Ohio State University
Horticulture and Crop Science

LAUDIS DISTRIBUTOR PACKAGES EFFICACY TRIAL

Title No. 2:
Trial ID: 10LAUDIS Protocol ID: 10LAUDIS
Location: WESTERN BRANCH F-7 Study Director: Anthony F. Dobbels
Project ID: Investigator: Dr. Mark M. Loux
Sponsor Contact: Dave Lamore, Bayer CropScience

General Trial Information

Study Director: Anthony F. Dobbels **Title:** Research Specialist
Investigator: Dr. Mark M. Loux **Title:** Professor

Trial Location

City: South Charleston
State/Prov.: Ohio
Postal Code: 45368
Country: USA
Latitude of LL Corner °: 39.86027 N
Longitude of LL Corner °: 93.67207 W
Altitude of LL Corner, Unit: 1106.00 FT

Personnel

Study Director: Anthony F. Dobbels **Title:** Research Specialist
Affiliation: The Ohio State University
Address: 7721 South Charleston Pike
Location: South Charleston OH
Postal Code: 45368 **E-mail:** dobbels.1@osu.edu
Investigator: Dr. Mark M. Loux **Title:** Professor
Affiliation: The Ohio State University
Address: 7721 South Charleston Pike
Location: South Charleston OH
Postal Code: 43210 **E-mail:** loux.1@osu.edu

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: PIONEER 33W84
BBCH Scale: BCOR
Planting Method: SEEDED seeded
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Seed Bed: SMOOTH smooth
Soil Moisture: DRY dry
Description: RR/LL
Planting Date: 4/20/10
Rate, Unit: 32097 S/A
Soil Temperature, Unit: 58 F
Emergence Date: 5/3/10

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail

Pest 2 Type: W **Code:** AMBEL Ambrosia artemisiifolia
Common Name: Common ragweed

Pest 3 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Pest 4 Type: W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters

Pest 5 Type: W **Code:** POLPY Polygonum pensylvanicum
Common Name: Pennsylvania smartweed

Pest 6 Type: W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed

Pest 7 Type: W **Code:** ABUTH Abutilon theophrasti
Common Name: Velvetleaf

Site and Design

Plot Width, Unit: 6.67 FT
Plot Length, Unit: 30 FT
Plot Area, Unit: 200.1 FT2
Replications: 3
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: F-7 East
% OM: 1.8
pH: 6.1
CEC: 16
Texture: SIL silt loam
Soil Name: Crosby
Fert. Level: G good
Soil Drainage: G good

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Application Description

	A
Application Date:	5/25/10
Time of Day:	9:00 A.M.
Application Method:	SPRAY
Application Timing:	POST
Application Placement:	BROFO
Applied By:	Loux
Air Temperature, Unit:	69 F
% Relative Humidity:	79
Wind Velocity, Unit:	7 MPH
Wind Direction:	E
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	64 F
Soil Moisture:	NORMAL
% Cloud Cover:	40
Next Rain Occurred On:	5/31/10

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMX BCOR
Stage Scale Used:	BBCH
Stage Majority, Percent:	14 100
Height, Unit:	9 IN
Height Minimum, Maximum:	8 9

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SETFA W
Stage Majority, Percent:	13 100
Height, Unit:	4 IN
Height Minimum, Maximum:	3 4
Density, Unit:	244 M2
Pest 2 Code, Type, Scale:	AMBEL W
Stage Majority, Percent:	16 100
Height, Unit:	4 IN
Height Minimum, Maximum:	3 4
Density, Unit:	4 M2
Pest 3 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	18 90
Stage Minimum, Percent:	16 10
Stage Maximum, Percent:	18 90
Height, Unit:	7 IN
Height Minimum, Maximum:	6 7
Density, Unit:	4 M2
Pest 4 Code, Type, Scale:	CHEAL W
Stage Majority, Percent:	18 90
Stage Minimum, Percent:	16 10
Stage Maximum, Percent:	18 90
Height, Unit:	2 IN
Height Minimum, Maximum:	1 2
Density, Unit:	9.2 M2
Pest 5 Code, Type, Scale:	POLPY W
Stage Majority, Percent:	15 100
Height, Unit:	4 IN
Height Minimum, Maximum:	3 4
Density, Unit:	5.2 M2
Pest 6 Code, Type, Scale:	AMARE W
Stage Majority, Percent:	16 100
Height, Unit:	2 IN
Height Minimum, Maximum:	2 3
Density, Unit:	2.4 M2
Pest 7 Code, Type, Scale:	ABUTH W
Stage Majority, Percent:	16 90
Stage Minimum, Percent:	15 10
Stage Maximum, Percent:	16 90
Height, Unit:	3 IN
Height Minimum, Maximum:	2 3

