia trifi>		
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Velvetleaf		Giant foxtail	Giant ragweed		
Crop Code					ZEAMX	ZEAMX	ZEAMX		
BBCH Scale					BCOR	BCOR	BCOR		
Crop Scientific Name					Zea mays	Zea mays	Zea mays		
Crop Name					Corn	Corn	Corn		
Rating Date	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-14-2013	Jun-18-2013	Jun-18-2013		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYNEC	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority					V5	V6	V6		
Pest Stage Majority	8 IN	20 IN	5 IN	4 IN		18 IN	30 IN		
Pest Density, Unit	15 FT2	7 YD2	2 FT2	1 YD2		20 FT2	5 YD2		
Assessed By	MW	MW	MW	MW	MW	MW	MW		
Days After First/Last Applic.	36 10	36 10	36 10	36 10	36 10	40 14	40 14		
Plant-Eval Interval	36 DP-1	36 DP-1	36 DP-1	36 DP-1	36 DP-1	40 DP-1	40 DP-1		
Days After Emergence	27 DE-1	27 DE-1	27 DE-1	27 DE-1	27 DE-1	31 DE-1	31 DE-1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	1	2	3	4	5	6	7
1 Untreated Check			0.0 c	0.0 e	0.0 c	0.0 c	0.0 e	0.0 c	0.0 d
2 ROUNDUP POWERMAX AMS - Liquid	22 fl oz/a B 2.5 % v/v B		96.5 ab	85.5 bc	96.8 ab	99.0 a	0.0 e	93.5 a	83.3 bc
3 LIBERTY 280 SL AMS - Liquid	22 fl oz/a B 2.5 % v/v B		96.5 ab	89.5 abc	92.3 b	81.0 b	0.8 de	94.0 a	87.0 ab
4 F9387-1 ROUNDUP POWERMAX AMS - Liquid	2.5 fl oz/a B 22 fl oz/a B 2.5 % v/v B		94.0 ab	90.3 abc	99.0 a	99.0 a	2.8 bcd	93.8 a	90.3 ab
5 F9387-1 ROUNDUP POWERMAX AMS - Liquid	3.15 fl oz/a B 22 fl oz/a B 2.5 % v/v B		96.0 ab	90.5 abc	99.0 a	96.8 a	2.8 bcd	94.5 a	91.8 a
6 CADET ROUNDUP POWERMAX AMS - Liquid	0.75 fl oz/a B 22 fl oz/a B 2.5 % v/v B		97.0 ab	78.8 d	96.8 ab	96.8 a	5.0 ab	95.5 a	80.0 c
7 CALLISTO ROUNDUP POWERMAX AMS - Liquid	3.0 fl oz/a B 22 fl oz/a B 2.5 % v/v B		96.0 ab	92.0 ab	99.0 a	99.0 a	0.0 e	94.5 a	92.0 a
8 F9387-1 LIBERTY 280 SL AMS - Liquid	2.5 fl oz/a B 22 fl oz/a B 2.5 % v/v B		98.0 ab	93.8 ab	99.0 a	99.0 a	5.0 ab	94.5 a	89.3 ab
9 F9387-1 LIBERTY 280 SL AMS - Liquid	3.15 fl oz/a B 22 fl oz/a B 2.5 % v/v B		97.0 ab	93.8 ab	98.0 a	99.0 a	3.5 bc	93.5 a	90.0 ab
10 CADET LIBERTY 280 SL AMS - Liquid	0.75 fl oz/a B 22 fl oz/a B 2.5 % v/v B		91.3 b	83.8 cd	94.5 ab	89.5 a	6.5 a	85.0 b	79.3 c
11 F9387-1 AATREX ROUNDUP POWERMAX AMS - Liquid	2.5 fl oz/a B 16 fl oz/a B 22 fl oz/a B 2.5 % v/v B		95.5 ab	93.8 ab	99.0 a	99.0 a	2.3 cde	92.5 a	91.3 a

