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Weed control programs with Instigate.

Trial ID: 12S-THP-CTC-06 Protocol ID: 12S-THP-CTC-06
 Location: Throckmorton Study Director: White/Marquardt
 Project ID: USA-12-004 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:** 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: 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: SLIWET slightly wet **Soil Temperature, Unit:** 60 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:** SETFA Setaria faberi
Common Name: Giant foxtail
Pest 3 Type: W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters

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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:	11:30 AM	8 AM
Application Method:	SPRAY	SPRAY
Application Timing:	ATPLAN	POSPOS
Application Placement:	SOIL	FOLIAR
Applied By:	MW	MW
Air Temperature, Unit:	68 F	63 F
% Relative Humidity:	41	54
Wind Velocity, Unit:	5 MPH	7 MPH
Wind Direction:	S	E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	60 F	69 F
Soil Moisture:	SLIWET	DRY
% Cloud Cover:	15	5

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:		BBCH
Stage Majority, Percent:		V3
Height, Unit:		16 IN

Pest Stage At Each Application		
	A	B
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W
Height, Unit:		3 IN
Height Minimum, Maximum:		1 5
Density, Unit:		8 YD2
Pest 2 Code, Type, Scale:	SETFA W	SETFA W
Height, Unit:		2.25 IN
Height Minimum, Maximum:		0.5 4
Density, Unit:		17 YD2
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W
Height, Unit:		2 IN
Height Minimum, Maximum:		1 3
Density, Unit:		5 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
 Project ID: USA-12-004 Investigator: Dr. Bill Johnson
 Sponsor Contact: DuPont - Helen Flanigan

Pest Type	W Weed AMBTR	W Weed CHEAL	W Weed SETFA			W Weed AMBTR	W Weed SETFA	W Weed CHEAL
Pest Code	Ambrosia trifi>	Chenopodium al>	Setaria faberi			Ambrosia trifi>	Setaria faberi	Chenopodium al>
Pest Scientific Name	Giant ragweed	Common lambsqu>	Giant foxtail			Giant ragweed	Giant foxtail	Common lambsqu>
Pest Name								
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	5-22-2012	5-22-2012	5-22-2012	5-22-2012	5-29-2012	5-29-2012	5-29-2012	5-29-2012
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1	1	1
Crop Stage Majority	V4	V4	V4	V4	V5	V5	V5	V5
Pest Stage Majority	5 IN	2.5 IN	2 IN			1-16 IN	1-12 IN	1-12 IN
Pest Density, Unit	10 YD2	5 YD2	25 FT2			20 YD2	75 YD2	40 YD2
Assessed By	MW	MW	MW	MW	MW	JS/G	JS/G	JS/G
Days After First/Last Applic.	34 34	34 34	34 34	34 34	41 7	41 7	41 7	41 7
Plant-Eval Interval	34 DP-1	34 DP-1	34 DP-1	34 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1	20 DE-1	27 DE-1	27 DE-1	27 DE-1	27 DE-1
Trt No.	1	2	3	4	5	6	7	8
Treatment Name	1 Untreated Check							
Rate	0.0 c	0.0 c	0.0 c	0.0 a	0.0 a	0.0 c	0.0 c	0.0 c
Appl Unit								
Code								
Treatment Name	2 Resolve (25 SG) Mesotrione (50 WG) Atrazine Abundit (3 SL) AMS - Liquid							
Rate	88.8 a	99.0 a	81.3 a	0.0 a	0.0 a	95.8 a	99.0 a	100.0 a
Appl Unit								
Code								
Treatment Name	3 Resolve (25 SG) Mesotrione (50 WG) Atrazine Resolve (25 SG) Mesotrione (50 WG) Isoxadifen (50 WG) Abundit (3 SL) AMS - Liquid							
Rate	87.5 a	99.0 a	81.3 a	0.0 a	0.0 a	99.0 a	98.3 a	100.0 a
Appl Unit								
Code								
Treatment Name	4 Resolve (25 SG) Mesotrione (50 WG) Cinch ATZ (5.5 SC) Abundit (3 SL) AMS - Liquid							
Rate	82.5 a	99.0 a	88.8 a	0.0 a	0.0 a	94.5 a	99.5 a	100.0 a
Appl Unit								
Code								
Treatment Name	5 Resolve (25 SG) Mesotrione (50 WG) Cinch ATZ (5.5 SC)							
Rate	83.8 a	99.0 a	90.0 a	0.0 a	0.0 a	84.8 a	82.5 a	100.0 a
Appl Unit								
Code								
Treatment Name	6 Resolve (25 SG) Mesotrione (50 WG) Cinch ATZ (5.5 SC)							
Rate	36.3 b	49.5 b	47.5 b	0.0 a	0.0 a	40.5 b	40.0 b	50.0 b
Appl Unit								
Code								