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Application Equipment

	A
Appl. Equipment:	6 foot boom
Equipment Type:	SPRBAC
Operating Pressure, Unit:	53 PSI
Nozzle Type:	TEEJET DG
Nozzle Size:	8002
Nozzle Spacing, Unit:	18 IN
Boom Length, Unit:	6 FT
Boom Height, Unit:	20 IN
Ground Speed, Unit:	3 MPH
Carrier:	WATER
Spray Volume, Unit:	20 GPA
Mix Size, Unit:	0.33 Gallons
Propellant:	CO2

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Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	1	2	3	4	5	6	7	8
	Pest Code						SETFA	AMBTR	AMBEL	CHEAL	AMARE	HIBTR	POLPY
	Crop Code					ZEAMX							
	Rating Date					6/8/10	6/8/10	6/8/10	6/8/10	6/8/10	6/8/10	6/8/10	6/8/10
	Rating Type					PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
	Rating Unit					%	%	%	%	%	%	%	%
	Trt-Eval Interval					14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A
	Plant-Eval Interval					49 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1
	Days After Emergence					36 DE-	36 DE-	36 DE-	36 DE-	36 DE-	36 DE-	36 DE-	36 DE-
1	UNTREATED					0	0	0	0	0	0	0	0
2	Laudis	3.5	3	oz/a	A	0	47	93	100	100	100	100	100
2	Atrazine	4	1	pt/a									
2	Loveland MSO	100	1	% v/v									
2	N-PAK AMS	100	2.5	% v/v									
3	Impact	2.8	0.75	oz/a	A	0	88	90	100	80	93	100	100
3	Atrazine	4	1	pt/a									
3	Loveland MSO	100	0.75	% v/v									
3	N-PAK AMS	100	2.5	% v/v									
4	Capreno	3.46	3	oz/a	A	0	83	90	100	100	100	100	100
4	Atrazine	4	1	pt/a									
4	COC	100	1	% v/v									
4	N-PAK AMS	100	2.5	% v/v									
5	Laudis	3.5	3	oz/a	A	0	47	90	100	100	97	100	100
5	Atrazine	4	1	pt/a									
5	Loveland MSO	100	1	% v/v									
5	Weather Guard Complete	100	2	qt/100 gal									
6	Laudis	3.5	3	oz/a	A	0	78	90	100	100	100	100	100
6	Atrazine	4	1	pt/a									
6	Destiny HC	100	0.5	% v/v									
6	Class Act NG	100	5	qt/100 gal									
6	Interlock	100	4	oz/a									
7	Laudis	3.5	3	oz/a	A	0	68	90	100	100	100	100	100
7	Atrazine	4	1	pt/a									
7	Dyne-Amic	100	2	qt/100 gal									
7	Request	100	2	qt/100 gal									
7	Grounded	100	1	gal/100 gal									
8	Laudis	3.5	3	oz/a	A	0	68	90	100	100	100	100	100
8	Atrazine	4	1	pt/a									
8	Sundance II	100	1.5	pt/a									
8	Array	100	9.5	lb/100 gal									
9	Laudis	3.5	3	oz/a	A	1	76	90	100	100	100	100	100
9	Atrazine	4	1	pt/a									
9	Soy-Stick	100	1.5	pt/a									
9	Gardian Plus	100	2	qt/100 gal									
10	Laudis	3.5	3	oz/a	A	0	72	90	100	100	100	100	100
10	Atrazine	4	1	pt/a									
10	Destiny HC	100	0.5	% v/v									
10	N-PAK AMS	100	2.5	% v/v									
	LSD (P=.05)					0.9	17.2	3.1	0.0	0.0	7.2	0.0	0.0
	Standard Deviation					0.5	10.0	1.8	0.0	0.0	4.2	0.0	0.0
	CV					547.72	16.0	2.24	0.0	0.0	4.69	0.0	0.0
	Bartlett's X2					0.0	7.708	0.0	0.0	0.0	0.871	0.0	0.0
	P(Bartlett's X2)					.	0.463	.	.	.	0.351	.	.
	Replicate F					1.000	1.110	1.000	0.000	0.000	0.574	0.000	0.000
	Replicate Prob(F)					0.3874	0.3512	0.3874	1.0000	1.0000	0.5730	1.0000	1.0000
	Treatment F					1.000	20.110	736.000	0.000	0.000	169.383	0.000	0.000
	Treatment Prob(F)					0.4742	0.0001	0.0001	1.0000	1.0000	0.0001	1.0000	1.0000