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	W Weed		
Pest Code	CHEAL	AMARE	ABUTH		SETFA	AMBTR	ABUTH		
Pest Scientific Name	Chenopodium al>	Amaranthus ret>	Abutilon theop>		Setaria faberi	Ambrosia trifi>	Abutilon theop>		
Pest Name	Common lambsqu>	Redroot pigweed	velvetleaf		Giant foxtail	Giant ragweed	velvetleaf		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
BBCB Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR		
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn	Corn		
Rating Date	Jun-18-2013	Jun-18-2013	Jun-18-2013	Jun-18-2013	Jul-8-2013	Jul-8-2013	Jul-8-2013		
Rating Type	CONTRO	CONTRO	CONTRO	PHYNEC	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority	V6	V6	V6	V6					
Pest Stage Majority	12 IN	13 IN			40 IN	60 IN	42 IN		
Pest Density, Unit	3 YD2	5 YD2			30 FT2	8 YD2	2 YD2		
Assessed By	MW	MW	MW	MW	MW	MW	MW		
Days After First/Last Applic.	40 14	40 14	40 14	40 14	60 34	60 34	60 34		
Plant-Eval Interval	40 DP-1	40 DP-1	40 DP-1	40 DP-1	60 DP-1	60 DP-1	60 DP-1		
Days After Emergence	31 DE-1	31 DE-1	31 DE-1	31 DE-1	51 DE-1	51 DE-1	51 DE-1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	8	9	10	11	12	13	14
1 Untreated Check			0.0 b	0.0 b	0.0 c	0.0 c	0.0 c	0.0 c	0.0 b
2 ROUNDUP POWERMAX AMS - Liquid	22 fl oz/a B 2.5 % v/v B		95.8 a	97.5 a	98.0 a	0.0 c	90.0 a	82.5 ab	99.0 a
3 LIBERTY 280 SL AMS - Liquid	22 fl oz/a B 2.5 % v/v B		93.5 a	93.0 a	75.0 b	0.8 c	93.3 a	75.0 b	86.0 a
4 F9387-1 ROUNDUP POWERMAX AMS - Liquid	2.5 fl oz/a B 22 fl oz/a B 2.5 % v/v B		97.0 a	98.0 a	99.0 a	3.0 b	93.3 a	91.5 a	99.0 a
5 F9387-1 ROUNDUP POWERMAX AMS - Liquid	3.15 fl oz/a B 22 fl oz/a B 2.5 % v/v B		99.0 a	99.0 a	99.0 a	0.8 c	94.5 a	94.5 a	98.0 a
6 CADET ROUNDUP POWERMAX AMS - Liquid	0.75 fl oz/a B 22 fl oz/a B 2.5 % v/v B		92.3 a	96.8 a	93.0 a	5.0 ab	92.3 a	84.8 ab	89.3 a
7 CALLISTO ROUNDUP POWERMAX AMS - Liquid	3.0 fl oz/a B 22 fl oz/a B 2.5 % v/v B		97.0 a	99.0 a	99.0 a	0.0 c	93.8 a	95.0 a	99.0 a
8 F9387-1 LIBERTY 280 SL AMS - Liquid	2.5 fl oz/a B 22 fl oz/a B 2.5 % v/v B		96.8 a	99.0 a	99.0 a	3.5 ab	95.0 a	94.5 a	99.0 a
9 F9387-1 LIBERTY 280 SL AMS - Liquid	3.15 fl oz/a B 22 fl oz/a B 2.5 % v/v B		95.8 a	99.0 a	99.0 a	3.3 b	94.3 a	92.5 a	99.0 a
10 CADET LIBERTY 280 SL AMS - Liquid	0.75 fl oz/a B 22 fl oz/a B 2.5 % v/v B		85.5 a	95.8 a	89.5 a	5.5 a	82.5 b	75.5 b	95.0 a
11 F9387-1 AATREX ROUNDUP POWERMAX AMS - Liquid	2.5 fl oz/a B 16 fl oz/a B 22 fl oz/a B 2.5 % v/v B		99.0 a	99.0 a	99.0 a	3.5 ab	90.8 a	92.8 a	99.0 a

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Pest Type		W Weed			
Pest Code		CHEAL			
Pest Scientific Name		Chenopodium al>			
Pest Name		Common lambsqu>			
Crop Code		ZEAMX	ZEAMX	ZEAMX	ZEAMX
BBCH Scale		BCOR	BCOR	BCOR	BCOR
Crop Scientific Name		Zea mays	Zea mays	Zea mays	Zea mays
Crop Name		Corn	Corn	Corn	Corn
Rating Date		Jul-8-2013	Jul-8-2013	Oct-9-2013	Oct-9-2013
Rating Type		CONTRO	PHYNEC	MOICON	YIELD
Rating Unit		%	%	%	bu/ac
Number of Subsamples		1	1	1	1
Crop Stage Majority					
Pest Stage Majority		40 IN			
Pest Density, Unit		4 YD2			
Assessed By		MW	MW		
Days After First/Last Applic.		60 34	60 34	153 127	153 127
Plant-Eval Interval		60 DP-1	60 DP-1	153 DP-1	153 DP-1
Days After Emergence		51 DE-1	51 DE-1	144 DE-1	144 DE-1
Trt No.	Treatment	Rate	Appl		
	No. Name	Rate Unit	Code	15	16
1	Untreated Check			0.0 c	0.0 a
2	ROUNDUP POWERMAX AMS - Liquid	22 fl oz/a B 2.5 % v/v B		98.0 a	0.0 a
3	LIBERTY 280 SL AMS - Liquid	22 fl oz/a B 2.5 % v/v B		88.5 b	0.0 a
4	F9387-1 ROUNDUP POWERMAX AMS - Liquid	2.5 fl oz/a B 22 fl oz/a B 2.5 % v/v B		96.5 a	0.0 a
5	F9387-1 ROUNDUP POWERMAX AMS - Liquid	3.15 fl oz/a B 22 fl oz/a B 2.5 % v/v B		98.0 a	0.0 a
6	CADET ROUNDUP POWERMAX AMS - Liquid	0.75 fl oz/a B 22 fl oz/a B 2.5 % v/v B		92.3 ab	0.0 a
7	CALLISTO ROUNDUP POWERMAX AMS - Liquid	3.0 fl oz/a B 22 fl oz/a B 2.5 % v/v B		98.0 a	0.0 a
8	F9387-1 LIBERTY 280 SL AMS - Liquid	2.5 fl oz/a B 22 fl oz/a B 2.5 % v/v B		98.0 a	0.0 a
9	F9387-1 LIBERTY 280 SL AMS - Liquid	3.15 fl oz/a B 22 fl oz/a B 2.5 % v/v B		98.0 a	0.0 a
10	CADET LIBERTY 280 SL AMS - Liquid	0.75 fl oz/a B 22 fl oz/a B 2.5 % v/v B		89.5 b	0.0 a
11	F9387-1 AATREX ROUNDUP POWERMAX AMS - Liquid	2.5 fl oz/a B 16 fl oz/a B 22 fl oz/a B 2.5 % v/v B		99.0 a	0.0 a
				21.63 a	49.35 b
				19.35 a	218.95 a
				19.90 a	217.88 a
				20.78 a	230.93 a
				20.89 a	232.55 a
				20.83 a	219.68 a
				19.98 a	241.38 a
				20.73 a	250.95 a
				19.28 a	244.93 a
				19.78 a	212.65 a
				19.60 a	226.78 a