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	AMBTR	CHEAL	SETFA			AMBTR	SETFA	CHEAL				
Pest Scientific Name	Ambrosia trifi>	Chenopodium al>	Setaria faberi			Ambrosia trifi>	Setaria faberi	Chenopodium al>				
Pest Name	Giant ragweed	Common lambsqu>	Giant foxtail			Giant ragweed	Giant foxtail	Common lambsqu>				
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	5-22-2012	5-22-2012	5-22-2012	5-22-2012	5-29-2012	5-29-2012	5-29-2012	5-29-2012				
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1	1	1				
Crop Stage Majority	V4	V4	V4	V4	V5	V5	V5	V5				
Pest Stage Majority	5 IN	2.5 IN	2 IN			1-16 IN	1-12 IN	1-12 IN				
Pest Density, Unit	10 YD2	5 YD2	25 FT2			20 YD2	75 YD2	40 YD2				
Assessed By	MW	MW	MW	MW	MW	JS/G	JS/G	JS/G				
Days After First/Last Applic.	34 34	34 34	34 34	34 34	41 7	41 7	41 7	41 7				
Plant-Eval Interval	34 DP-1	34 DP-1	34 DP-1	34 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1				
Days After Emergence	20 DE-1	20 DE-1	20 DE-1	20 DE-1	27 DE-1	27 DE-1	27 DE-1	27 DE-1				
Trt No.	Treatment Name	Rate	Appl Unit	Code	1	2	3	4	5	6	7	8
7	Resolve (25 SG)	0.25 oz ai/a	A		82.5 a	99.0 a	97.5 a	0.0 a	0.0 a	97.0 a	100.0 a	100.0 a
	Mesotrione (50 WG)	2.5 oz ai/a	A									
	Cinch	1.75 lb ai/a	A									
	Resolve (25 SG)	0.3 oz ai/a	B									
	Mesotrione (50 WG)	1.25 oz ai/a	B									
	Isoxadifen (50 WG)	0.15 oz ai/a	B									
	Abundit (3 SL)	0.75 lb ae/a	B									
	AMS - Liquid	2 lb ai/a	B									
8	Lumax (3.95 SC)	2.96 lb ai/a	A		89.3 a	99.0 a	94.3 a	0.0 a	0.5 a	97.8 a	98.8 a	100.0 a
	Abundit (3 SL)	0.75 lb ae/a	B									
	AMS - Liquid	2 lb ai/a	B									
9	Resolve (25 SG)	0.25 oz ai/a	A		87.5 a	99.0 a	88.8 a	0.0 a	0.5 a	96.3 a	99.0 a	100.0 a
	Mesotrione (50 WG)	2.5 oz ai/a	A									
	Atrazine	1 lb ai/a	A									
	Solida (25 WG)	0.25 oz ai/a	B									
	Glyphos Xtra (3 SL)	0.75 lb ae/a	B									
	AMS - Liquid	2 lb ai/a	B									
10	Solida (25 WG)	0.25 oz ai/a	B		0.0 c	0.0 c	0.0 c	0.0 a	2.0 a	76.8 a	92.5 a	83.8 a
	Glyphos Xtra (3 SL)	0.75 lb ae/a	B									
	AMS - Liquid	2 lb ai/a	B									
LSD (P=.05)					20.32	26.23	26.11	0.00	1.23	21.49	21.56	27.30
Standard Deviation					14.01	18.07	17.99	0.00	0.85	14.81	14.86	18.81
CV					21.95	24.34	26.89	0.0	282.55	18.93	18.36	22.57
Bartlett's X2					29.725	0.0	58.136	0.0	2.491	70.609	79.377	2.999
P(Bartlett's X2)					0.001*	.	0.001*	.	0.288	0.001*	0.001*	0.083
Replicate F					1.964	1.000	0.973	0.000	0.278	1.463	0.804	1.471
Replicate Prob(F)					0.1432	0.4079	0.4199	1.0000	0.8405	0.2468	0.5025	0.2446
Treatment F					28.070	21.667	17.723	0.000	2.227	19.549	20.807	12.557
Treatment Prob(F)					0.0001	0.0001	0.0001	1.0000	0.0522	0.0001	0.0001	0.0001

