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Weed control programs with Instigate plus Zidua.

Trial ID: 12S-THP-CTC-08 Protocol ID: 12S-THP-CTC-08
 Location: Throckmorton Study Director: White/Marquardt
 Project ID: USA-12-012 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: 3-16-2012

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
State/Prov: IN
Postal Code: 47909 **E-mail:** jayyoung@purdue.edu
Country: USA United States
Phone No.: 765-538-3422
Fax No.: 765-538-3423

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: Beck's 6175 **Description:** HXX, LL, RR2
BBCH Scale: BCOR **Planting Date:** 4-18-2012
Planting Method: PLANTD planted **Rate, Unit:** 32000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Soil Moisture: DRY dry **Soil Temperature, Unit:** 68 F
Emergence Date: 5-2-2012

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:** SETFA Setaria faberi
Common Name: Giant foxtail

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Site and Design	
Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Plot Area, Unit: 300 FT2 Replications: 4	Site Type: FIELD field Experimental Unit: 1 PLOT plot Tillage Type: CONTIL conventional-till Study Design: RACOBL Randomized Complete Block (RCB) Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description
Description Name: TPAC -Field 4A % OM: 3.1 Texture: SIL silt loam pH: 6 Soil Name: Toronto-Millbrook CEC: 11.1

Application Description		
	A	B
Application Date:	4-18-2012	5-22-2012
Time of Day:		9 AM
Application Method:	SPRAY	SPRAY
Application Timing:	ATPLAN	POSPOS
Application Placement:	FOLIAR	FOLIAR
Applied By:	MW	MW
Air Temperature, Unit:	72 F	63 F
% Relative Humidity:	39	54
Wind Velocity, Unit:	9 MPH	7 MPH
Wind Direction:	E	E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	68 F	69 F
Soil Moisture:	DRY	DRY
% Cloud Cover:	15	5

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR

Pest Stage At Each Application		
	A	B
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W
Height, Unit:		4.5 IN
Height Minimum, Maximum:		3 6
Density, Unit:		5 YD2
Pest 2 Code, Type, Scale:	ABUTH W	ABUTH W
Height, Unit:		2 IN
Density, Unit:		1 YD2
Pest 3 Code, Type, Scale:	SETFA W	SETFA W
Height, Unit:		2.5 IN
Height Minimum, Maximum:		1 4
Density, Unit:		77 YD2

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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

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 Location: Throckmorton Study Director: White/Marquardt
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 Sponsor Contact: DuPont - Helen Flanigan

Pest Type	W Weed SETFA	W Weed AMBTR			W Weed SETFA	W Weed AMBTR	W Weed CHEAL				
Pest Code	Setaria faberi	Ambrosia trifid			Setaria faberi	Ambrosia trifid	Chenopodium al				
Pest Scientific Name	Giant foxtail	Giant ragweed			Giant foxtail	Giant ragweed	Common lambsqu				
Pest Name											
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX				
BBCH 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	5-8-2012	5-8-2012	5-8-2012	5-8-2012	6-11-2012	6-11-2012	6-11-2012				
Rating Type	CONTRO	CONTRO	PHYLCU	PHYBLE	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1	1				
Crop Stage Majority	V1				V7-V8	V7-V8	V7-V8				
Pest Stage Majority	.5 IN	1.5 IN			6-18 IN	6-36 IN	6-36 IN				
Pest Density, Unit	20 FT2	3 YD2			60 M2	25 M2	3 M2				
Assessed By	MW	MW	MW	MW	JR	JR	JR				
Days After First/Last Applic.	20 20	20 20	20 20	20 20	54 20	54 20	54 20				
Plant-Eval Interval	20 DP-1	20 DP-1	20 DP-1	20 DP-1	54 DP-1	54 DP-1	54 DP-1				
Days After Emergence	6 DE-1	6 DE-1	6 DE-1	6 DE-1	40 DE-1	40 DE-1	40 DE-1				
Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4	5	6	7
1	Untreated Check	0.0	c								
2	Resolve (25 SG)	0.25	oz ai/a	A	99.0 a	93.0 a	3.8 a	0.0 a	97.8 a	98.8 a	100.0 a
	Mesotrione (50 WG)	2.5	oz ai/a	A							
	Zidua (85 WG)	0.85	oz ai/a	A							
	Abundit (3 SL)	0.75	lb ae/a	B							
	AMS - Liquid	8.5	lb ai/100 gal	B							
3	Resolve (25 SG)	0.25	oz ai/a	A	96.5 b	90.0 a	0.8 a	0.0 a	98.8 a	100.0 a	100.0 a
	Mesotrione (50 WG)	2.5	oz ai/a	A							
	Zidua (85 WG)	1.28	oz ai/a	A							
	Abundit (3 SL)	0.75	lb ae/a	B							
	AMS - Liquid	8.5	lb ai/100 gal	B							
4	Resolve (25 SG)	0.25	oz ai/a	A	99.0 a	96.5 a	0.8 a	0.0 a	98.3 a	98.3 a	100.0 a
	Mesotrione (50 WG)	2.5	oz ai/a	A							
	Zidua (85 WG)	0.85	oz ai/a	A							
	Atrazine	1	lb ai/a	A							
	Abundit (3 SL)	0.75	lb ae/a	B							
	AMS - Liquid	8.5	lb ai/100 gal	B							
5	Resolve (25 SG)	0.25	oz ai/a	A	99.0 a	87.5 a	0.8 a	1.3 a	98.3 a	97.3 a	100.0 a
	Mesotrione (50 WG)	2.5	oz ai/a	A							
	Zidua (85 WG)	1.28	oz ai/a	A							
	Atrazine	1	lb ai/a	A							
	Abundit (3 SL)	0.75	lb ae/a	B							
	AMS - Liquid	8.5	lb ai/100 gal	B							
6	Resolve (25 SG)	0.25	oz ai/a	A	99.0 a	96.5 a	2.5 a	0.0 a	99.0 a	99.5 a	100.0 a
	Mesotrione (50 WG)	2.5	oz ai/a	A							
	Cinch ATZ (5.5 SC)	2.06	lb ai/a	A							
	Abundit (3 SL)	0.75	lb ae/a	B							
	AMS - Liquid	8.5	lb ai/100 gal	B							
7	Zidua (85 WG)	1.7	oz ai/a	A	98.5 a	68.8 b	0.0 a	0.0 a	100.0 a	83.8 b	100.0 a
	Abundit (3 SL)	0.75	lb ae/a	B							
	AMS - Liquid	8.5	lb ai/100 gal	B							

