

Ohio State University Horticulture and Crop Science

CAPRENO DISTRIBUTOR PACKAGES EFFICACY STUDY

Title No. 2:
 Trial ID: 10CAPRENO Protocol ID: 10CAPRENO
 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 **Latitude of LL Corner °:** 39.86027 N
State/Prov.: Ohio **Longitude of LL Corner °:** 83.67191 W
Postal Code: 45368 **Altitude of LL Corner, Unit:** 1107.00 FT
Country: USA

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 **Description:** RR/LL
BBCH Scale: BCOR **Planting Date:** 4/20/10
Planting Method: SEEDED seeded **Rate, Unit:** 32097 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Seed Bed: SMOOTH smooth **Soil Temperature, Unit:** 58 F
Soil Moisture: DRY dry **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 **Site Type:** FIELD field
Plot Length, Unit: 30 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 200.1 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOB L Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: F-7 East
% OM: 1.8 **Texture:** SIL silt loam
pH: 6.1 **Soil Name:** Crosby
CEC: 16 **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: 177.2 M2
Pest 2 Code, Type, Scale: AMBEL W
Stage Majority, Percent: 16 100
Height, Unit: 4 IN
Height Minimum, Maximum: 3 4
Density, Unit: 9.2 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: 13.2 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: 12 M2
Pest 5 Code, Type, Scale: POLPY W
Stage Majority, Percent: 15 100
Height, Unit: 4 IN
Height Minimum, Maximum: 3 4
Density, Unit: 8 M2
Pest 6 Code, Type, Scale: AMARE W
Stage Majority, Percent: 16 100
Height, Unit: 2 IN
Height Minimum, Maximum: 2 3
Density, Unit: 16 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

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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Pest Code		SETFA	AMBTR	AMBEL	CHEAL	ABUTH	POLPY	AMARE
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-

Trt No.	Treatment Name	Form Conc	Other Rate	Other Unit	Appl Code	1	2	3	4	5	6	7	8
1	UTC					0	0	0	0	0	0	0	0
2	Capreno	3.46	3 oz/a		A	0	90	100	100	100	100	100	100
	2 Atrazine	4	1 pt/a										
	2 Herbimax	100	0.8 qt/a										
	2 N-PAK AMS	100	2 qt/a										
3	Halex GT	4.38	3.6 pt/a		A	0	98	99	100	100	100	100	100
	3 NIS	100	6.4 oz/a										
	3 N-PAK AMS	100	2 qt/a										
4	Capreno	3.46	3 oz/a		A	0	99	100	100	100	100	100	100
	4 Atrazine	4	1 pt/a										
	4 Roundup PowerMax	4.5	22 oz/a										
	4 Superb HC	100	0.4 qt/a										
5	Capreno	3.46	3 oz/a		A	0	82	98	100	100	100	100	100
	5 Atrazine	4	1 pt/a										
	5 Herbimax	100	0.8 qt/a										
	5 Weather Guard Complet	100	2 qt/ 100 gal										
6	Capreno	3.46	3 oz/a		A	0	75	100	100	100	100	100	100
	6 Atrazine	4	1 pt/a										
	6 Superb HC	100	0.4 qt/a										
	6 Interlock	100	4 oz/a										
7	Capreno	3.46	3 oz/a		A	0	85	100	100	100	100	100	100
	7 Atrazine	4	1 pt/a										
	7 COC	100	2 qt/100 gal										
	7 HEL-FIRE	100	1 qt/100 gal										
	7 Grounded	100	1 gal/100 gal										
8	Capreno	3.46	3 oz/a		A	0	81	100	100	100	100	100	100
	8 Atrazine	4	1 pt/a										
	8 COC	100	1.5 pt/a										
	8 Array	100	9 lb/100 gal										
9	Capreno	3.46	3 oz/a		A	0	85	99	100	100	100	100	100
	9 Atrazine	4	1 pt/a										
	9 Trophy Gold	100	1 qt/100 gal										
	9 Gardian Plus	100	2 qt/100 gal										
10	Capreno	3.46	3 oz/a		A	0	85	97	100	100	100	100	100
	10 Atrazine	4	1 pt/a										
	10 COC	100	0.8 qt/a										
	10 AMS	100	8.5 lb/100 gal										
	LSD (P=.05)					0.0	5.2	2.3	0.0	0.3	0.0	0.0	0.0
	Standard Deviation					0.0	3.0	1.4	0.0	0.2	0.0	0.0	0.0
	CV					0.0	3.9	1.52	0.0	0.2	0.0	0.0	0.0
	Bartlett's X2					0.0	6.879	2.798	0.0	0.0	0.0	0.0	0.0
	P(Bartlett's X2)					.	0.332	0.424	.	.	.	.	.
	Replicate F					0.000	1.392	1.419	0.000	1.000	0.000	0.000	0.000
	Replicate Prob(F)					1.0000	0.2742	0.2677	1.0000	0.3874	1.0000	1.0000	1.0000
	Treatment F					0.000	260.943	1595.946	0.000	89934.345	0.000	0.000	0.000
	Treatment Prob(F)					1.0000	0.0001	0.0001	1.0000	0.0001	1.0000	1.0000	1.0000