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Pest Type		W Weed AMBTR	W Weed SETFA	W Weed CHEAL	W Weed SETFA	W Weed AMBTR	W Weed CHEAL				
Pest Code		Ambrosia trifi>	Setaria faberi	Chenopodium al>	Setaria faberi	Ambrosia trifi>	Chenopodium al>				
Pest Scientific Name											
Pest Name		Giant ragweed	Giant foxtail	Common lambsqu>	Giant foxtail	Giant ragweed	Common lambsqu>				
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	Com	Com	Corn	Corn	Corn	Corn	Corn				
Rating Date	6-4-2012	6-4-2012	6-4-2012	6-4-2012	6-18-2012	6-18-2012	6-18-2012				
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1	1				
Crop Stage Majority	V5	V5	V5	V5	V9	V9	V9				
Pest Stage Majority		1-24 IN	1-18 IN	2-20 IN	3-24 IN	6-48 IN	6-18 IN				
Pest Density, Unit		20 M2	70 M2	10 M2	20 M2	30 M2	121 M2				
Assessed By	JS/G	JS/G	JS/G	JS/G	JS/JR	JS/JR	JS/JR				
Days After First/Last Applic.	47 13	47 13	47 13	47 13	61 27	61 27	61 27				
Plant-Eval Interval	47 DP-1	47 DP-1	47 DP-1	47 DP-1	61 DP-1	61 DP-1	61 DP-1				
Days After Emergence	33 DE-1	33 DE-1	33 DE-1	33 DE-1	47 DE-1	47 DE-1	47 DE-1				
Trt No.	Treatment Name	Rate	Appl Unit	Code	9	10	11	12	13	14	15
1	Untreated Check	0.0	a		0.0 a	0.0 c	0.0 c	0.0 c	0.0 d	0.0 d	0.0 c
2	Resolve (25 SG) Mesotrione (50 WG) Atrazine Abundit (3 SL) AMS - Liquid	0.25 oz ai/a 2.5 oz ai/a 1 lb ai/a 0.75 lb ae/a 2 lb ai/a	A A A B B		0.0 a	98.8 a	99.5 a	100.0 a	96.3 a	98.3 a	100.0 a
3	Resolve (25 SG) Mesotrione (50 WG) Atrazine Resolve (25 SG) Mesotrione (50 WG) Isoxadifen (50 WG) Abundit (3 SL) AMS - Liquid	0.25 oz ai/a 2.5 oz ai/a 1 lb ai/a 0.3 oz ai/a 1.25 oz ai/a 0.15 oz ai/a 0.75 lb ae/a 2 lb ai/a	A A A B B B B B		0.0 a	99.0 a	100.0 a	100.0 a	99.0 a	99.5 a	100.0 a
4	Resolve (25 SG) Mesotrione (50 WG) Cinch ATZ (5.5 SC) Abundit (3 SL) AMS - Liquid	0.25 oz ai/a 2.5 oz ai/a 1.38 lb ai/a 0.75 lb ae/a 2 lb ai/a	A A A B B		0.0 a	95.0 a	98.3 a	100.0 a	97.5 a	94.5 a	100.0 a
5	Resolve (25 SG) Mesotrione (50 WG) Cinch ATZ (5.5 SC)	0.25 oz ai/a 2.5 oz ai/a 2.06 lb ai/a	A A A		0.0 a	75.0 a	73.8 a	100.0 a	55.0 b	67.5 b	100.0 a
6	Resolve (25 SG) Mesotrione (50 WG) Cinch ATZ (5.5 SC)	0.25 oz ai/a 2.5 oz ai/a 2.75 lb ai/a	A A A		0.0 a	32.5 b	40.0 b	50.0 b	31.3 c	22.5 c	50.0 b

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 Location: Throckmorton Study Director: White/Marquardt
 Project ID: USA-12-004 Investigator: Dr. Bill Johnson
 Sponsor Contact: DuPont - Helen Flanigan

Pest Type

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

Pest Code

AMBTR, Ambrosia trifida, = US

CHEAL, Chenopodium album, = US

SETFA, Setaria faberi, = US

Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

CONTRO = control / burndown or knockdown

PHYGEN = phytotoxicity - general / injury

Rating Unit

% = percent

YD2 = per square yard

FT2 = per square foot

M2 = per square meter

Plant-Eval Interval

34 DP-1 = 1 ZEAMD 4-18-2012

41 DP-1 = 1 ZEAMD 4-18-2012

47 DP-1 = 1 ZEAMD 4-18-2012

61 DP-1 = 1 ZEAMD 4-18-2012