

# Purdue University

## TO DETERMINE THE EFFICACY AND SELECTIVITY OF HARROW AND CRUSHER WHEN APPLIED PREPLANT TO CORN IN 2014.

Trial ID: 14S-THP-NTC-32      Protocol ID: 14S-THP-NTC-32  
 Location: Throckmorton      Study Director:  
 Project ID: HZEAMXRIM2THI1401 RIM!TH      Investigator: Dr. Bill Johnson  
 Sponsor Contact: TOM HAYDEN

### 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

**Keywords:** CORN, HARROW (CHA-057), RIMSULFURON 50%, THIFENSULFURON 25%, GLYFOS X-TRA, BASIS, EFFICACY, CROP RESPONSE, BURNDOWN.

### Objectives:

TO DETERMINE THE EFFICACY AND SELECTIVITY OF HARROW HERBICIDE WHEN APPLIED PREPLANT TO CORN

### 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:** wj@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:** ZEAMD Zea mays indentata Dent corn  
**Variety:** Dekalb DKC 62-08      **Description:** HXX, LL, RR2  
**BBCH Scale:** BCOR      **Planting Date:** Apr-30-2014  
**Planting Method:** SEEDED seeded      **Rate, Unit:** 33000 S/A  
**Depth, Unit:** 1.5 IN  
**Row Spacing, Unit:** 30 IN  
  
**Emergence Date:** May-9-2014

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## Pest Description

- Pest 1 Type:** W **Code:** THLSS *Thlaspi* sp.  
**Common Name:** Pennycress
- Pest 2 Type:** W **Code:** TAROF *Taraxacum officinale*  
**Common Name:** Common dandelion
- Pest 3 Type:** W **Code:** LAMAM *Lamium amplexicaule*  
**Common Name:** Henbit
- Pest 4 Type:** W **Code:** STEME *Stellaria media*  
**Common Name:** Common chickweed
- Pest 5 Type:** W **Code:** ERICA *Conyza canadensis*  
**Common Name:** Canada horseweed
- Pest 6 Type:** W **Code:** LACSE *Lactuca serriola*  
**Common Name:** Prickly lettuce
- Pest 7 Type:** W **Code:** BROTE *Bromus tectorum*  
**Common Name:** Downy brome
- Pest 8 Type:** W **Code:** AMBTR *Ambrosia trifida*  
**Common Name:** Giant ragweed
- Pest 9 Type:** W **Code:** SETFA *Setaria faberi*  
**Common Name:** Giant foxtail

## Site and Design

**Plot Width, Unit:** 10 FT  
**Plot Length, Unit:** 30 FT  
**Plot Area, Unit:** 300 FT<sup>2</sup>  
**Replications:** 4

**Site Type:** FIELD field  
**Experimental Unit:** 1 PLOT plot  
**Tillage Type:** NOTILL no-till  
**Study Design:** RACOB L Randomized Complete Block (RCB)  
**Untreated Arrangement:** INCLUDED single control randomized in each block

## Soil Description

**Description Name:** TPAC - Field 5  
**% OM:** 2.3 **Texture:** SIL silt loam  
**pH:** 6.6 **Soil Name:** Longlois  
**CEC:** 9.9

## Application Description

	A	B	C
<b>Application Date:</b>	Apr-23-2014	May-20-2014	Jun-13-2014
<b>Application Method:</b>	SPRAY	SPRAY	SPRAY
<b>Application Timing:</b>	EARPRE	EAPOCR	POSPOS
<b>Application Placement:</b>	FOLIAR	FOLIAR	FOLIAR
<b>Air Temperature, Unit:</b>	47 F	65.3 F	65 F
<b>% Relative Humidity:</b>	52	71	66
<b>Wind Velocity, Unit:</b>	4.3 mph	2.8 mph	4.5 mph
<b>Wind Direction:</b>	NE	SW	NW
<b>Dew Presence (Y/N):</b>	N no	N no	N no
<b>Soil Temperature, Unit:</b>	40 F	60 F	70 F
<b>Soil Moisture:</b>	Moist	Moist	Dry
<b>% Cloud Cover:</b>	0	30	5

## Crop Stage At Each Application

	A	B	C
<b>Crop 1 Code, BBCH Scale:</b>	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
<b>Stage Scale Used:</b>		BBCH	BBCH
<b>Stage Majority, Percent:</b>		11	15

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## Pest Stage At Each Application

	A	B	C
<b>Pest 1 Code, Type, Scale:</b>	THLSS W	THLSS W	THLSS W
<b>Height, Unit:</b>	6 IN	23 IN	24 IN
<b>Density, Unit:</b>	5 FT2	10 YD2	4 YD2
<b>Pest 2 Code, Type, Scale:</b>	TAROF W	TAROF W	TAROF W
<b>Height, Unit:</b>	5 IN	8 IN	8 IN
<b>Height Minimum, Maximum:</b>		4 8	
<b>Density, Unit:</b>	2 FT2	1 YD1	2 YD2
<b>Pest 3 Code, Type, Scale:</b>	LAMAM W	LAMAM W	LAMAM W
<b>Height, Unit:</b>	3 IN	10 IN	
<b>Height Minimum, Maximum:</b>		6 10	
<b>Density, Unit:</b>	2 FT2	3 YD2	
<b>Pest 4 Code, Type, Scale:</b>	STEME W	STEME W	STEME W
<b>Height, Unit:</b>	2 IN		
<b>Density, Unit:</b>	4 FT2		
<b>Pest 5 Code, Type, Scale:</b>	ERICA W	ERICA W	ERICA W
<b>Height, Unit:</b>	2 IN	4 IN	12 IN
<b>Height Minimum, Maximum:</b>		3 4	
<b>Density, Unit:</b>	2 FT2	5 FT2	3 YD2
<b>Pest 6 Code, Type, Scale:</b>	LACSE W	LACSE W	LACSE W
<b>Height, Unit:</b>	3 IN		10 IN
<b>Density, Unit:</b>	1 FT2		1 YD2
<b>Pest 7 Code, Type, Scale:</b>	BROTE W	BROTE W	BROTE W
<b>Height, Unit:</b>	4 IN	24 IN	30 IN
<b>Density, Unit:</b>	2 FT2	8 FT2	10 FT2
<b>Pest 8 Code, Type, Scale:</b>	AMBTR W	AMBTR W	AMBTR W
<b>Stage Majority, Percent:</b>			3
<b>Height Minimum, Maximum:</b>			1 6
<b>Density, Unit:</b>			3 FT2
<b>Pest 9 Code, Type, Scale:</b>	SETFA W	SETFA W	SETFA W
<b>Stage Majority, Percent:</b>			2
<b>Height Minimum, Maximum:</b>			1 4
<b>Density, Unit:</b>			2 YD2

## Application Equipment

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

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Trial ID: 14S-THP-NTC-32 Protocol ID: 14S-THP-NTC-32  
 Location: Throckmorton Study Director:  
 Project ID: HZEAMXRIM2THI1401 RIMITH Investigator: Dr. Bill Johnson  
 Sponsor Contact: TOM HAYDEN