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Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	9	10	11	12	13	14	15	16
Pest Code						SETFA	AMBTR	AMBEL	CHEAL	AMARE	HIBTR	POLPY	SETFA
Crop Code													
Rating Date						6/22/10	6/22/10	6/22/10	6/22/10	6/22/10	6/22/10	6/22/10	7/8/10
Rating Type						CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit						%	%	%	%	%	%	%	%
Trt-Eval Interval						28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	44 DA-A
Plant-Eval Interval						63 DP-1	63 DP-1	63 DP-1	63 DP-1	63 DP-1	63 DP-1	63 DP-1	79 DP-1
Days After Emergence						50 DE-	50 DE-	50 DE-	50 DE-	50 DE-	50 DE-	50 DE-	66 DE-
1	UNTREATED					0	0	0	0	0	0	0	0
2	Laudis	3.5	3	oz/a	A	23	88	100	100	100	100	100	20
2	Atrazine	4	1	pt/a									
2	Loveland MSO	100	1	% v/v									
2	N-PAK AMS	100	2.5	% v/v									
3	Impact	2.8	0.75	oz/a	A	80	80	92	87	100	100	100	87
3	Atrazine	4	1	pt/a									
3	Loveland MSO	100	0.75	% v/v									
3	N-PAK AMS	100	2.5	% v/v									
4	Capreno	3.46	3	oz/a	A	72	72	100	100	100	100	100	60
4	Atrazine	4	1	pt/a									
4	COC	100	1	% v/v									
4	N-PAK AMS	100	2.5	% v/v									
5	Laudis	3.5	3	oz/a	A	27	80	100	100	100	100	100	23
5	Atrazine	4	1	pt/a									
5	Loveland MSO	100	1	% v/v									
5	Weather Guard Complete	100	2	qt/100 gal									
6	Laudis	3.5	3	oz/a	A	62	73	100	100	100	100	100	57
6	Atrazine	4	1	pt/a									
6	Destiny HC	100	0.5	% v/v									
6	Class Act NG	100	5	qt/100 gal									
6	Interlock	100	4	oz/a									
7	Laudis	3.5	3	oz/a	A	57	73	100	100	100	100	100	40
7	Atrazine	4	1	pt/a									
7	Dyne-Amic	100	2	qt/100 gal									
7	Request	100	2	qt/100 gal									
7	Grounded	100	1	gal/100 gal									
8	Laudis	3.5	3	oz/a	A	53	76	100	100	100	100	100	43
8	Atrazine	4	1	pt/a									
8	Sundance II	100	1.5	pt/a									
8	Array	100	9.5	lb/100 gal									
9	Laudis	3.5	3	oz/a	A	60	76	100	100	100	100	100	57
9	Atrazine	4	1	pt/a									
9	Soy-Stick	100	1.5	pt/a									
9	Gardian Plus	100	2	qt/100 gal									
10	Laudis	3.5	3	oz/a	A	57	70	100	100	100	100	100	47
10	Atrazine	4	1	pt/a									
10	Destiny HC	100	0.5	% v/v									
10	N-PAK AMS	100	2.5	% v/v									
LSD (P=.05)						16.6	11.0	7.8	6.3	0.0	0.0	0.0	16.2
Standard Deviation						9.7	6.4	4.6	3.7	0.0	0.0	0.0	9.4
CV						19.7	9.35	5.12	4.12	0.0	0.0	0.0	21.75
Bartlett's X2						9.247	2.999	0.0	0.0	0.0	0.0	0.0	6.712
P(Bartlett's X2)						0.235	0.885	.	.	.	.	.	0.568
Replicate F						4.281	0.300	1.000	1.000	0.000	0.000	0.000	0.854
Replicate Prob(F)						0.0301	0.7444	0.3874	0.3874	1.0000	1.0000	1.0000	0.4422
Treatment F						19.550	44.400	142.333	222.333	0.000	0.000	0.000	20.104
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	1.0000	1.0000	1.0000	0.0001