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Pest Code		SETFA	AMBTR	AMBEL	CHEAL	ABUTH	POLPY	AMARE
Crop Code		ZEAMX						
Rating Date		6/22/10	6/22/10	6/22/10	6/22/10	6/22/10	6/22/10	6/22/10
Rating Type		PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit		%	%	%	%	%	%	%
Tri-Eval Interval		28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 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
Days After Emergence		50 DE-	50 DE-	50 DE-	50 DE-	50 DE-	50 DE-	50 DE-

Tri	Treatment No. Name	Form Conc	Other Rate	Other Unit	Appl Code	9	10	11	12	13	14	15	16
1	UTC					0	0	0	0	0	0	0	0
2	Capreno	3.46	3 oz/a		A	0	82	86	100	100	100	100	100
	2 Atrazine	4	1 pt/a										
	2 Herbimax	100	0.8 qt/a										
	2 N-PAK AMS	100	2 qt/a										
3	Halex GT	4.38	3.6 pt/a		A	0	95	70	100	100	100	100	100
	3 NIS	100	6.4 oz/a										
	3 N-PAK AMS	100	2 qt/a										
4	Capreno	3.46	3 oz/a		A	2	94	73	100	100	100	100	100
	4 Atrazine	4	1 pt/a										
	4 Roundup PowerMax	4.5	22 oz/a										
	4 Superb HC	100	0.4 qt/a										
5	Capreno	3.46	3 oz/a		A	0	81	86	100	100	100	100	100
	5 Atrazine	4	1 pt/a										
	5 Herbimax	100	0.8 qt/a										
	5 Weather Guard Complet	100	2 qt/ 100 gal										
6	Capreno	3.46	3 oz/a		A	0	73	86	100	100	100	100	100
	6 Atrazine	4	1 pt/a										
	6 Superb HC	100	0.4 qt/a										
	6 Interlock	100	4 oz/a										
7	Capreno	3.46	3 oz/a		A	0	81	86	100	100	100	100	100
	7 Atrazine	4	1 pt/a										
	7 COC	100	2 qt/100 gal										
	7 HEL-FIRE	100	1 qt/100 gal										
	7 Grounded	100	1 gal/100 gal										
8	Capreno	3.46	3 oz/a		A	0	82	76	100	100	100	100	100
	8 Atrazine	4	1 pt/a										
	8 COC	100	1.5 pt/a										
	8 Array	100	9 lb/100 gal										
9	Capreno	3.46	3 oz/a		A	0	82	85	100	100	100	100	100
	9 Atrazine	4	1 pt/a										
	9 Trophy Gold	100	1 qt/100 gal										
	9 Gardian Plus	100	2 qt/100 gal										
10	Capreno	3.46	3 oz/a		A	0	81	72	100	100	100	100	100
	10 Atrazine	4	1 pt/a										
	10 COC	100	0.8 qt/a										
	10 AMS	100	8.5 lb/100 gal										
	LSD (P=.05)					1.6	5.6	15.9	0.0	0.0	0.0	0.0	0.0
	Standard Deviation					0.9	3.2	9.3	0.0	0.0	0.0	0.0	0.0
	CV					547.72	4.32	12.85	0.0	0.0	0.0	0.0	0.0
	Bartlett's X2					0.0	4.617	4.355	0.0	0.0	0.0	0.0	0.0
	P(Bartlett's X2)					.	0.798	0.824	.	.	.	.	.
	Replicate F					1.000	2.570	0.753	0.000	0.000	0.000	0.000	0.000
	Replicate Prob(F)					0.3874	0.1043	0.4854	1.0000	1.0000	1.0000	1.0000	1.0000
	Treatment F					1.000	210.335	24.013	0.000	0.000	0.000	0.000	0.000
	Treatment Prob(F)					0.4742	0.0001	0.0001	1.0000	1.0000	1.0000	1.0000	1.0000