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 Unit	Growth Stage	Appl Code	Appl Description	Amt to Measure	Product	Rep 1	Rep 2	Rep 3	Rep 4
1	Untreated Check													101	402	603	801
2	HARROW	75 %W/W	WDG		0.0234 lb ai/a		0.50 oz/a		EARPRE	A	EPP7	0.4673 g/mx		102	303	503	902
	GLYFOS XTRA	3 LBAE/GAL	SL		0.75 lb ae/a		32 fl oz/a		EARPRE	A	EPP7	31.25 ml/mx					
	NIS		L		0.25 % v/v		0.25 % v/v		EARPRE	A	EPP7	6.249 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EARPRE	A	EPP7	62.49 ml/mx					
	Glyfos Xtra (3 SL)	3 LBAE/GAL	SL		0.75 lb ae/a		32 oz/a		EAPOCR	B		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOCR	B		62.49 ml/mx					
	Glyfos Xtra (3 SL)	3 LBAE/GAL	SL		0.75 lb ae/a		32 oz/a		POSPOS	C		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		POSPOS	C		62.49 ml/mx					
3	BASIS	75 %W/W	WDG		0.0234 lb ai/a		0.50 oz/a		EARPRE	A	EPP7	0.4673 g/mx		103	401	601	1001
	Resolve (25 SG)	25 %	WG		0.25 oz ai/a		1 oz/a		EARPRE	A	EPP7	0.9361 g/mx					
	Harmony SG (50 SG)	50 %	SG		0.125 oz ai/a		0.25 oz/a		EARPRE	A	EPP7	0.234 g/mx					
	GLYFOS XTRA	3 LBAE/GAL	SL		0.75 lb ae/a		32 fl oz/a		EARPRE	A	EPP7	31.25 ml/mx					
	NIS		L		0.25 % v/v		0.25 % v/v		EARPRE	A	EPP7	6.249 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EARPRE	A	EPP7	62.49 ml/mx					
	Glyfos Xtra (3 SL)	3 LBAE/GAL	SL		0.75 lb ae/a		32 oz/a		EAPOCR	B		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOCR	B		62.49 ml/mx					
	Glyfos Xtra (3 SL)	3 LBAE/GAL	SL		0.75 lb ae/a		32 oz/a		POSPOS	C		31.25 ml/mx					
AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		POSPOS	C		62.49 ml/mx						
4	Crusher (50 WG)	50 %W/W	WG		0.0313 lb ai/a		1 oz/a		EARPRE	A	EPP7	0.9376 g/mx		201	302	702	901
	GLYFOS XTRA	3 LBAE/GAL	SL		0.75 lb ae/a		32 fl oz/a		EARPRE	A	EPP7	31.25 ml/mx					
	NIS		L		0.25 % v/v		0.25 % v/v		EARPRE	A	EPP7	6.249 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EARPRE	A	EPP7	62.49 ml/mx					
	Glyfos Xtra (3 SL)	3 LBAE/GAL	SL		0.75 lb ae/a		32 oz/a		EAPOCR	B		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOCR	B		62.49 ml/mx					
	Glyfos Xtra (3 SL)	3 LBAE/GAL	SL		0.75 lb ae/a		32 oz/a		POSPOS	C		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		POSPOS	C		62.49 ml/mx					
	5	Leadoff (33.4 WG)	33.4 %W/W	WG		0.0313 lb ai/a		1.5 oz/a		EARPRE	A	EPP7	1.404 g/mx		202	502	701
GLYFOS XTRA		3 LBAE/GAL	SL		0.75 lb ae/a		32 fl oz/a		EARPRE	A	EPP7	31.25 ml/mx					
NIS			L		0.25 % v/v		0.25 % v/v		EARPRE	A	EPP7	6.249 ml/mx					
AMS - Liquid		3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EARPRE	A	EPP7	62.49 ml/mx					
Glyfos Xtra (3 SL)		3 LBAE/GAL	SL		0.75 lb ae/a		32 oz/a		EAPOCR	B		31.25 ml/mx					
AMS - Liquid		3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOCR	B		62.49 ml/mx					
Glyfos Xtra (3 SL)		3 LBAE/GAL	SL		0.75 lb ae/a		32 oz/a		POSPOS	C		31.25 ml/mx					
AMS - Liquid		3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		POSPOS	C		62.49 ml/mx					
6		SureStart II (4.16 SC)	4.16 LBA/GAL	SC		1.56 lb ai/a		3 pt/a		EARPRE	A	EPP7	46.87 ml/mx		203	403	703
	Durango DMA (4 SL)	4 LBAE/GAL	SL		0.75 lb ae/a		1.5 pt/a		EARPRE	A	EPP7	23.43 ml/mx					
	2,4-D Amine	4 LBA/GAL	L		0.5 lb ai/a		1 pt/a		EARPRE	A	EPP7	15.62 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EARPRE	A	EPP7	62.49 ml/mx					
	Durango DMA (4 SL)	4 LBAE/GAL	SL		0.75 lb ae/a		1.5 pt/a		POSPOS	C		23.43 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		POSPOS	C		62.49 ml/mx					
	7	SureStart II (4.16 SC)	4.16 LBA/GAL	SC		1.56 lb ai/a		3 pt/a		EARPRE	A	EPP7	46.87 ml/mx		301	501	602
Atrazine		4 LBA/GAL	F		1 lb ai/a		1 qt/a		EARPRE	A	EPP7	31.25 ml/mx					
Durango DMA (4 SL)		4 LBAE/GAL	SL		0.75 lb ae/a		1.5 pt/a		EARPRE	A	EPP7	23.43 ml/mx					
2,4-D Amine		4 LBA/GAL	L		0.5 lb ai/a		1 pt/a		EARPRE	A	EPP7	15.62 ml/mx					
AMS - Liquid		3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EARPRE	A	EPP7	62.49 ml/mx					
Durango DMA (4 SL)		4 LBAE/GAL	SL		0.75 lb ae/a		1.5 pt/a		POSPOS	C		23.43 ml/mx					
AMS - Liquid		3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		POSPOS	C		62.49 ml/mx					

Sort Order: Treatment

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Trial ID: 14S-THP-NTC-32                      Protocol ID: 14S-THP-NTC-32  
 Location: Throckmorton                      Study Director:  
 Project ID: HZEAMXRIM2THI1401 RIMITH      Investigator: Dr. Bill Johnson  
 Sponsor Contact: TOM HAYDEN

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	TAROF	STEME	THLSS	THLSS	LAMAM	BROTE		
Pest Scientific Name	Taraxacum offi>	Stellaria media	Thlaspi sp.	Thlaspi sp.	Lamium amplexi>	Bromus tectorum		
Pest Name	Common dandel>	Common chickwe>	Pennycress	Pennycress	Henbit	Downy brome		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Description				Seedling				
Rating Date	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority								
Pest Stage Majority	6	3	8		4	9		
Pest Density, Unit	5 YD2	5 FT2	3 YD2		2 FT2	5 FT2		
Days After First/Last Applic.	7 7	7 7	7 7	7 7	7 7	7 7		
Plant-Eval Interval	0 DP-1	0 DP-1	0 DP-1	0 DP-1	0 DP-1	0 DP-1		
Days After Emergence	-9 DE-1	-9 DE-1	-9 DE-1	-9 DE-1	-9 DE-1	-9 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
		402	0.0	0.0	0.0	0.0	0.0	0.0
		603	0.0	0.0	0.0	0.0	0.0	0.0
		801	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 HARROW	0.0234 lb ai/a	A 102	0.0	60.0	60.0	50.0	0.0	70.0
GLYFOS XTRA	0.75 lb ae/a	A 303	0.0	99.0	60.0	70.0	0.0	99.0
NIS	0.25 % v/v	A 503	0.0	99.0	65.0	60.0	0.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A 902	0.0	99.0	20.0	40.0	0.0	99.0
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	0.0	89.3	51.3	55.0	0.0	91.8
3 BASIS	0.0234 lb ai/a	A 103	0.0	70.0	70.0	80.0	30.0	99.0
Resolve (25 SG)	0.25 oz ai/a	A 401	0.0	99.0	40.0	70.0	10.0	30.0
Harmony SG (50 SG)	0.125 oz ai/a	A 601	0.0	99.0	30.0	60.0	10.0	99.0
GLYFOS XTRA	0.75 lb ae/a	A 1001	0.0	99.0	30.0	50.0	0.0	20.0
NIS	0.25 % v/v	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	0.0	91.8	42.5	65.0	12.5	62.0

