

# Purdue University

## Assure II Applied at Various Times and Planted Back to Corn

Trial ID: 11S-THP-CTC-02 Protocol ID: 11S-THP-CTC-102  
 Location: Throckmorton Study Director: White/Marquardt  
 Project ID: USA-11-002 Investigator: Dr. Bill Johnson  
 Sponsor Contact: DuPont - Helen Flanigan

### General Trial Information

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

**Discipline:** H herbicide  
**Trial Status:** E 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:** 5-24-2011  
**Planting Method:** PLANTD planted **Rate, Unit:** 34000 S/A

**Depth, Unit:** 1.5 IN  
**Row Spacing, Unit:** 30 IN

**Emergence Date:** 6-1-2011

### 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

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### Application Description

	A	B	C	D
<b>Application Date:</b>	5-12-2011	5-18-2011	5-24-2011	6-9-2011
<b>Time of Day:</b>			2 PM	8:30 AM
<b>Application Method:</b>	SPRAY	SPRAY	SPRAY	SPRAY
<b>Application Timing:</b>	EARPRE	PREPLA	ATPLAN	BULK
<b>Application Placement:</b>	FOLIAR	FOLIAR	FOLIAR	FOLIAR
<b>Applied By:</b>	RT		MH	BM
<b>Air Temperature, Unit:</b>	79 F	62 F	85 F	76 F
<b>% Relative Humidity:</b>	43	53	58	68
<b>Wind Velocity, Unit:</b>	7.5 MPH	3 MPH	4 MPH	7.3 MPH
<b>Wind Direction:</b>		W	E	SW
<b>Dew Presence (Y/N):</b>	N no	N no	N no	N no
<b>Soil Temperature, Unit:</b>	70.5 F	64 F	80 F	73 F
<b>Soil Moisture:</b>	SLIWET	DRY	DRY	DRY
<b>% Cloud Cover:</b>	40	95	72	10

### Crop Stage At Each Application

	A	B	C	D
<b>Crop 1 Code, BBCH Scale:</b>	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
<b>Stage Scale Used:</b>				BBCH
<b>Stage Majority, Percent:</b>				V3
<b>Height, Unit:</b>				8.5 IN
<b>Height Minimum, Maximum:</b>				8 9

### Application Equipment

	A	B	C	D
<b>Appl. Equipment:</b>	CO2 BKPK	CO2 BKPK	CO2 BKPK	CUB
<b>Equipment Type:</b>	SPRBAC	SPRBAC	SPRBAC	
<b>Operation Pressure, Unit:</b>	17 PSI	17 PSI	17 PSI	
<b>Nozzle Type:</b>	FLAT FAN	FLAT FAN	FLAT FAN	FLAT FAN
<b>Nozzle Size:</b>	XR 110 02	XR 110 02	XR 110 02	XR 110 02
<b>Nozzle Spacing, Unit:</b>	15 IN	15 IN	15 IN	20 IN
<b>Nozzles/Row:</b>	8	8	8	6
<b>Boom Length, Unit:</b>	10 FT	10 FT	10 FT	10 FT
<b>Boom Height, Unit:</b>	18 IN	18 IN	18 IN	19 IN
<b>Ground Speed, Unit:</b>	3 MPH	3 MPH	3 MPH	2.1 MPH
<b>Carrier:</b>	H2O	H2O	H2O	MEIGS
<b>Water Hardness (ppm CaCO3):</b>	150	150	150	
<b>Spray Volume, Unit:</b>	15 gal/ac	15 gal/ac	15 gal/ac	20
<b>Mix Size, Unit:</b>	1.8 liters	1.8 liters	1.8 liters	
<b>Propellant:</b>	C02	C02	C02	
<b>Tank Mix (Y/N):</b>	N no	N no	N no	

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## Assure II Applied at Various Times and Planted Back to Corn

Trial ID: 11S-THP-CTC-02      Protocol ID: 11S-THP-CTC-102

Location: Throckmorton      Study Director: White/Marquardt  
 Project ID: USA-11-002      Investigator: Dr. Bill Johnson

