

Ohio State University Horticulture and Crop Science

Syngenta one pass programs for weed control in corn.

Title No. 2:
 Trial ID: 11SYN1PASS Protocol ID: 11SYN1PASS
 Location: WESTERN BRANCH G-6 Study Director: Anthony F. Dobbels
 Project ID: Investigator: Dr. Mark M. Loux
 Sponsor Contact: Dain Bruns, Syngenta

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 °:** 39.85946 N
State/Prov.: Ohio **Longitude of LL Corner °:** -83.67476 W
Postal Code: 45368
Country: USA

Description

14-21 DAT after APPLICATION A

Objectives:

Demonstrate various corn herbicide weed control systems common to the midwest.

Crop Description

Crop 1: ZEAMX Zea mays **Corn**
Variety: Pioneer 33W84 **Description:** RR/LL
BBCH Scale: BCOR **Planting Date:** 5/31/11
Planting Method: SEEDED seeded **Rate, Unit:** 32097 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM medium **Soil Temperature, Unit:** 72 F
Soil Moisture: SLIWET slightly wet **Emergence Date:** 6/6/11

Pest Description

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

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 3 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: Velvetleaf

Pest 4 Type: W **Code:** IPOHE *Ipomoea hederacea*
Common Name: Ivyleaf morningglory

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 L Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: G-6 **Texture:** SIL silt loam
% OM: 2.2 **Soil Name:** Crosby
pH: 6.3 **Fert. Level:** G good
CEC: 13.6 **Soil Drainage:** G good

Application Description

Application Date: 5/31/11 **A**
Time of Day: 11:15 A.M.
Application Method: SPRAY
Application Placement: BROFOL
Applied By: Reeb
Air Temperature, Unit: 89.9 F
% Relative Humidity: 62.1
Wind Velocity, Unit: 3.8 MPH
Wind Direction: SSW
Dew Presence (Y/N): N no
Soil Temperature, Unit: 72 F
Soil Moisture: GOOD
% Cloud Cover: 2
Next Rain Occurred On: 6/3/11

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Crop Stage At Each Application

A

Crop 1 Code, BBCH Scale: ZEAMX BCOR

Pest Stage At Each Application

A

Pest 1 Code, Type, Scale: SETFA W

Density, Unit: 13 M2

Pest 2 Code, Type, Scale: AMBTR W

Density, Unit: 9 M2

Pest 3 Code, Type, Scale: ABUTH W

Density, Unit: 1 M2

Pest 4 Code, Type, Scale: IPOHE W

Density, Unit: 6 M2

Application Equipment

A

Appl. Equipment: 6 foot boom

Equipment Type: SPRBAC

Operating Pressure, Unit: 46 PSI

Nozzle Type: TEEJET DG

Nozzle Size: 80015

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: 15 GPA

Mix Size, Unit: 0.33 Gallons

Propellant: CO2

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Pest Type	ZEAMX		ZEAMX		W Weed		W Weed		W Weed		W Weed		W Weed	
Pest Code	BCOR		BCOR		SETFA		AMBTR		IPOHE		ABUTH		CHEAL	
Pest Scientific Name	Zea mays		Zea mays		Setaria faberi		Ambrosia trifi>		Ipomoea heder>		Abutilon theop>		Chenopodium al>	
Pest Name	Corn		Corn		Giant foxtail		Giant ragweed		Ivyleaf mornin>		Velvetleaf		Common lambsqu>	
Crop Code	ZEAMX		ZEAMX											
BBCH Scale	BCOR		BCOR											
Crop Scientific Name	Zea mays		Zea mays											
Crop Name	Corn		Corn											
Rating Date	6/13/11		6/22/11		6/22/11		6/22/11		6/22/11		6/22/11		6/22/11	
Rating Type	PHYNLM		PHYNLM		CONTRO		CONTRO		CONTRO		CONTRO		CONTRO	
Rating Unit	%		%		%		%		%		%		%	
Number of Subsamples	1		1		1		1		1		1		1	
Days After First/Last Applic.	13 13		22 22		22 22		22 22		22 22		22 22		22 22	
Trt-Eval Interval	13 DA-A		22 DA-A		22 DA-A		22 DA-A		22 DA-A		22 DA-A		22 DA-A	
Plant-Eval Interval	13 DP-1		22 DP-1		22 DP-1		22 DP-1		22 DP-1		22 DP-1		22 DP-1	
Days After Emergence	7 DE-1		16 DE-1		16 DE-1		16 DE-1		16 DE-1		16 DE-1		16 DE-1	
Number of Decimals	0		0		0		0		0		0		0	

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	1	2	3	4	5	6	7
1	Lexar	3.7	3 qt/a		A	0	0	99	89	83	100	100
2	Lexar	3.7	6 qt/a		A	0	0	100	97	96	100	100
3	Corvus	2.63	5.6 oz/a		A	0	0	86	86	70	100	100
3	Atrazine	4	1 qt/a		A							
4	Corvus	2.63	11.2 oz/a		A	0	0	99	97	89	100	100
4	Atrazine	4	1 qt/a		A							
5	Verdict	5.57	13 oz/a		A	0	0	93	70	85	96	100
6	Verdict	5.57	26 oz/a		A	0	0	98	90	100	98	100
7	Fierce	76	2.95 oz/a		A	8	0	85	68	60	100	100
8	Fierce	76	5.9 oz/a		A	10	0	100	80	68	100	100
LSD (P=.05)						0.8	0.0	9.4	12.4	16.9	4.4	0.0
Standard Deviation						0.5	0.0	6.4	8.4	11.5	3.0	0.0
CV						23.9	0.0	6.78	9.93	14.12	2.99	0.0
Bartlett's X2						0.0	0.0	36.219	6.068	21.69	0.47	0.0
P(Bartlett's X2)						.	.	0.001*	0.416	0.003*	0.493	.
Replicate F						1.000	0.000	0.198	0.570	2.728	2.215	0.000
Replicate Prob(F)						0.4123	1.0000	0.8965	0.6410	0.0698	0.1163	1.0000
Treatment F						245.190	0.000	3.605	7.248	6.110	1.000	0.000
Treatment Prob(F)						0.0001	1.0000	0.0105	0.0002	0.0006	0.4586	1.0000