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	TAROF	STEME	THLSS	THLSS	LAMAM	BROTE		
Pest Scientific Name	Taraxacum offi>	Stellaria media	Thlaspi sp.	Thlaspi sp.	Lamium amplexi>	Bromus tectorum		
Pest Name	Common dandel>	Common chickwe>	Pennycress	Pennycress	Henbit	Downy brome		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Description				Seedling				
Rating Date	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority								
Pest Stage Majority	6	3	8		4	9		
Pest Density, Unit	5 YD2	5 FT2	3 YD2		2 FT2	5 FT2		
Days After First/Last Applic.	7 7	7 7	7 7	7 7	7 7	7 7		
Plant-Eval Interval	0 DP-1	0 DP-1	0 DP-1	0 DP-1	0 DP-1	0 DP-1		
Days After Emergence	-9 DE-1	-9 DE-1	-9 DE-1	-9 DE-1	-9 DE-1	-9 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	1	2	3	4	5	6
4 Crusher (50 WG)	0.0313 lb ai/a	A 201	0.0	70.0	30.0	40.0	0.0	99.0
GLYFOS XTRA	0.75 lb ae/a	A 302	0.0	99.0	40.0	20.0	0.0	99.0
NIS	0.25 % v/v	A 702	40.0	99.0	20.0	50.0	0.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A 901	10.0	99.0	30.0	30.0	0.0	99.0
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	12.5	91.8	30.0	35.0	0.0	99.0
5 Leadoff (33.4 WG)	0.0313 lb ai/a	A 202	0.0	60.0	10.0	60.0	0.0	50.0
GLYFOS XTRA	0.75 lb ae/a	A 502	10.0	99.0	20.0	40.0	0.0	99.0
NIS	0.25 % v/v	A 701	10.0	99.0	30.0	60.0	0.0	60.0
AMS - Liquid	8.5 lb ai/100 gal	A 803	40.0	99.0	20.0	50.0	0.0	99.0
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	15.0	89.3	20.0	52.5	0.0	77.0
6 SureStart II (4.16 SC)	1.56 lb ai/a	A 203	0.0	75.0	60.0	80.0	50.0	99.0
Durango DMA (4 SL)	0.75 lb ae/a	A 403	0.0	60.0	70.0	70.0	60.0	70.0
2,4-D Amine	0.5 lb ai/a	A 703	5.8*	99.0	70.0	85.0	99.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A 903	9.2*	99.0	50.0	70.0	40.0	99.0
Durango DMA (4 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	3.7	83.3	62.5	76.3	62.3	91.8
7 SureStart II (4.16 SC)	1.56 lb ai/a	A 301	50.0	90.0	85.0	87.0	70.0	99.0
Atrazine	1 lb ai/a	A 501	10.0	99.0	50.0	70.0	60.0	99.0
Durango DMA (4 SL)	0.75 lb ae/a	A 602	20.0	99.0	75.0	65.0	50.0	99.0
2,4-D Amine	0.5 lb ai/a	A 802	40.0	99.0	70.0	50.0	60.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A						
Durango DMA (4 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	30.0	96.8	70.0	68.0	60.0	99.0

# Purdue University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	THLSS	LACSE	TAROF	LAMAM	ERICA	BROTE		
Pest Scientific Name	Thlaspi sp.	Lactuca serrio>	Taraxacum offi>	Lamium amplexi>	Conyza canadens>	Bromus tectorum		
Pest Name	Pennycress	Prickly lettuce	Common dandel>	Henbit	Canada horsewe>	Downy brome		
Crop Code								
BBCB Scale								
Crop Scientific Name								
Crop Name								
Description								
Rating Date	May-19-2014	May-19-2014	May-19-2014	May-19-2014	May-19-2014	May-19-2014		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority								
Pest Stage Majority	20	6	6	8	7	19		
Pest Density, Unit	5 FT2	2 YD2	1 YD2	1 YD2	6 FT2	2 FT2		
Days After First/Last Applic.	26 26	26 26	26 26	26 26	26 26	26 26		
Plant-Eval Interval	19 DP-1	19 DP-1	19 DP-1	19 DP-1	19 DP-1	19 DP-1		
Days After Emergence	10 DE-1	10 DE-1	10 DE-1	10 DE-1	10 DE-1	10 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
		402	0.0	0.0	0.0	0.0	0.0	0.0
		603	0.0	0.0	0.0	0.0	0.0	0.0
		801	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 HARROW	0.0234 lb ai/a	A 102	99.0	99.0	90.0	99.0	80.0	99.0
GLYFOS XTRA	0.75 lb ae/a	A 303	99.0	99.0	95.0	95.0	80.0	99.0
NIS	0.25 % v/v	A 503	99.0	99.0	99.0	99.0	75.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A 902	99.0	99.0	87.0	87.0	90.0	99.0
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	99.0	99.0	92.8	95.0	81.3	99.0
3 BASIS	0.0234 lb ai/a	A 103	99.0	99.0	90.0	99.0	90.0	99.0
Resolve (25 SG)	0.25 oz ai/a	A 401	99.0	99.0	40.0	93.0	85.0	99.0
Harmony SG (50 SG)	0.125 oz ai/a	A 601	99.0	99.0	20.0	99.0	87.0	95.0
GLYFOS XTRA	0.75 lb ae/a	A 1001	99.0	99.0	85.0	93.0	93.0	99.0
NIS	0.25 % v/v	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	99.0	99.0	58.8	96.0	88.8	98.0

# Purdue University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	THLSS	LACSE	TAROF	LAMAM	ERICA	BROTE		
Pest Scientific Name	Thlaspi sp.	Lactuca serrio>	Taraxacum offi>	Lamium amplexi>	Conyza canadens>	Bromus tectorum		
Pest Name	Pennycress	Prickly lettuce	Common dandel>	Henbit	Canada horsewe>	Downy brome		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Description								
Rating Date	May-19-2014	May-19-2014	May-19-2014	May-19-2014	May-19-2014	May-19-2014		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority								
Pest Stage Majority	20	6	6	8	7	19		
Pest Density, Unit	5 FT2	2 YD2	1 YD2	1 YD2	6 FT2	2 FT2		
Days After First/Last Applic.	26 26	26 26	26 26	26 26	26 26	26 26		
Plant-Eval Interval	19 DP-1	19 DP-1	19 DP-1	19 DP-1	19 DP-1	19 DP-1		
Days After Emergence	10 DE-1	10 DE-1	10 DE-1	10 DE-1	10 DE-1	10 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	7	8	9	10	11	12
4 Crusher (50 WG)	0.0313 lb ai/a	A 201	99.0	99.0	10.0	99.0	90.0	99.0
GLYFOS XTRA	0.75 lb ae/a	A 302	99.0	99.0	30.0	93.0	90.0	99.0
NIS	0.25 % v/v	A 702	99.0	99.0	80.0	99.0	60.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A 901	99.0	99.0	50.0	99.0	93.0	99.0
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	99.0	99.0	42.5	97.5	83.3	99.0
5 Leadoff (33.4 WG)	0.0313 lb ai/a	A 202	99.0	99.0	30.0	80.0	80.0	99.0
GLYFOS XTRA	0.75 lb ae/a	A 502	99.0	99.0	80.0	99.0	70.0	99.0
NIS	0.25 % v/v	A 701	99.0	99.0	40.0	99.0	60.0	95.0
AMS - Liquid	8.5 lb ai/100 gal	A 803	99.0	99.0	99.0	95.0	80.0	99.0
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	99.0	99.0	62.3	93.3	72.5	98.0
6 SureStart II (4.16 SC)	1.56 lb ai/a	A 203	99.0	99.0	75.0	99.0	99.0	99.0
Durango DMA (4 SL)	0.75 lb ae/a	A 403	99.0	99.0	75.0	99.0	99.0	99.0
2,4-D Amine	0.5 lb ai/a	A 703	99.0	99.0	99.0	97.0	99.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A 903	99.0	99.0	99.0	97.0	99.0	99.0
Durango DMA (4 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	99.0	99.0	87.0	98.0	99.0	99.0
7 SureStart II (4.16 SC)	1.56 lb ai/a	A 301	99.0	99.0	20.0	99.0	99.0	99.0
Atrazine	1 lb ai/a	A 501	99.0	99.0	20.0	99.0	99.0	99.0
Durango DMA (4 SL)	0.75 lb ae/a	A 602	99.0	99.0	65.0	99.0	99.0	99.0
2,4-D Amine	0.5 lb ai/a	A 802	99.0	99.0	20.0	99.0	99.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A						
Durango DMA (4 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	99.0	99.0	31.3	99.0	99.0	99.0