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Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	17	18	19	20	21	22
	Pest Code					AMBTR	AMBEL	CHEAL	AMARE	HIBTR	POLPY
	Crop Code										
	Rating Date					7/8/10	7/8/10	7/8/10	7/8/10	7/8/10	7/8/10
	Rating Type					CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
	Rating Unit					%	%	%	%	%	%
	Trt-Eval Interval					44 DA-A	44 DA-A	44 DA-A	44 DA-A	44 DA-A	44 DA-A
	Plant-Eval Interval					79 DP-1	79 DP-1	79 DP-1	79 DP-1	79 DP-1	79 DP-1
	Days After Emergence					66 DE-	66 DE-	66 DE-	66 DE-	66 DE-	66 DE-
1	UNTREATED					0	0	0	0	0	0
2	Laudis	3.5	3	oz/a	A	88	100	100	100	100	100
2	Atrazine	4	1	pt/a							
2	Loveland MSO	100	1	% v/v							
2	N-PAK AMS	100	2.5	% v/v							
3	Impact	2.8	0.75	oz/a	A	75	100	85	100	100	100
3	Atrazine	4	1	pt/a							
3	Loveland MSO	100	0.75	% v/v							
3	N-PAK AMS	100	2.5	% v/v							
4	Capreno	3.46	3	oz/a	A	70	100	100	100	100	100
4	Atrazine	4	1	pt/a							
4	COC	100	1	% v/v							
4	N-PAK AMS	100	2.5	% v/v							
5	Laudis	3.5	3	oz/a	A	87	100	100	100	100	100
5	Atrazine	4	1	pt/a							
5	Loveland MSO	100	1	% v/v							
5	Weather Guard Complete	100	2	qt/100 gal							
6	Laudis	3.5	3	oz/a	A	67	100	100	100	100	100
6	Atrazine	4	1	pt/a							
6	Destiny HC	100	0.5	% v/v							
6	Class Act NG	100	5	qt/100 gal							
6	Interlock	100	4	oz/a							
7	Laudis	3.5	3	oz/a	A	68	100	100	100	100	100
7	Atrazine	4	1	pt/a							
7	Dyne-Amic	100	2	qt/100 gal							
7	Request	100	2	qt/100 gal							
7	Grounded	100	1	gal/100 gal							
8	Laudis	3.5	3	oz/a	A	73	100	100	100	100	100
8	Atrazine	4	1	pt/a							
8	Sundance II	100	1.5	pt/a							
8	Array	100	9.5	lb/100 gal							
9	Laudis	3.5	3	oz/a	A	66	100	100	100	100	100
9	Atrazine	4	1	pt/a							
9	Soy-Stick	100	1.5	pt/a							
9	Gardian Plus	100	2	qt/100 gal							
10	Laudis	3.5	3	oz/a	A	67	100	100	100	100	100
10	Atrazine	4	1	pt/a							
10	Destiny HC	100	0.5	% v/v							
10	N-PAK AMS	100	2.5	% v/v							
	LSD (P=.05)					15.7	0.0	7.2	0.0	0.0	0.0
	Standard Deviation					9.2	0.0	4.2	0.0	0.0	0.0
	CV					13.88	0.0	4.73	0.0	0.0	0.0
	Bartlett's X2					9.952	0.0	0.0	0.0	0.0	0.0
	P(Bartlett's X2)					0.191	.	.	.	.	.
	Replicate F					1.363	0.000	1.000	0.000	0.000	0.000
	Replicate Prob(F)					0.2810	1.0000	0.3874	1.0000	1.0000	1.0000
	Treatment F					21.564	0.000	169.571	0.000	0.000	0.000
	Treatment Prob(F)					0.0001	1.0000	0.0001	1.0000	1.0000	1.0000

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Project ID:
Protocol ID: 10LAUDIS
Study Director: Anthony F. Dobbels
Investigator: Dr. Mark M. Loux
Sponsor Contact: Dave Lamore, Bayer CropScience

Pest Code
SETFA, Setaria faberi, = US
AMBTR, Ambrosia trifida, = US
AMBEL, Ambrosia artemisiifolia, = US
CHEAL, Chenopodium album, = US
AMARE, Amaranthus retroflexus, = US
HIBTR, Hibiscus trionum, = US
POLPY, Polygonum pensylvanicum, = US
Crop Code
ZEAMX, BCOR, Zea mays, = US
Rating Type
PHYGEN = phytotoxicity - general / injury
CONTRO = control / burndown or knockdown
Rating Unit
% = percent
Plant-Eval Interval
49 DP-1 = 1 4/20/10
63 DP-1 = 1 4/20/10
79 DP-1 = 1 4/20/10