Sponsor Contact: DuPont - Helen Flanigan

Crop Code	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR				
BBCH Scale														
Crop Scientific Name	Zea mays Corn	Zea mays Corn	Zea mays Corn	Zea mays Corn	Zea mays Corn	Zea mays Corn	Zea mays Corn	Zea mays Corn	Zea mays Corn	Zea mays Corn				
Crop Name														
Rating Date	6-9-2011	6-9-2011	6-9-2011	6-9-2011	6-9-2011	6-9-2011	6-21-2011	7-18-2011	10-24-2011	10-24-2011				
Rating Type	COUNT	PHYLCU %	PHYNLS %	PHYDIS %	PHYSTU %	PHYBLE %	PHYGEN %	PHYGEN %	MOICON %	YIELD bu/ac				
Rating Unit														
Sample Size, Unit	17 FT													
Number of Subsamples	1	1	1	1	1	1	1	1	1	1				
Crop Stage Majority							V5-V6	V10						
Assessed By	MH/BM	MW	MW	MW	MW	MW	RH/JS	MW						
Days After First/Last Applic.	28 16	28 16	28 16	28 16	28 16	28 16	40 12	67 39	165 137	165 137				
Plant-Eval Interval	16 DP-1	16 DP-1	16 DP-1	16 DP-1	16 DP-1	16 DP-1	28 DP-1	55 DP-1	153 DP-1	153 DP-1				
Days After Emergence	8 DE-1	8 DE-1	8 DE-1	8 DE-1	8 DE-1	8 DE-1	20 DE-1	47 DE-1	145 DE-1	145 DE-1				
Trt No.	Treatment Name	Rate	Appl Unit	Code	1	2	3	4	5	6	7	8	9	10
1	Lexar (3.7 SC) Untreated Check	2.78 lb ai/a	A		31.8 a	0.8 a	0.0 a	0.0 a	0.0 b	0.0 a	2.0 a	0.0 a	19.340 a	168.58 a
2	Lexar (3.7 SC) Assure	2.78 lb ai/a 0.05 lb ai/a	A A		29.3 a	0.8 a	0.0 a	3.8 a	0.0 b	0.0 a	3.0 a	0.0 a	19.088 a	176.90 a
3	Lexar (3.7 SC) Assure	2.78 lb ai/a 0.1 lb ai/a	A A		29.5 a	0.0 a	0.0 a	3.0 a	0.0 b	1.3 a	4.3 a	0.0 a	19.515 a	172.85 a
4	Lexar (3.7 SC) SelectMax (0.97 EC)	2.78 lb ai/a 0.091 lb ai/a	A A		29.5 a	2.0 a	0.0 a	0.0 a	0.0 b	0.8 a	2.5 a	0.0 a	19.345 a	173.53 a
5	Lexar (3.7 SC) Assure	2.78 lb ai/a 0.05 lb ai/a	A B		30.0 a	1.3 a	0.0 a	0.0 a	1.3 b	0.0 a	2.5 a	0.0 a	20.023 a	178.73 a
6	Lexar (3.7 SC) Assure	2.78 lb ai/a 0.1 lb ai/a	A B		30.0 a	2.0 a	1.3 a	4.8 a	1.3 b	0.0 a	1.8 a	0.0 a	19.980 a	184.33 a
7	Lexar (3.7 SC) SelectMax (0.97 EC)	2.78 lb ai/a 0.091 lb ai/a	A B		31.8 a	1.8 a	0.8 a	0.0 a	0.8 b	0.0 a	2.0 a	0.0 a	19.928 a	196.58 a
8	Lexar (3.7 SC) Assure	2.78 lb ai/a 0.05 lb ai/a	A C		31.3 a	4.5 a	0.0 a	1.3 a	1.3 b	0.0 a	3.8 a	0.0 a	19.863 a	178.20 a
9	Lexar (3.7 SC) Assure	2.78 lb ai/a 0.1 lb ai/a	A C		28.3 a	2.0 a	0.0 a	7.5 a	7.5 a	0.0 a	5.0 a	0.0 a	20.328 a	175.93 a
10	Lexar (3.7 SC) SelectMax (0.97 EC)	2.78 lb ai/a 0.091 lb ai/a	A C		26.5 a	0.8 a	0.0 a	1.3 a	0.0 b	0.0 a	3.8 a	0.0 a	20.008 a	162.20 a
LSD (P=.05)	4.29	3.66	1.36	5.19	2.49	1.36	3.30	0.00	0.9798	28.196				
Standard Deviation	2.96	2.52	0.94	3.58	1.71	0.94	2.27	0.00	0.6753	19.433				
CV	9.93	160.19	468.45	166.48	142.72	468.45	74.58	0.0	3.42	10.99				
Bartlett's X2	3.696	5.987	0.739	6.431	1.189	0.739	3.442	0.0	15.812	4.258				
P(Bartlett's X2)	0.93	0.649	0.39	0.267	0.88	0.39	0.944	.	0.071	0.894				
Replicate F	1.102	0.569	0.684	1.460	1.000	0.684	20.828	0.000	3.675	2.225				
Replicate Prob(F)	0.3655	0.6399	0.5699	0.2476	0.4079	0.5699	0.0001	1.0000	0.0243	0.1082				
Treatment F	1.198	0.960	0.873	2.039	7.136	0.873	0.921	0.000	1.361	0.896				
Treatment Prob(F)	0.3359	0.4925	0.5598	0.0738	0.0001	0.5598	0.5222	1.0000	0.2538	0.5419				

**Crop Code**

ZEAMX, BCOR, Zea mays, = US

**Rating Type**

COUNT = count

PHYLCU = phytotoxicity - leaf curl

PHYNLS = phytotoxicity - necrosis, leaf spot

PHYDIS = phytotoxicity - discoloration

PHYSTU = phytotoxicity - stunting

PHYBLE = phytotoxicity - bleaching

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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PHYGEN = phytotoxicity - general / injury

MOICON = moisture content

YIELD = yield

Rating Unit

% = percent

bu/ac = bushels per acre

FT = foot

Plant-Eval Interval

16 DP-1 = 1 ZEAMD 5-24-2011

28 DP-1 = 1 ZEAMD 5-24-2011

55 DP-1 = 1 ZEAMD 5-24-2011

153 DP-1 = 1 ZEAMD 5-24-2011