# Purdue University

Pest Type				W Weed TAROF Taraxacum offi-> Common dandel->	W Weed THLSS Thlaspi sp. Pennycress	W Weed BROTE Bromus tectorum Downy brome		
Pest Code								
Pest Scientific Name								
Pest Name								
Crop Code	ZEAMX	ZEAMX	ZEAMX					
BBCH Scale	BCOR	BCOR	BCOR					
Crop Scientific Name	Zea mays	Zea mays	Zea mays					
Crop Name	Corn	Corn	Corn					
Description								
Rating Date	May-19-2014	May-28-2014	May-28-2014	Jun-2-2014	Jun-2-2014	Jun-2-2014		
Rating Type	PHYNEC	PHYNEC	PHYSTU	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority		V3	V3	V4	V4	V4		
Pest Stage Majority				8	20	30		
Pest Density, Unit				2 YD2	4 YD2	10 FT2		
Days After First/Last Applic.	26 26	35 8	35 8	40 13	40 13	40 13		
Plant-Eval Interval	19 DP-1	28 DP-1	28 DP-1	33 DP-1	33 DP-1	33 DP-1		
Days After Emergence	10 DE-1	19 DE-1	19 DE-1	24 DE-1	24 DE-1	24 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	13	14	15	16	17	18
1 Untreated Check		101	0.0	0.0	0.0	0.0	0.0	0.0
		402	0.0	0.0	0.0	0.0	0.0	0.0
		603	0.0	0.0	0.0	0.0	0.0	0.0
		801	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 HARROW	0.0234 lb ai/a	A 102	1.0	0.0	0.0	93.0	99.0	99.0
GLYFOS XTRA	0.75 lb ae/a	A 303	5.0	0.0	5.0	90.0	99.0	99.0
NIS	0.25 % v/v	A 503	1.0	3.0	5.0	99.0	99.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A 902	2.0	0.0	0.0	99.0	99.0	99.0
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	2.3	0.8	2.5	95.3	99.0	99.0
3 BASIS	0.0234 lb ai/a	A 103	5.0	3.0	0.0	99.0	99.0	99.0
Resolve (25 SG)	0.25 oz ai/a	A 401	3.0	5.0	0.0	70.0	99.0	99.0
Harmony SG (50 SG)	0.125 oz ai/a	A 601	3.0	5.0	0.0	70.0	99.0	99.0
GLYFOS XTRA	0.75 lb ae/a	A 1001	3.0	0.0	0.0	75.0	99.0	99.0
NIS	0.25 % v/v	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
		Mean =	3.5	3.3	0.0	78.5	99.0	99.0

# Purdue University

Pest Type					W Weed TAROF Taraxacum offi> Common dandel>	W Weed THLSS Thlaspi sp. Pennycress	W Weed BROTE Bromus tectorum Downy brome		
Pest Code									
Pest Scientific Name									
Pest Name									
Crop Code	ZEAMX	ZEAMX	ZEAMX						
BBCH Scale	BCOR	BCOR	BCOR						
Crop Scientific Name	Zea mays	Zea mays	Zea mays						
Crop Name	Corn	Corn	Corn						
Description									
Rating Date	May-19-2014	May-28-2014	May-28-2014	Jun-2-2014	Jun-2-2014	Jun-2-2014			
Rating Type	PHYNEC	PHYNEC	PHYSTU	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%			
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT			
Number of Subsamples	1	1	1	1	1	1			
Crop Stage Majority		V3	V3	V4	V4	V4			
Pest Stage Majority				8	20	30			
Pest Density, Unit				2 YD2	4 YD2	10 FT2			
Days After First/Last Applic.	26 26	35 8	35 8	40 13	40 13	40 13			
Plant-Eval Interval	19 DP-1	28 DP-1	28 DP-1	33 DP-1	33 DP-1	33 DP-1			
Days After Emergence	10 DE-1	19 DE-1	19 DE-1	24 DE-1	24 DE-1	24 DE-1			
Trt Treatment	Rate	Rate	Appl						
No. Name	Rate	Unit	Code Plot	13	14	15	16	17	18
4 Crusher (50 WG)	0.0313 lb ai/a	A	201	2.0	10.0	5.0	50.0	99.0	99.0
GLYFOS XTRA	0.75 lb ae/a	A	302	3.0	5.0	3.0	93.0	99.0	99.0
NIS	0.25 % v/v	A	702	4.0	0.0	5.0	90.0	99.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A	901	1.0	5.0	3.0	70.0	99.0	99.0
Glyfos Xtra (3 SL)	0.75 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
Glyfos Xtra (3 SL)	0.75 lb ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
			Mean =	2.5	5.0	4.0	75.8	99.0	99.0
5 Leadoff (33.4 WG)	0.0313 lb ai/a	A	202	3.0	0.0	0.0	99.0	99.0	99.0
GLYFOS XTRA	0.75 lb ae/a	A	502	1.0	0.0	0.0	85.0	99.0	99.0
NIS	0.25 % v/v	A	701	5.0	5.0	5.0	75.0	99.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A	803	2.0	3.0	0.0	99.0	99.0	99.0
Glyfos Xtra (3 SL)	0.75 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
Glyfos Xtra (3 SL)	0.75 lb ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
			Mean =	2.8	2.0	1.3	89.5	99.0	99.0
6 SureStart II (4.16 SC)	1.56 lb ai/a	A	203	4.0	0.0	0.0	87.0	99.0	99.0
Durango DMA (4 SL)	0.75 lb ae/a	A	403	5.0	0.0	0.0	65.0	99.0	99.0
2,4-D Amine	0.5 lb ai/a	A	703	5.0	0.0	0.0	99.0	99.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A	903	5.0	0.0	0.0	99.0	99.0	99.0
Durango DMA (4 SL)	0.75 lb ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
			Mean =	4.8	0.0	0.0	87.5	99.0	99.0
7 SureStart II (4.16 SC)	1.56 lb ai/a	A	301	1.0	0.0	0.0	60.0	99.0	99.0
Atrazine	1 lb ai/a	A	501	4.0	0.0	0.0	65.0	99.0	99.0
Durango DMA (4 SL)	0.75 lb ae/a	A	602	2.0	0.0	5.0	85.0	99.0	99.0
2,4-D Amine	0.5 lb ai/a	A	802	5.0	0.0	0.0	60.0	99.0	99.0
AMS - Liquid	8.5 lb ai/100 gal	A							
Durango DMA (4 SL)	0.75 lb ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
			Mean =	3.0	0.0	1.3	67.5	99.0	99.0

# Purdue University

Pest Type	W Weed	W Weed	W Weed								
Pest Code	LACSE	ERICA	SETFA								
Pest Scientific Name	Lactuca serrio>	Conyza canaden>	Setaria faberi								
Pest Name	Prickly lettuce	Canada horsewe>	Giant foxtail								
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				
Description											
Rating Date	Jun-2-2014	Jun-2-2014	Jun-2-2014	Jun-9-2014	Jun-9-2014	Nov-5-2014	Nov-5-2014				
Rating Type	CONTRO	CONTRO	CONTRO	PHYSTU	PHYNEC	MOICON	YIELD				
Rating Unit	%	%	%	%	%	%	bu/ac				
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT						
Number of Subsamples	1	1	1	1	1	1	1				
Crop Stage Majority	V4	V4	V4	V4	V4						
Pest Stage Majority	10	12									
Pest Density, Unit	1 YD2	3 YD2									
Days After First/Last Applic.	40 13	40 13	40 13	47 20	47 20	196 145	196 145				
Plant-Eval Interval	33 DP-1	33 DP-1	33 DP-1	40 DP-1	40 DP-1	189 DP-1	189 DP-1				
Days After Emergence	24 DE-1	24 DE-1	24 DE-1	31 DE-1	31 DE-1	180 DE-1	180 DE-1				
Trt Treatment	Rate	Appl									
No. Name	Rate	Unit	Code	Plot	19	20	21	22	23	24	25
1 Untreated Check				101	0.0	0.0	.	0.0	0.0	12.8700012	20.50
				402	0.0	0.0	.	0.0	0.0	20.7800028	92.70
				603	0.0	0.0	.	0.0	0.0	18.1400012	73.30
				801	0.0	0.0	.	0.0	0.0	18.9500027	53.40
				Mean =	0.0	0.0	.	0.0	0.0	17.6850012	59.98
2 HARROW	0.0234 lb ai/a	A	102		99.0	85.0	99.0	3.0	0.0	17.4200018	293.20
GLYFOS XTRA	0.75 lb ae/a	A	303		99.0	83.0	99.0	5.0	0.0	17.1700018	270.10
NIS	0.25 % v/v	A	503		99.0	80.0	75.0	7.0	0.0	18.0800017	321.20
AMS - Liquid	8.5 lb ai/100 gal	A	902		99.0	87.0	90.0	0.0	0.0	18.3200015	248.90
Glyfos Xtra (3 SL)	0.75 lb ae/a	B									
AMS - Liquid	8.5 lb ai/100 gal	B									
Glyfos Xtra (3 SL)	0.75 lb ae/a	C									
AMS - Liquid	8.5 lb ai/100 gal	C									
				Mean =	99.0	83.8	90.8	3.8	0.0	17.7475012	283.35
3 BASIS	0.0234 lb ai/a	A	103		99.0	90.0	99.0	3.0	0.0	17.1000021	268.40
Resolve (25 SG)	0.25 oz ai/a	A	401		99.0	86.0	99.0	3.0	2.0	18.8600025	288.70
Harmony SG (50 SG)	0.125 oz ai/a	A	601		99.0	83.0	99.0	5.0	0.0	18.6300010	329.30
GLYFOS XTRA	0.75 lb ae/a	A	1001		99.0	90.0	99.0	0.0	0.0	17.5400027	297.90
NIS	0.25 % v/v	A									
AMS - Liquid	8.5 lb ai/100 gal	A									
Glyfos Xtra (3 SL)	0.75 lb ae/a	B									
AMS - Liquid	8.5 lb ai/100 gal	B									
Glyfos Xtra (3 SL)	0.75 lb ae/a	C									
AMS - Liquid	8.5 lb ai/100 gal	C									
				Mean =	99.0	87.3	99.0	2.8	0.5	18.0325030	296.08