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Pest Code	SETFA	AMBTR	AMBEL	CHEAL	ABUTH	POLPY	AMARE
Crop Code							
Rating Date	7/8/10	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	CONTRO
Rating Unit	%	%	%	%	%	%	%
Trt-Eval Interval	44 DA-A	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	79 DP-1
Days After Emergence	66 DE-	66 DE-	66 DE-	66 DE-	66 DE-	66 DE-	66 DE-

Trt No.	Treatment Name	Form Conc	Other Rate	Other Unit	Appl Code	17	18	19	20	21	22	23
1	UTC					0	0	0	0	0	0	0
2	Capreno	3.46	3 oz/a		A	72	85	100	100	100	100	100
	2 Atrazine	4	1 pt/a									
	2 Herbimax	100	0.8 qt/a									
	2 N-PAK AMS	100	2 qt/a									
3	Halex GT	4.38	3.6 pt/a		A	95	72	100	100	100	100	100
	3 NIS	100	6.4 oz/a									
	3 N-PAK AMS	100	2 qt/a									
4	Capreno	3.46	3 oz/a		A	87	77	100	100	100	100	100
	4 Atrazine	4	1 pt/a									
	4 Roundup PowerMax	4.5	22 oz/a									
	4 Superb HC	100	0.4 qt/a									
5	Capreno	3.46	3 oz/a		A	63	83	100	100	100	100	100
	5 Atrazine	4	1 pt/a									
	5 Herbimax	100	0.8 qt/a									
	5 Weather Guard Complet	100	2 qt/ 100 gal									
6	Capreno	3.46	3 oz/a		A	50	70	100	100	100	100	100
	6 Atrazine	4	1 pt/a									
	6 Superb HC	100	0.4 qt/a									
	6 Interlock	100	4 oz/a									
7	Capreno	3.46	3 oz/a		A	67	91	100	100	100	100	100
	7 Atrazine	4	1 pt/a									
	7 COC	100	2 qt/100 gal									
	7 HEL-FIRE	100	1 qt/100 gal									
	7 Grounded	100	1 gal/100 gal									
8	Capreno	3.46	3 oz/a		A	60	75	100	100	100	100	100
	8 Atrazine	4	1 pt/a									
	8 COC	100	1.5 pt/a									
	8 Array	100	9 lb/100 gal									
9	Capreno	3.46	3 oz/a		A	66	70	100	100	100	100	100
	9 Atrazine	4	1 pt/a									
	9 Trophy Gold	100	1 qt/100 gal									
	9 Gardian Plus	100	2 qt/100 gal									
10	Capreno	3.46	3 oz/a		A	57	73	100	100	100	100	100
	10 Atrazine	4	1 pt/a									
	10 COC	100	0.8 qt/a									
	10 AMS	100	8.5 lb/100 gal									
LSD (P=.05)						14.6	25.2	0.0	0.0	0.0	0.0	0.0
Standard Deviation						8.5	14.7	0.0	0.0	0.0	0.0	0.0
CV						13.79	21.09	0.0	0.0	0.0	0.0	0.0
Bartlett's X2						6.472	5.998	0.0	0.0	0.0	0.0	0.0
P(Bartlett's X2)						0.595	0.647	.	.	.	.	.
Replicate F						0.134	0.377	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)						0.8751	0.6911	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F						27.102	9.008	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)						0.0001	0.0001	1.0000	1.0000	1.0000	1.0000	1.0000

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Study Director: Anthony F. Dobbels
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Pest Code

SETFA, *Setaria faberi*, = US
AMBTR, *Ambrosia trifida*, = US
AMBEL, *Ambrosia artemisiifolia*, = US
CHEAL, *Chenopodium album*, = US
ABUTH, *Abutilon theophrasti*, = US
POLPY, *Polygonum pensylvanicum*, = US
AMARE, *Amaranthus retroflexus*, = US

Crop Code

ZEAMX, *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