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Pest Type	W Weed			
Pest Code	CHEAL			
Pest Scientific Name	Chenopodium al>			
Pest Name	Common lambsqu>			
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn	Corn
Rating Date	Jul-8-2013	Jul-8-2013	Oct-9-2013	Oct-9-2013
Rating Type	CONTRO	PHYNEC	MOICON	YIELD
Rating Unit	%		%	bu/ac
Number of Subsamples	1	1	1	1
Crop Stage Majority				
Pest Stage Majority	40 IN			
Pest Density, Unit	4 YD2			
Assessed By	MW	MW		
Days After First/Last Applic.	60 34	60 34	153 127	153 127
Plant-Eval Interval	60 DP-1	60 DP-1	153 DP-1	153 DP-1
Days After Emergence	51 DE-1	51 DE-1	144 DE-1	144 DE-1
Trt Treatment	Rate Appl			
No. Name	Rate Unit Code	15	16	17
12 F9387-1	2.5 fl oz/a B	99.0 a	0.0 a	19.68 a
AATREX	16 fl oz/a B			
LIBERTY 280 SL	22 fl oz/a B			
AMS - Liquid	2.5 % v/v B			
13 ANTHEM ATZ	24 fl oz/a A	99.0 a	0.0 a	19.80 a
F9387-1	3 fl oz/a B			
ROUNDUP POWERMAX	22 fl oz/a B			
AMS - Liquid	2.5 % v/v B			
14 ANTHEM	8 fl oz/a A	99.0 a	0.0 a	19.83 a
F9387-1	2.5 fl oz/a B			
AATREX	16 fl oz/a B			
ROUNDUP POWERMAX	22 fl oz/a B			
AMS - Liquid	2.5 % v/v B			
15 STATUS herbicide	2.5 oz/a B	96.0 a	0.0 a	20.10 a
ROUNDUP POWERMAX	22 fl oz/a B			
AMS - Liquid	2.5 % v/v B			
LSD (P=.05)		5.04	0.00	1.346
Standard Deviation		3.52	0.00	0.942
CV		3.92	0.0	4.68
Bartlett's X2		29.88	0.0	8.488
P(Bartlett's X2)		0.001*	.	0.862
Replicate F		1.136	0.000	3.456
Replicate Prob(F)		0.3455	1.0000	0.0249
Treatment F		203.202	0.000	2.026
Treatment Prob(F)		0.0001	1.0000	0.0400

Purdue University

To evaluate F9387 premix herbicide tank mixed with glyphosate for crop safety and weed control in RR corn

Trial ID: 13S-THP-CTC-06 Protocol ID: 13S-THP-CTC-06
 Location: Field Study Director: Shiv D Sharma
 Project ID: NA13-1115B Investigator: Dr. Bill Johnson
 Sponsor Contact: FMC - Joe Reed

Pest Type

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

Pest Code

SETFA, Setaria faberi, = US

AMBTR, Ambrosia trifida, = US

CHEAL, Chenopodium album, = US

ABUTH, Abutilon theophrasti, = US

AMARE, Amaranthus retroflexus, = US

Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

CONTRO = control / burndown or knockdown

PHYNEC = phytotoxicity - necrosis /burn

MOICON = moisture content

YIELD = yield

Rating Unit

% = percent

bu/ac = bushels per acre

FT2 = per square foot

YD2 = per square yard

Plant-Eval Interval

36 DP-1 = 1 ZEAMX May-9-2013

40 DP-1 = 1 ZEAMX May-9-2013

60 DP-1 = 1 ZEAMX May-9-2013

153 DP-1 = 1 ZEAMX May-9-2013