# Purdue University

Pest Type	W Weed	W Weed	W Weed								
Pest Code	LACSE	ERICA	SETFA								
Pest Scientific Name	Lactuca serrio>	Conyza canadens>	Setaria faberi								
Pest Name	Prickly lettuce	Canada horsewe>	Giant foxtail								
Crop Code											
BBCH Scale											
Crop Scientific Name											
Crop Name											
Description											
Rating Date	Jun-2-2014	Jun-2-2014	Jun-2-2014	Jun-9-2014	Jun-9-2014	Nov-5-2014	Nov-5-2014				
Rating Type	CONTRO	CONTRO	CONTRO	PHYSTU	PHYNEC	MOICON	YIELD				
Rating Unit	%	%	%	%	%	%	bu/ac				
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1	1				
Number of Subsamples	1	1	1	1	1	1	1				
Crop Stage Majority	V4	V4	V4	V4	V4						
Pest Stage Majority	10	12									
Pest Density, Unit	1 YD2	3 YD2									
Days After First/Last Applic.	40 13	40 13	40 13	47 20	47 20	196 145	196 145				
Plant-Eval Interval	33 DP-1	33 DP-1	33 DP-1	40 DP-1	40 DP-1	189 DP-1	189 DP-1				
Days After Emergence	24 DE-1	24 DE-1	24 DE-1	31 DE-1	31 DE-1	180 DE-1	180 DE-1				
Trt Treatment	Rate	Appl									
No. Name	Rate	Unit	Code	Plot	19	20	21	22	23	24	25
4 Crusher (50 WG)	0.0313 lb ai/a	A	201		99.0	80.0	99.0	3.0	2.0	19.7300015	264.80
GLYFOS XTRA	0.75 lb ae/a	A	302		99.0	92.0	99.0	3.0	0.0	18.7600021	273.30
NIS	0.25 % v/v	A	702		99.0	65.0	99.0	5.0	0.0	16.6800020	275.20
AMS - Liquid	8.5 lb ai/100 gal	A	901		99.0	90.0	85.0	0.0	0.0	18.6800022	269.60
Glyfos Xtra (3 SL)	0.75 lb ae/a	B									
AMS - Liquid	8.5 lb ai/100 gal	B									
Glyfos Xtra (3 SL)	0.75 lb ae/a	C									
AMS - Liquid	8.5 lb ai/100 gal	C									
				Mean =	99.0	81.8	95.5	2.8	0.5	18.4625015	270.73
5 Leadoff (33.4 WG)	0.0313 lb ai/a	A	202		99.0	80.0	99.0	3.0	0.0	17.7700022	256.60
GLYFOS XTRA	0.75 lb ae/a	A	502		99.0	85.0	99.0	7.0	0.0	16.9200018	296.90
NIS	0.25 % v/v	A	701		99.0	77.0	99.0	7.0	0.0	18.0400027	273.80
AMS - Liquid	8.5 lb ai/100 gal	A	803		99.0	86.0	99.0	0.0	0.0	17.0200022	313.10
Glyfos Xtra (3 SL)	0.75 lb ae/a	B									
AMS - Liquid	8.5 lb ai/100 gal	B									
Glyfos Xtra (3 SL)	0.75 lb ae/a	C									
AMS - Liquid	8.5 lb ai/100 gal	C									
				Mean =	99.0	82.0	99.0	4.3	0.0	17.4375017	285.10
6 SureStart II (4.16 SC)	1.56 lb ai/a	A	203		99.0	99.0	95.0	3.0	0.0	16.6900022	314.30
Durango DMA (4 SL)	0.75 lb ae/a	A	403		99.0	99.0	85.0	5.0	0.0	16.9200018	321.00
2,4-D Amine	0.5 lb ai/a	A	703		99.0	99.0	90.0	0.0	0.0	16.2700021	307.60
AMS - Liquid	8.5 lb ai/100 gal	A	903		99.0	99.0	85.0	0.0	0.0	16.3800008	299.20
Durango DMA (4 SL)	0.75 lb ae/a	C									
AMS - Liquid	8.5 lb ai/100 gal	C									
				Mean =	99.0	99.0	88.8	2.0	0.0	16.5650022	310.53
7 SureStart II (4.16 SC)	1.56 lb ai/a	A	301		99.0	99.0	99.0	0.0	0.0	19.9800015	270.10
Atrazine	1 lb ai/a	A	501		99.0	99.0	70.0	0.0	0.0	17.9300021	299.30
Durango DMA (4 SL)	0.75 lb ae/a	A	602		99.0	99.0	60.0	5.0	0.0	16.6900022	321.90
2,4-D Amine	0.5 lb ai/a	A	802		99.0	99.0	99.0	3.0	0.0	16.5700014	280.70
AMS - Liquid	8.5 lb ai/100 gal	A									
Durango DMA (4 SL)	0.75 lb ae/a	C									
AMS - Liquid	8.5 lb ai/100 gal	C									
				Mean =	99.0	99.0	82.0	2.0	0.0	17.7925013	293.00

# Purdue University

## TO DETERMINE THE EFFICACY AND SELECTIVITY OF HARROW AND CRUSHER WHEN APPLIED PREPLANT TO CORN IN 2014.

Trial ID: 14S-THP-NTC-32                      Protocol ID: 14S-THP-NTC-32  
 Location: Throckmorton                      Study Director:  
 Project ID: HZEAMXRIM2THI1401 RIMITH      Investigator: Dr. Bill Johnson  
    Sponsor Contact: TOM HAYDEN

### Pest Type

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

### Pest Code

TAROF, Taraxacum officinale, = US

STEME, Stellaria media, = US

THLSS, Thlaspi sp., = US

LAMAM, Lamium amplexicaule, = US

BROTE, Bromus tectorum, = US

LACSE, Lactuca serriola, = US

ERICA, Conyza canadensis, = US

SETFA, Setaria faberi, = US

### Crop Code

ZEAMX, BCOR, Zea mays, = US

### Rating Type

CONTRO = control / burndown or knockdown

PHYNEC = phytotoxicity - necrosis /burn

PHYSTU = phytotoxicity - stunting

MOICON = moisture content

YIELD = yield

### Rating Unit

% = percent

bu/ac = bushels per acre

PLOT = total plot

### Pest Stage Majority

19 = 9 true leaves, leaf pairs or whorls unfolded

30 = Beginning of stem elongation; G = Beginning of shooting

10 = G, M = First true leaf emerged from coleoptile; D = Cotyledons completely unfolded; P = First leaves separated

12 = 2 true leaves, leaf pairs or whorls unfolded

YD2 = per square yard

FT2 = per square foot

### Plant-Eval Interval

0 DP-1 = 1 ZEAMD Apr-30-2014

19 DP-1 = 1 ZEAMD Apr-30-2014

28 DP-1 = 1 ZEAMD Apr-30-2014

33 DP-1 = 1 ZEAMD Apr-30-2014

40 DP-1 = 1 ZEAMD Apr-30-2014

189 DP-1 = 1 ZEAMD Apr-30-2014

# Purdue University

## TO DETERMINE THE EFFICACY AND SELECTIVITY OF HARROW AND CRUSHER WHEN APPLIED PREPLANT TO CORN IN 2014.

Trial ID: 14S-THP-NTC-32      Protocol ID: 14S-THP-NTC-32  
 Location: Throckmorton      Study Director:  
 Project ID: HZEAMXRIM2THI1401 RIMITH      Investigator: Dr. Bill Johnson  
 Sponsor Contact: TOM HAYDEN

