

# Purdue University

## Stratego YLD Corn

Trial ID: 11S-THP-CTC-13 Protocol ID: 11S-THP-CTC-113  
 Location: Throckmorton Study Director: White/Marquardt  
 Project ID: HP11NARDLF Investigator: Dr. Bill Johnson  
 Sponsor Contact: Bayer - Dave Lamore

## General Trial Information

**Study Director:** White/Marquardt **Title:** Research Associate  
**Investigator:** Dr. Bill Johnson **Title:** Professor

**Discipline:** H herbicide  
**Trial Status:** Established  
**Initiation Date:** 4-8-2011

## Trial Location

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

## Personnel

**Study Director:** White/Marquardt **Title:** Research Associate

**Affiliation:** Purdue University  
**Address:** 915 W State Street  
**Location:** West Lafayette, IN, USA  
**Postal Code:** 47907 **E-mail:** mdwhite@purdue.edu  
**Phone No.:** 765-494-0891  
**Investigator:** Dr. Bill Johnson **Title:** Professor

**Affiliation:** Purdue University  
**Address:** 915 W State Street  
**Location:** West Lafayette, IN, USA  
**Postal Code:** 47907 **E-mail:** wji@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:** Pioneer 33W84 **Description:** HXX LL RR2  
**BBCH Scale:** BCOR **Planting Date:** 5-12-2011  
**Planting Method:** PLANTD planted **Rate, Unit:** 34000 S/A  
**Depth, Unit:** 1.5 IN  
**Row Spacing, Unit:** 30 IN **Soil Temperature, Unit:** 70.5 F  
**Soil Moisture:** SLIWET slightly wet **Emergence Date:** 5-22-2011

## Pest Description

**Pest 1 Type:** W **Code:** AMBTR Ambrosia trifida  
**Common Name:** Giant ragweed  
**Pest 2 Type:** W **Code:** ABUTH Abutilon theophrasti  
**Common Name:** Velvetleaf  
**Pest 3 Type:** W **Code:** IPOHE Ipomoea hederacea  
**Common Name:** Ivyleaf morningglory

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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 FT <sup>2</sup>	Tillage Type: CONTIL conventional-till
Replications: 4	Study Design: RACOB1 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	C
Application Date:	5-12-2011	6-7-2011	6-14-2011
Time of Day:	1:30 PM	2-2:30 PM	8:40 am
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	ATPLAN	ATPLAN	MIPOCR
Application Placement:	FOLIAR	FOLIAR	FOLIAR
Applied By:	MH	MW	MW
Air Temperature, Unit:	80 F	88 F	67 F
% Relative Humidity:		53	58
Wind Velocity, Unit:	9 MPH	4.5 PMPH	2.5 MPH
Wind Direction:	SE	SE	N
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	78 F	87 F	68 F
Soil Moisture:	DRY	SLIWET	DRY
% Cloud Cover:	40	10	60

Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:		BBCH	BBCH
Stage Majority, Percent:			V5
Height, Unit:		5.5 IN	
Height Minimum, Maximum:		4 7	

Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Height, Unit:			1 IN
Height Minimum, Maximum:			0.5 1.5
Density, Unit:			13 YD2
Pest 2 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Height, Unit:			0.75 IN
Height Minimum, Maximum:			0.5 1
Density, Unit:			4 YD2
Pest 3 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W
Height, Unit:			1 IN
Density, Unit:			2 YD2

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## Application Equipment

	A	B	C
<b>Appl. Equipment:</b>	CUB	CO2 FORD	CO2 FORD
<b>Equipment Type:</b>		SPTRMO	SPTRMO
<b>Nozzle Type:</b>	FLAT FAN	FLAT FAN	FLAT FAN
<b>Nozzle Size:</b>	XR 110 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>Boom Height, Unit:</b>	19 IN	20 IN	20 IN
<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	20 gal/ac	20 gal/ac
<b>Mix Size, Unit:</b>		2.5 liters	2.5 liters
<b>Propellant:</b>		CO2	CO2

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## Stratego YLD Corn

Trial ID: 11S-THP-CTC-13      Protocol ID: 11S-THP-CTC-113  
 Location: Throckmorton      Study Director: White/Marquardt  
 Project ID: HP11NARDLF      Investigator: Dr. Bill Johnson  
 Sponsor Contact: Bayer - Dave Lamore