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type	W Weed	W Weed			W Weed	W Weed	W Weed		
Pest Code	SETFA	AMBTR			SETFA	AMBTR	CHEAL		
Pest Scientific Name	Setaria faberi	Ambrosia trifida			Setaria faberi	Ambrosia trifida	Chenopodium album		
Pest Name	Giant foxtail	Giant ragweed			Giant foxtail	Giant ragweed	Common lambsquarters		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
BBCH 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	5-8-2012	5-8-2012	5-8-2012	5-8-2012	6-11-2012	6-11-2012	6-11-2012		
Rating Type	CONTRO	CONTRO	PHYLCU	PHYBLE	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority	V1				V7-V8	V7-V8	V7-V8		
Pest Stage Majority	.5 IN	1.5 IN			6-18 IN	6-36 IN	6-36 IN		
Pest Density, Unit	20 FT2	3 YD2			60 M2	25 M2	3 M2		
Assessed By	MW	MW	MW	MW	JR	JR	JR		
Days After First/Last Applic.	20 20	20 20	20 20	20 20	54 20	54 20	54 20		
Plant-Eval Interval	20 DP-1	20 DP-1	20 DP-1	20 DP-1	54 DP-1	54 DP-1	54 DP-1		
Days After Emergence	6 DE-1	6 DE-1	6 DE-1	6 DE-1	40 DE-1	40 DE-1	40 DE-1		
Trt No.	1	2	3	4	5	6	7		
Treatment Name									
Rate									
Unit									
Appl Code									
8 Zidua (85 WG)	1.7 oz ai/a	A	98.5 a	94.3 a	1.5 a	0.0 a	99.5 a	98.8 a	100.0 a
Atrazine	1 lb ai/a	A							
Abundit (3 SL)	0.75 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
LSD (P=.05)	1.14	9.18	2.70	1.30	2.47	8.74	26.00		
Standard Deviation	0.78	6.24	1.84	0.88	1.68	5.95	17.68		
CV	0.9	7.97	146.84	565.69	1.95	7.03	19.51		
Bartlett's X2	1.761	19.813	3.288	0.0	3.638	31.26	0.0		
P(Bartlett's X2)	0.415	0.003*	0.656	.	0.603	0.001*	.		
Replicate F	2.426	3.519	1.014	1.000	1.488	0.852	1.000		
Replicate Prob(F)	0.0941	0.0329	0.4062	0.4123	0.2466	0.4812	0.4123		
Treatment F	8073.951	111.029	1.993	1.000	1726.478	135.190	9.000		
Treatment Prob(F)	0.0001	0.0001	0.1047	0.4586	0.0001	0.0001	0.0001		

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

Crop Code
ZEAMX, BCOR, Zea mays, = US

Rating Type
CONTRO = control / burndown or knockdown
PHYLCU = phytotoxicity - leaf curl
PHYBLE = phytotoxicity - bleaching

Rating Unit
% = percent

FT2 = per square foot
YD2 = per square yard
M2 = per square meter

Plant-Eval Interval
20 DP-1 = 1 ZEAMD 4-18-2012
54 DP-1 = 1 ZEAMD 4-18-2012