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	TAROF	STEME	THLSS	THLSS	LAMAM	BROTE			
Pest Scientific Name	Taraxacum offi>	Stellaria media	Thlaspi sp.	Thlaspi sp.	Lamium amplexi>	Bromus tectorum			
Pest Name	Common dandel>	Common chickwe>	Pennycress	Pennycress	Henbit	Downy brome			
Crop Code									
BBCH Scale									
Crop Scientific Name									
Crop Name									
Description				Seedling					
Rating Date	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%			
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT			
Number of Subsamples	1	1	1	1	1	1			
Crop Stage Majority									
Pest Stage Majority	6	3	8		4	9			
Pest Density, Unit	5 YD2	5 FT2	3 YD2		2 FT2	5 FT2			
Days After First/Last Applic.	7 7	7 7	7 7	7 7	7 7	7 7			
Plant-Eval Interval	0 DP-1	0 DP-1	0 DP-1	0 DP-1	0 DP-1	0 DP-1			
Days After Emergence	-9 DE-1	-9 DE-1	-9 DE-1	-9 DE-1	-9 DE-1	-9 DE-1			
Trt Treatment	Rate	Appl							
No. Name	Rate	Unit	Code	1	2	3	4	5	6
1 Untreated Check				0.0 b	0.0 b	0.0 e	0.0 d	0.0 b	0.0 b
2 HARROW	0.0234 lb ai/a	A		0.0 b	89.3 a	51.3 abc	55.0 b	0.0 b	91.8 a
GLYFOS XTRA	0.75 lb ae/a	A							
NIS	0.25 % v/v	A							
AMS - Liquid	8.5 lb ai/100 gal	A							
Glyfos Xtra (3 SL)	0.75 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
Glyfos Xtra (3 SL)	0.75 lb ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
3 BASIS	0.0234 lb ai/a	A		0.0 b	91.8 a	42.5 bcd	65.0 ab	12.5 b	62.0 a
Resolve (25 SG)	0.25 oz ai/a	A							
Harmony SG (50 SG)	0.125 oz ai/a	A							
GLYFOS XTRA	0.75 lb ae/a	A							
NIS	0.25 % v/v	A							
AMS - Liquid	8.5 lb ai/100 gal	A							
Glyfos Xtra (3 SL)	0.75 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
Glyfos Xtra (3 SL)	0.75 lb ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
4 Crusher (50 WG)	0.0313 lb ai/a	A		12.5 ab	91.8 a	30.0 cd	35.0 c	0.0 b	99.0 a
GLYFOS XTRA	0.75 lb ae/a	A							
NIS	0.25 % v/v	A							
AMS - Liquid	8.5 lb ai/100 gal	A							
Glyfos Xtra (3 SL)	0.75 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
Glyfos Xtra (3 SL)	0.75 lb ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							

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

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	TAROF	STEME	THLSS	THLSS	LAMAM	BROTE		
Pest Scientific Name	Taraxacum offi>	Stellaria media	Thlaspi sp.	Thlaspi sp.	Lamium amplexi>	Bromus tectorum		
Pest Name	Common dandel>	Common chickwe>	Pennycress	Pennycress	Henbit	Downy brome		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Description				Seedling				
Rating Date	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014	Apr-30-2014		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority								
Pest Stage Majority	6	3	8		4	9		
Pest Density, Unit	5 YD2	5 FT2	3 YD2		2 FT2	5 FT2		
Days After First/Last Applic.	7 7	7 7	7 7	7 7	7 7	7 7		
Plant-Eval Interval	0 DP-1	0 DP-1	0 DP-1	0 DP-1	0 DP-1	0 DP-1		
Days After Emergence	-9 DE-1	-9 DE-1	-9 DE-1	-9 DE-1	-9 DE-1	-9 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
5 Leadoff (33.4 WG)	0.0313 lb ai/a	A	15.0 ab	89.3 a	20.0 d	52.5 b	0.0 b	77.0 a
GLYFOS XTRA	0.75 lb ae/a	A						
NIS	0.25 % v/v	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
6 SureStart II (4.16 SC)	1.56 lb ai/a	A	3.7 b	83.3 a	62.5 ab	76.3 a	62.3 a	91.8 a
Durango DMA (4 SL)	0.75 lb ae/a	A						
2,4-D Amine	0.5 lb ai/a	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Durango DMA (4 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
7 SureStart II (4.16 SC)	1.56 lb ai/a	A	30.0 a	96.8 a	70.0 a	68.0 ab	60.0 a	99.0 a
Atrazine	1 lb ai/a	A						
Durango DMA (4 SL)	0.75 lb ae/a	A						
2,4-D Amine	0.5 lb ai/a	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Durango DMA (4 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
LSD (P=.05)			18.89	15.49	19.25	14.31	17.09	32.30
Standard Deviation			12.60	10.42	12.96	9.63	11.51	21.74
CV			144.0	13.46	32.84	19.17	59.77	29.24
Bartlett's X2			0.023	5.232	4.727	1.613	3.791	4.723
P(Bartlett's X2)			0.989	0.388	0.45	0.90	0.15	0.193
Replicate F			1.043	8.442	1.380	3.487	0.738	0.185
Replicate Prob(F)			0.4003	0.0010	0.2808	0.0374	0.5432	0.9049
Treatment F			3.189	43.505	14.437	28.685	25.369	10.587
Treatment Prob(F)			0.0297	0.0001	0.0001	0.0001	0.0001	0.0001

# Purdue University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	THLSS	LACSE	TAROF	LAMAM	ERICA	BROTE		
Pest Scientific Name	Thlaspi sp.	Lactuca serrio>	Taraxacum offi>	Lamium amplexi>	Conyza canaden>	Bromus tectorum		
Pest Name	Pennycress	Prickly lettuce	Common dandel>	Henbit	Canada horsewe>	Downy brome		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Description								
Rating Date	May-19-2014	May-19-2014	May-19-2014	May-19-2014	May-19-2014	May-19-2014		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority								
Pest Stage Majority	20	6	6	8	7	19		
Pest Density, Unit	5 FT2	2 YD2	1 YD2	1 YD2	6 FT2	2 FT2		
Days After First/Last Applic.	26 26	26 26	26 26	26 26	26 26	26 26		
Plant-Eval Interval	19 DP-1	19 DP-1	19 DP-1	19 DP-1	19 DP-1	19 DP-1		
Days After Emergence	10 DE-1	10 DE-1	10 DE-1	10 DE-1	10 DE-1	10 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 Untreated Check			0.0 b	0.0 b	0.0 c	0.0 b	0.0 d	0.0 b
2 HARROW	0.0234 lb ai/a	A	99.0 a	99.0 a	92.8 a	95.0 a	81.3 bc	99.0 a
GLYFOS XTRA	0.75 lb ae/a	A						
NIS	0.25 % v/v	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
3 BASIS	0.0234 lb ai/a	A	99.0 a	99.0 a	58.8 ab	96.0 a	88.8 ab	98.0 a
Resolve (25 SG)	0.25 oz ai/a	A						
Harmony SG (50 SG)	0.125 oz ai/a	A						
GLYFOS XTRA	0.75 lb ae/a	A						
NIS	0.25 % v/v	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
4 Crusher (50 WG)	0.0313 lb ai/a	A	99.0 a	99.0 a	42.5 abc	97.5 a	83.3 bc	99.0 a
GLYFOS XTRA	0.75 lb ae/a	A						
NIS	0.25 % v/v	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						