Pest Type		W Weed	W Weed	W Weed	W Weed							
Pest Code		SETFA	AMBTR	ABUTH	IPOHE							
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Abutilon theop>	Ipomoea heder>							
Pest Name		Giant foxtail	Giant ragweed	Velvetleaf	Ivyleaf mornin>							
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX				
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR				
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays				
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn				
Rating Date	6-21-2011	7-11-2011	7-11-2011	7-11-2011	7-11-2011	7-11-2011	10-17-2011	10-17-2011				
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	MOICON	YIELD				
Rating Unit	%	%	%	%	%	%	%	bu/ac				
Number of Subsamples	1	1	1	1	1	1	1	1				
Crop Stage Majority	V7	VT	VT	VT	VT	VT	VT					
Pest Stage Majority		16 IN	40 IN	1 IN	10 IN							
Pest Density, Unit		10 YD2	8 YD2	6 YD2	3 YD2							
Assessed By	AR	MW	MW	MW	MW	MW						
Days After First/Last Applic.	40 7	60 27	60 27	60 27	60 27	60 27	158 125	158 125				
Plant-Eval Interval	40 DP-1	60 DP-1	60 DP-1	60 DP-1	60 DP-1	60 DP-1	158 DP-1	158 DP-1				
Days After Emergence	30 DE-1	50 DE-1	50 DE-1	50 DE-1	50 DE-1	50 DE-1	148 DE-1	148 DE-1				
Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4	5	6	7	8
1	Bicep II Magnum (5.5 SC) Roundup PowerMax 4.5 SL AMS - Liquid	3.55 0.77 1.28	lb ai/a lb ae/a lb ai/a	A B B	2.5 a	97.0 a	72.5 b	92.8 ab	93.3 a	0.0 a	15.6250016 a	190.13 a
2	Bicep II Magnum (5.5 SC) Roundup PowerMax 4.5 SL AMS - Liquid Stratego YLD (4.18 SC) NIS	3.55 0.77 1.28 0.13 0.125	lb ai/a lb ae/a lb ai/a lb ai/a % v/v	A B B C C	2.5 a	97.5 a	78.5 ab	90.0 b	83.3 a	0.0 a	15.9850013 a	200.33 a
3	Bicep II Magnum (5.5 SC) Roundup PowerMax 4.5 SL AMS - Liquid Laudis (3.5 SL) MSO AMS - Liquid	3.55 0.77 1.28 0.082 1 8.5	lb ai/a lb ae/a lb ai/a lb ai/a % v/v lb ai/100 gal	A B B C C C	1.3 a	98.0 a	97.0 a	97.5 a	93.5 a	0.0 a	15.8225018 a	217.90 a
4	Bicep II Magnum (5.5 SC) Roundup PowerMax 4.5 SL AMS - Liquid Stratego YLD (4.18 SC) Laudis (3.5 SL) MSO AMS - Liquid	3.55 0.77 1.28 0.13 0.082 1 8.5	lb ai/a lb ae/a lb ai/a lb ai/a lb ai/a % v/v lb ai/100 gal	A B B C C C C	2.5 a	98.0 a	97.0 a	99.0 a	92.5 a	0.0 a	15.8500020 a	192.43 a
5	Bicep II Magnum (5.5 SC) Roundup PowerMax 4.5 SL AMS - Liquid Callisto (4.0 SC) COC AMS - Liquid	3.55 0.77 1.28 0.094 1 8.5	lb ai/a lb ae/a lb ai/a lb ai/a % v/v lb ai/100 gal	A B B C C C	3.8 a	97.0 a	98.0 a	99.0 a	97.5 a	0.0 a	16.2075021 a	196.55 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						
Pest Code	SETFA	AMBTR	ABUTH	IPHOE						
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Abutilon theophrasti	Ipomoea hederacea						
Pest Name	Giant foxtail	Giant ragweed	Velvetleaf	Ivyleaf morning glory						
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR		
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn		
Rating Date	6-21-2011	7-11-2011	7-11-2011	7-11-2011	7-11-2011	7-11-2011	10-17-2011	10-17-2011		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	MOICON	YIELD		
Rating Unit	%	%	%	%	%	%	%	bu/ac		
Number of Subsamples	1	1	1	1	1	1	1	1		
Crop Stage Majority	V7	VT	VT	VT	VT	VT	VT	VT		
Pest Stage Majority		16 IN	40 IN	1 IN	10 IN					