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	AMARE	SETFA	AMBTR	ABUTH	CHEAL	AMARE					
Pest Scientific Name	Amaranthus ret>	Setaria faberi	Ambrosia trifi>	Abutilon theop>	Chenopodium al>	Amaranthus ret>					
Pest Name	Redroot pigweed	Giant foxtail	Giant ragweed	Velvetleaf	Common lambsqu>	Redroot pigweed					
Crop Code											
BBCH Scale											
Crop Scientific Name											
Crop Name											
Rating Date	6/22/11	7/11/11	7/11/11	7/11/11	7/11/11	7/11/11					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1	1					
Days After First/Last Applic.	22 22	41 41	41 41	41 41	41 41	41 41					
Trt-Eval Interval	22 DA-A	41 DA-A	41 DA-A	41 DA-A	41 DA-A	41 DA-A					
Plant-Eval Interval	22 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1					
Days After Emergence	16 DE-1	35 DE-1	35 DE-1	35 DE-1	35 DE-1	35 DE-1					
Number of Decimals	0	0	0	0	0	0					
Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	8	9	10	11	12	13
1	Lexar	3.7	3 qt/a		A	100	93	95	100	100	100
2	Lexar	3.7	6 qt/a		A	100	99	97	100	100	100
3	Corvus	2.63	5.6 oz/a		A	100	82	90	100	100	100
3	Atrazine	4	1 qt/a		A						
4	Corvus	2.63	11.2 oz/a		A	100	96	95	100	100	100
4	Atrazine	4	1 qt/a		A						
5	Verdict	5.57	13 oz/a		A	100	87	70	95	100	100
6	Verdict	5.57	26 oz/a		A	100	98	88	98	90	100
7	Fierce	76	2.95 oz/a		A	100	86	71	100	88	100
8	Fierce	76	5.9 oz/a		A	100	90	73	100	90	100
LSD (P=.05)						0.0	7.5	11.1	5.5	17.6	0.0
Standard Deviation						0.0	5.1	7.5	3.7	12.0	0.0
CV						0.0	5.56	8.9	3.76	12.49	0.0
Bartlett's X2						0.0	14.507	3.481	1.312	0.282	0.0
P(Bartlett's X2)						.	0.043*	0.747	0.252	0.868	.
Replicate F						0.000	1.445	0.546	2.032	0.066	0.000
Replicate Prob(F)						1.0000	0.2580	0.6560	0.1401	0.9772	1.0000
Treatment F						0.000	5.659	9.544	1.000	0.919	0.000
Treatment Prob(F)						1.0000	0.0009	0.0001	0.4586	0.5119	1.0000

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Pest Type	W Weed
Pest Code	IPOHE
Pest Scientific Name	Ipomoea hederata
Pest Name	Ivyleaf mornin
Crop Code	
BBCH Scale	
Crop Scientific Name	
Crop Name	
Rating Date	7/11/11
Rating Type	CONTRO
Rating Unit	%
Number of Subsamples	1
Days After First/Last Applic.	41 41
Trt-Eval Interval	41 DA-A
Plant-Eval Interval	41 DP-1
Days After Emergence	35 DE-1
Number of Decimals	0

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	
						14

1 Lexar	3.7	3 qt/a	A	79
2 Lexar	3.7	6 qt/a	A	98
3 Corvus	2.63	5.6 oz/a	A	70
3 Atrazine	4	1 qt/a	A	
4 Corvus	2.63	11.2 oz/a	A	90
4 Atrazine	4	1 qt/a	A	
5 Verdict	5.57	13 oz/a	A	76
6 Verdict	5.57	26 oz/a	A	94
7 Fierce	76	2.95 oz/a	A	60
8 Fierce	76	5.9 oz/a	A	63

LSD (P=.05)	20.9
Standard Deviation	14.2
CV	18.06
Bartlett's X2	7.303
P(Bartlett's X2)	0.294

Replicate F	0.376
Replicate Prob(F)	0.7710
Treatment F	3.977
Treatment Prob(F)	0.0065

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Pest Type

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

Pest Code

SETFA, *Setaria faberi*, = US
AMBTR, *Ambrosia trifida*, = US
IPOHE, *Ipomoea hederacea*, = US
ABUTH, *Abutilon theophrasti*, = US
CHEAL, *Chenopodium album*, = US
AMARE, *Amaranthus retroflexus*, = US

Crop Code

ZEAMX, BCOR, *Zea mays*, = US

Rating Type

PHYNLM = phytotoxicity - necrosis, leaf marginal
CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

13 DP-1 = 1 5/31/11
22 DP-1 = 1 5/31/11
41 DP-1 = 1 5/31/11