# Purdue University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	THLSS	LACSE	TAROF	LAMAM	ERICA	BROTE		
Pest Scientific Name	Thlaspi sp.	Lactuca serrio>	Taraxacum offi>	Lamium amplexi>	Conyza canaden>	Bromus tectorum		
Pest Name	Pennycress	Prickly lettuce	Common dandel>	Henbit	Canada horsewe>	Downy brome		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Description								
Rating Date	May-19-2014	May-19-2014	May-19-2014	May-19-2014	May-19-2014	May-19-2014		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority								
Pest Stage Majority	20	6	6	8	7	19		
Pest Density, Unit	5 FT2	2 YD2	1 YD2	1 YD2	6 FT2	2 FT2		
Days After First/Last Applic.	26 26	26 26	26 26	26 26	26 26	26 26		
Plant-Eval Interval	19 DP-1	19 DP-1	19 DP-1	19 DP-1	19 DP-1	19 DP-1		
Days After Emergence	10 DE-1	10 DE-1	10 DE-1	10 DE-1	10 DE-1	10 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
5 Leadoff (33.4 WG)	0.0313 lb ai/a	A	99.0 a	99.0 a	62.3 ab	93.3 a	72.5 c	98.0 a
GLYFOS XTRA	0.75 lb ae/a	A						
NIS	0.25 % v/v	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
6 SureStart II (4.16 SC)	1.56 lb ai/a	A	99.0 a	99.0 a	87.0 a	98.0 a	99.0 a	99.0 a
Durango DMA (4 SL)	0.75 lb ae/a	A						
2,4-D Amine	0.5 lb ai/a	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Durango DMA (4 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
7 SureStart II (4.16 SC)	1.56 lb ai/a	A	99.0 a	99.0 a	31.3 bc	99.0 a	99.0 a	99.0 a
Atrazine	1 lb ai/a	A						
Durango DMA (4 SL)	0.75 lb ae/a	A						
2,4-D Amine	0.5 lb ai/a	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Durango DMA (4 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
LSD (P=.05)			0.00	0.00	35.31	6.73	9.42	1.45
Standard Deviation			0.00	0.00	23.77	4.53	6.34	0.98
CV			0.0	0.0	44.43	5.48	8.48	1.15
Bartlett's X2			0.0	0.0	8.617	10.247	5.899	0.0
P(Bartlett's X2)			.	.	0.125	0.036*	0.117	.
Replicate F			0.000	0.000	0.829	0.619	3.590	2.400
Replicate Prob(F)			1.0000	1.0000	0.4952	0.6120	0.0341	0.1016
Treatment F			0.000	0.000	7.370	259.632	117.335	5842.001
Treatment Prob(F)			1.0000	1.0000	0.0004	0.0001	0.0001	0.0001

# Purdue University

Pest Type				W Weed TAROF Taraxacum offi> Common dandel>	W Weed THLSS Thlaspi sp. Pennycress	W Weed BROTE Bromus tectorum Downy brome	W Weed LACSE Lactuca serrio> Prickly lettuce		
Pest Code									
Pest Scientific Name									
Pest Name									
Crop Code	ZEAMX	ZEAMX	ZEAMX						
BBCH Scale	BCOR	BCOR	BCOR						
Crop Scientific Name	Zea mays	Zea mays	Zea mays						
Crop Name	Corn	Corn	Corn						
Description									
Rating Date	May-19-2014	May-28-2014	May-28-2014	Jun-2-2014	Jun-2-2014	Jun-2-2014	Jun-2-2014		
Rating Type	PHYNEC	PHYNEC	PHYSTU	CONTRO	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	V4	V4	V4	V4		
Pest Stage Majority				8	20	30	10		
Pest Density, Unit				2 YD2	4 YD2	10 FT2	1 YD2		
Days After First/Last Applic.	26 26	35 8	35 8	40 13	40 13	40 13	40 13		
Plant-Eval Interval	19 DP-1	28 DP-1	28 DP-1	33 DP-1	33 DP-1	33 DP-1	33 DP-1		
Days After Emergence	10 DE-1	19 DE-1	19 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	13	14	15	16	17	18	19
1 Untreated Check			0.0 b	0.0 a	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b
2 HARROW	0.0234 lb ai/a	A	2.3 ab	0.8 a	2.5 ab	95.3 a	99.0 a	99.0 a	99.0 a
GLYFOS XTRA	0.75 lb ae/a	A							
NIS	0.25 % v/v	A							
AMS - Liquid	8.5 lb ai/100 gal	A							
Glyfos Xtra (3 SL)	0.75 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
Glyfos Xtra (3 SL)	0.75 lb ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
3 BASIS	0.0234 lb ai/a	A	3.5 a	3.3 a	0.0 b	78.5 a	99.0 a	99.0 a	99.0 a
Resolve (25 SG)	0.25 oz ai/a	A							
Harmony SG (50 SG)	0.125 oz ai/a	A							
GLYFOS XTRA	0.75 lb ae/a	A							
NIS	0.25 % v/v	A							
AMS - Liquid	8.5 lb ai/100 gal	A							
Glyfos Xtra (3 SL)	0.75 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
Glyfos Xtra (3 SL)	0.75 lb ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
4 Crusher (50 WG)	0.0313 lb ai/a	A	2.5 ab	5.0 a	4.0 a	75.8 a	99.0 a	99.0 a	99.0 a
GLYFOS XTRA	0.75 lb ae/a	A							
NIS	0.25 % v/v	A							
AMS - Liquid	8.5 lb ai/100 gal	A							
Glyfos Xtra (3 SL)	0.75 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
Glyfos Xtra (3 SL)	0.75 lb ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							

# Purdue University

Pest Type				W Weed TAROF Taraxacum offi> Common dandel>	W Weed THLSS Thlaspi sp. Pennycress	W Weed BROTE Bromus tectorum Downy brome	W Weed LACSE Lactuca serrio> Prickly lettuce				
Pest Code											
Pest Scientific Name											
Pest Name											
Crop Code	ZEAMX	ZEAMX	ZEAMX								
BBCH Scale	BCOR	BCOR	BCOR								
Crop Scientific Name	Zea mays	Zea mays	Zea mays								
Crop Name	Corn	Corn	Corn								
Description											
Rating Date	May-19-2014	May-28-2014	May-28-2014	Jun-2-2014	Jun-2-2014	Jun-2-2014	Jun-2-2014				
Rating Type	PHYNEC	PHYNEC	PHYSTU	CONTRO	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	V4	V4	V4	V4				
Pest Stage Majority				8	20	30	10				
Pest Density, Unit				2 YD2	4 YD2	10 FT2	1 YD2				
Days After First/Last Applic.	26 26	35 8	35 8	40 13	40 13	40 13	40 13				
Plant-Eval Interval	19 DP-1	28 DP-1	28 DP-1	33 DP-1	33 DP-1	33 DP-1	33 DP-1				
Days After Emergence	10 DE-1	19 DE-1	19 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1				
Trt No.	Treatment Name	Rate	Unit	Appl Code	13	14	15	16	17	18	19
5	Leadoff (33.4 WG)	0.0313 lb ai/a	A	A	2.8 ab	2.0 a	1.3 ab	89.5 a	99.0 a	99.0 a	99.0 a
	GLYFOS XTRA	0.75 lb ae/a	A	A							
	NIS	0.25 % v/v	A	A							
	AMS - Liquid	8.5 lb ai/100 gal	A	A							
	Glyfos Xtra (3 SL)	0.75 lb ae/a	B	B							
	AMS - Liquid	8.5 lb ai/100 gal	B	B							
	Glyfos Xtra (3 SL)	0.75 lb ae/a	C	C							
	AMS - Liquid	8.5 lb ai/100 gal	C	C							
6	SureStart II (4.16 SC)	1.56 lb ai/a	A	A	4.8 a	0.0 a	0.0 b	87.5 a	99.0 a	99.0 a	99.0 a
	Durango DMA (4 SL)	0.75 lb ae/a	A	A							
	2,4-D Amine	0.5 lb ai/a	A	A							
	AMS - Liquid	8.5 lb ai/100 gal	A	A							
	Durango DMA (4 SL)	0.75 lb ae/a	C	C							
	AMS - Liquid	8.5 lb ai/100 gal	C	C							
7	SureStart II (4.16 SC)	1.56 lb ai/a	A	A	3.0 ab	0.0 a	1.3 ab	67.5 a	99.0 a	99.0 a	99.0 a
	Atrazine	1 lb ai/a	A	A							
	Durango DMA (4 SL)	0.75 lb ae/a	A	A							
	2,4-D Amine	0.5 lb ai/a	A	A							
	AMS - Liquid	8.5 lb ai/100 gal	A	A							
	Durango DMA (4 SL)	0.75 lb ae/a	C	C							
	AMS - Liquid	8.5 lb ai/100 gal	C	C							
	LSD (P=.05)				2.11	3.30	2.26	19.96	0.00	0.00	0.00
	Standard Deviation				1.42	2.22	1.52	13.43	0.00	0.00	0.00
	CV				52.9	141.45	118.3	19.04	0.0	0.0	0.0
	Bartlett's X2				5.073	2.803	2.197	5.055	0.0	0.0	0.0
	P(Bartlett's X2)				0.407	0.423	0.532	0.409	.	.	.
	Replicate F				0.350	0.173	3.581	0.357	0.000	0.000	0.000
	Replicate Prob(F)				0.7898	0.9129	0.0344	0.7849	1.0000	1.0000	1.0000
	Treatment F				4.138	3.082	3.978	23.396	0.000	0.000	0.000
	Treatment Prob(F)				0.0087	0.0296	0.0104	0.0001	1.0000	1.0000	1.0000