Pest Density, Unit		10 YD2	8 YD2	6 YD2	3 YD2					
Assessed By	AR	MW	MW	MW	MW	MW				
Days After First/Last Applic.	40 7	60 27	60 27	60 27	60 27	60 27	158 125	158 125		
Plant-Eval Interval	40 DP-1	60 DP-1	60 DP-1	60 DP-1	60 DP-1	60 DP-1	158 DP-1	158 DP-1		
Days After Emergence	30 DE-1	50 DE-1	50 DE-1	50 DE-1	50 DE-1	50 DE-1	148 DE-1	148 DE-1		
Trt Treatment	Rate	Appl								
No. Name	Rate Unit	Code	1	2	3	4	5	6	7	8
6 Bicep II Magnum (5.5 SC)	3.55 lb ai/a	A	4.3 a	97.0 a	97.0 a	99.0 a	96.5 a	0.0 a	15.9675023 a	197.03 a
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	1.28 lb ai/a	B								
Stratego YLD (4.18 SC)	0.13 lb ai/a	C								
Callisto (4.0 SC)	0.094 lb ai/a	C								
COC	1 % v/v	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
7 Bicep II Magnum (5.5 SC)	3.55 lb ai/a	A	5.0 a	99.0 a	88.8 ab	96.3 ab	82.5 a	0.0 a	16.2225015 a	197.58 a
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	1.28 lb ai/a	B								
Ignite 280 (2.34 SL)	0.402 lb ai/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
8 Bicep II Magnum (5.5 SC)	3.55 lb ai/a	A	2.5 a	98.5 a	81.3 ab	94.3 ab	93.3 a	1.3 a	16.1525018 a	206.10 a
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	1.28 lb ai/a	B								
Stratego YLD (4.18 SC)	0.13 lb ai/a	C								
Ignite 280 (2.34 SL)	0.402 lb ai/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
9 Bicep II Magnum (5.5 SC)	3.55 lb ai/a	A	6.3 a	98.5 a	92.5 ab	95.3 ab	82.5 a	0.0 a	16.2300012 a	197.05 a
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	1.28 lb ai/a	B								
Roundup PowerMax 4.5 SL	0.77 lb ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
10 Bicep II Magnum (5.5 SC)	3.55 lb ai/a	A	5.0 a	98.0 a	88.8 ab	94.8 ab	95.8 a	0.0 a	16.0225007 a	193.73 a
Roundup PowerMax 4.5 SL	0.77 lb ae/a	B								
AMS - Liquid	1.28 lb ai/a	B								
Stratego YLD (4.18 SC)	0.13 lb ai/a	C								
Roundup PowerMax 4.5 SL	0.77 lb ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
LSD (P=.05)			6.23	2.25	14.40	4.54	13.29	1.15	0.50798207	25.722
Standard Deviation			4.29	1.55	9.92	3.13	9.16	0.79	0.35009510	17.727
CV			120.94	1.58	11.14	3.27	10.06	632.46	2.19	8.91
Bartlett's X2			9.133	5.577	45.826	4.195	28.266	0.0	4.25	13.196
P(Bartlett's X2)			0.425	0.694	0.001*	0.65	0.001*	.	0.894	0.154
Replicate F			0.277	1.711	0.710	2.986	1.537	1.000	2.785	2.440
Replicate Prob(F)			0.8417	0.1883	0.5547	0.0487	0.2277	0.4079	0.0599	0.0861
Treatment F			0.524	0.839	3.284	3.650	1.685	1.000	1.319	0.813
Treatment Prob(F)			0.8443	0.5873	0.0079	0.0043	0.1416	0.4635	0.2732	0.6089

**Pest Type**  
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop  
**Pest Code**  
SETFA, Setaria faberi, = US

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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AMBTR, Ambrosia trifida, = US

ABUTH, Abutilon theophrasti, = US

IPOHE, Ipomoea hederacea, = US

Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

MOICON = moisture content

YIELD = yield

Rating Unit

% = percent

bu/ac = bushels per acre

YD2 = per square yard

Plant-Eval Interval

40 DP-1 = 1 ZEAMD 5-12-2011

60 DP-1 = 1 ZEAMD 5-12-2011

158 DP-1 = 1 ZEAMD 5-12-2011