# Purdue University

Pest Type	W Weed	W Weed						
Pest Code	ERICA	SETFA						
Pest Scientific Name	Conyza canadens>	Setaria faberi						
Pest Name	Canada horsewe>	Giant foxtail						
Crop Code			ZEAMX	ZEAMX	ZEAMX	ZEAMX		
BBCB Scale			BCOR	BCOR	BCOR	BCOR		
Crop Scientific Name			Zea mays	Zea mays	Zea mays	Zea mays		
Crop Name			Corn	Corn	Corn	Corn		
Description								
Rating Date	Jun-2-2014	Jun-2-2014	Jun-9-2014	Jun-9-2014	Nov-5-2014	Nov-5-2014		
Rating Type	CONTRO	CONTRO	PHYSTU	PHYNEC	MOICON	YIELD		
Rating Unit	%	%	%	%	%	bu/ac		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT				
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority	V4	V4	V4	V4				
Pest Stage Majority	12							
Pest Density, Unit	3 YD2							
Days After First/Last Applic.	40 13	40 13	47 20	47 20	196 145	196 145		
Plant-Eval Interval	33 DP-1	33 DP-1	40 DP-1	40 DP-1	189 DP-1	189 DP-1		
Days After Emergence	24 DE-1	24 DE-1	31 DE-1	31 DE-1	180 DE-1	180 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	20	21	22	23	24	25
1 Untreated Check			0.0 c		0.0 a	0.0 a	17.6850012 a	59.98 b
2 HARROW	0.0234 lb ai/a	A	83.8 b	90.8 a	3.8 a	0.0 a	17.7475012 a	283.35 a
GLYFOS XTRA	0.75 lb ae/a	A						
NIS	0.25 % v/v	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
3 BASIS	0.0234 lb ai/a	A	87.3 b	99.0 a	2.8 a	0.5 a	18.0325030 a	296.08 a
Resolve (25 SG)	0.25 oz ai/a	A						
Harmony SG (50 SG)	0.125 oz ai/a	A						
GLYFOS XTRA	0.75 lb ae/a	A						
NIS	0.25 % v/v	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						
4 Crusher (50 WG)	0.0313 lb ai/a	A	81.8 b	95.5 a	2.8 a	0.5 a	18.4625015 a	270.73 a
GLYFOS XTRA	0.75 lb ae/a	A						
NIS	0.25 % v/v	A						
AMS - Liquid	8.5 lb ai/100 gal	A						
Glyfos Xtra (3 SL)	0.75 lb ae/a	B						
AMS - Liquid	8.5 lb ai/100 gal	B						
Glyfos Xtra (3 SL)	0.75 lb ae/a	C						
AMS - Liquid	8.5 lb ai/100 gal	C						

# Purdue University

Pest Type	W Weed	W Weed				
Pest Code	ERICA	SETFA				
Pest Scientific Name	Conyza canadensis	Setaria faberii				
Pest Name	Canada horseweed	Giant foxtail				
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
Description						
Rating Date	Jun-2-2014	Jun-2-2014	Jun-9-2014	Jun-9-2014	Nov-5-2014	Nov-5-2014
Rating Type	CONTRO	CONTRO	PHYSTU	PHYNEC	MOICON	YIELD
Rating Unit	%	%	%	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1
Crop Stage Majority	V4	V4	V4	V4		
Pest Stage Majority	12					
Pest Density, Unit	3 YD2					
Days After First/Last Applic.	40 13	40 13	47 20	47 20	196 145	196 145
Plant-Eval Interval	33 DP-1	33 DP-1	40 DP-1	40 DP-1	189 DP-1	189 DP-1
Days After Emergence	24 DE-1	24 DE-1	31 DE-1	31 DE-1	180 DE-1	180 DE-1
Trt No.	20	21	22	23	24	25
Treatment Name						
Rate						
Unit						
Appl Code						
5 Leadoff (33.4 WG)	0.0313 lb ai/a					
GLYFOS XTRA	0.75 lb ae/a					
NIS	0.25 % v/v					
AMS - Liquid	8.5 lb ai/100 gal					
Glyfos Xtra (3 SL)	0.75 lb ae/a					
AMS - Liquid	8.5 lb ai/100 gal					
Glyfos Xtra (3 SL)	0.75 lb ae/a					
AMS - Liquid	8.5 lb ai/100 gal					
6 SureStart II (4.16 SC)	1.56 lb ai/a					
Durango DMA (4 SL)	0.75 lb ae/a					
2,4-D Amine	0.5 lb ai/a					
AMS - Liquid	8.5 lb ai/100 gal					
Durango DMA (4 SL)	0.75 lb ae/a					
AMS - Liquid	8.5 lb ai/100 gal					
7 SureStart II (4.16 SC)	1.56 lb ai/a					
Atrazine	1 lb ai/a					
Durango DMA (4 SL)	0.75 lb ae/a					
2,4-D Amine	0.5 lb ai/a					
AMS - Liquid	8.5 lb ai/100 gal					
Durango DMA (4 SL)	0.75 lb ae/a					
AMS - Liquid	8.5 lb ai/100 gal					
LSD (P=.05)	6.83	14.65	2.91	0.82	2.43776441	30.663
Standard Deviation	4.60	9.72	1.96	0.55	1.64089458	20.640
CV	6.04	10.51	78.23	384.42	9.28	8.03
Bartlett's X2	8.226	6.181	1.142	0.0	20.464	10.011
P(Bartlett's X2)	0.042*	0.103	0.95	.	0.002*	0.124
Replicate F	3.032	1.372	4.718	0.632	0.340	2.926
Replicate Prob(F)	0.0561	0.2894	0.0134	0.6041	0.7963	0.0619
Treatment F	223.798	1.870	2.004	0.789	0.509	72.267
Treatment Prob(F)	0.0001	0.1597	0.1183	0.5897	0.7937	0.0001

# Purdue University

## TO DETERMINE THE EFFICACY AND SELECTIVITY OF HARROW AND CRUSHER WHEN APPLIED PREPLANT TO CORN IN 2014.

Trial ID: 14S-THP-NTC-32                      Protocol ID: 14S-THP-NTC-32  
 Location: Throckmorton                      Study Director:  
 Project ID: HZEAMXRIM2THI1401 RIMITH      Investigator: Dr. Bill Johnson  
    Sponsor Contact: TOM HAYDEN

### Pest Type

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

### Pest Code

TAROF, Taraxacum officinale, = US

STEME, Stellaria media, = US

THLSS, Thlaspi sp., = US

LAMAM, Lamium amplexicaule, = US

BROTE, Bromus tectorum, = US

LACSE, Lactuca serriola, = US

ERICA, Conyza canadensis, = US

SETFA, Setaria faberi, = US

### Crop Code

ZEAMX, BCOR, Zea mays, = US

### Rating Type

CONTRO = control / burndown or knockdown

PHYNEC = phytotoxicity - necrosis /burn

PHYSTU = phytotoxicity - stunting

MOICON = moisture content

YIELD = yield

### Rating Unit

% = percent

bu/ac = bushels per acre

PLOT = total plot

### Pest Stage Majority

19 = 9 true leaves, leaf pairs or whorls unfolded

30 = Beginning of stem elongation; G = Beginning of shooting

10 = G, M = First true leaf emerged from coleoptile; D = Cotyledons completely unfolded; P = First leaves separated

12 = 2 true leaves, leaf pairs or whorls unfolded

YD2 = per square yard

FT2 = per square foot

### Plant-Eval Interval

0 DP-1 = 1 ZEAMD Apr-30-2014

19 DP-1 = 1 ZEAMD Apr-30-2014

28 DP-1 = 1 ZEAMD Apr-30-2014

33 DP-1 = 1 ZEAMD Apr-30-2014

40 DP-1 = 1 ZEAMD Apr-30-2014

189 DP-1 = 1 ZEAMD Apr-30-2014