

Ohio State University Horticulture and Crop Science

PRE fb POST WEED CONTROL IN CORN 2

Title No. 2:
Trial ID: 10PRPOC2 Protocol ID: 10PRPOC2
Location: WESTERN BRANCH F-7 Study Director: Anthony F. Dobbels
Project ID: Investigator: Dr. Mark M. Loux
Sponsor Contact:

General Trial Information

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

Trial Location

City: South Charleston **Latitude of LL Corner °:** 39.86021 N
State/Prov.: Ohio **Longitude of LL Corner °:** 83.67121 W
Postal Code: 45368 **Altitude of LL Corner, Unit:** 1104.00 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
Address: 7721 South Charleston Pike
Location: South Charleston OH

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: SEED CONSULTANTS 11HQ38 **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 Moisture: DRY dry **Soil Temperature, Unit:** 55 F
Harvest Date: 9/14/10 **Emergence Date:** 5/3/10
Harvested Width, Unit: 5 FT **Harvest Equipment:** MASSEY 8 XP
% Standard Moisture: 15.5 **Harvested Length, Unit:** 30 FT
Weighing Equipment: HARVEST MASTER 401 **Moisture Meter:** HARVEST MASTER

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:** ABUTH *Abutilon theophrasti*
Common Name: Velvetleaf

Pest 5 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters

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

Pest 7 Type: W **Code:** POLPY *Polygonum pensylvanicum*
Common Name: Pennsylvania smartweed

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

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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

Application Description

	A	B	C	D
Application Date:	4/20/10	5/10/10	5/25/10	5/31/10
Time of Day:	3:00 P.M.	9:30 A.M.	9:30 A.M.	10:00 A.M
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPO	MPO	POST
Application Placement:	BROSOI	BROFOL	BROFOL	BROFO
Applied By:	Loux	Reeb	McCormick	McCormick
Air Temperature, Unit:	64 F	54 F	69 F	78 F
% Relative Humidity:	32	49	79	72
Wind Velocity, Unit:	3 MPH	5 MPH	7 MPH	6 MPH
Wind Direction:	N	E	E	ESE
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	58 F	50 F	64 F	74 F
Soil Moisture:	DRY	NORMAL	NORMAL	DRY
% Cloud Cover:	15	20	40	15
Next Rain Occurred On:	4/24/10	5/11/10	6/2/10	6/2/10

Crop Stage At Each Application

	A		B		C		D	
Crop 1 Code, BBCH Scale:	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR
Stage Scale Used:	BBCH		BBCH		BBCH		BBCH	
Stage Majority, Percent:	12	100	14	100	16	100	16	100
Height, Unit:	3	IN	9	IN	15	IN	13	17
Height Minimum, Maximum:								

Pest Stage At Each Application

	A		B		C		D	
Pest 1 Code, Type, Scale:	SETFA	W	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent:	11	100	13	100	14	100	14	100
Height, Unit:	0.5	IN	5	IN	5	IN		
Height Minimum, Maximum:			4	6	4	6		
Density, Unit:							14.4	M2
Pest 2 Code, Type, Scale:	AMBEL	W	AMBEL	W	AMBEL	W	AMBEL	W
Stage Majority, Percent:	10	100	14	100	12	100		
Height, Unit:	0.25	IN	2	IN	2	IN		
Height Minimum, Maximum:			1	2	2	2		
Pest 3 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:	10	100	16	100	16	100		
Height, Unit:	0.5	IN	4	IN	6	IN		
Height Minimum, Maximum:			3	4	4	6		
Density, Unit:							5.2	M2
Pest 4 Code, Type, Scale:	ABUTH	W	ABUTH	W	ABUTH	W	ABUTH	W
Stage Majority, Percent:	10	100	15	90	14	100		
Stage Minimum, Percent:			14	10				
Stage Maximum, Percent:			15	90				
Height, Unit:	0.25	IN	2	IN	4	IN		
Height Minimum, Maximum:					3	4		
Density, Unit:							1.2	M2
Pest 5 Code, Type, Scale:	CHEAL	W	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent:			16	100	16	100		
Height, Unit:			2	IN	4	IN		
Height Minimum, Maximum:			2	3	2	4		
Density, Unit:							16	M2
Pest 6 Code, Type, Scale:	AMARE	W	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent:			15	100				
Height, Unit:			1	IN				
Height Minimum, Maximum:			0.5	1				
Density, Unit:							4	M2
Pest 7 Code, Type, Scale:	POLPY	W	POLPY	W	POLPY	W	POLPY	W
Stage Majority, Percent:			13	80	15	100		
Stage Minimum, Percent:			13	80				
Stage Maximum, Percent:			14	20				
Height, Unit:			2	IN	4	IN		
Height Minimum, Maximum:			2	3	3	4		
Density, Unit:					9.2	M2		

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Application Equipment

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

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Rating Date	5/31/10	5/31/10	5/31/10	5/31/10	5/31/10	5/31/10	6/7/10	6/14/10					
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	PHYGEN	PHYGEN					
Rating Unit	%	%	%	%	%	%	%	%					
Trt-Eval Interval	0 DA-D	0 DA-D	0 DA-D	0 DA-D	0 DA-D	0 DA-D	7 DA-D	14 DA-D					
Plant-Eval Interval	41 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1	48 DP-1	55 DP-1					
Days After Emergence	28 DE-	28 DE-	28 DE-	28 DE-	28 DE-	28 DE-	35 DE-	42 DE-					
Pest Code	SETFA	AMBTR	CHEAL	AMARE	ABUTH	POLPY							
Crop Code							ZEAMX	ZEAMX					
Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	1	2	3	4	5	6	7	8
14	Laudis	3.5	2 oz/a										
	14 N-PAK AMS	100	2 qt/a										
15	Balance Flexx	2	3 oz/a		A	60	58	50	100	67	96	0	0
	15 Atrazine	4	2 pt/a										
	15 Ignite	2.34	22 oz/a		D								
	15 N-PAK AMS	100	2 qt/a										
16	Balance Flexx	2	3 oz/a		A	88	83	100	100	100	90	0	0
	16 Atrazine	4	2 pt/a										
	16 Roundup PowerMax	4.5	22 oz/a		D								
	16 N-PAK AMS	100	2 qt/a										
17	Surestart	4.25	1.75 pt/a		A	99	85	100	100	100	98	0	0
	17 Durango DMA	4	24 oz/a		D								
	17 N-PAK AMS	100	2 qt/a										
18	UTC					0	20	27	0	33	0	0	0
LSD (P=.05)						11.8	17.2	19.3	3.5	23.7	11.4	2.4	0.5
Standard Deviation						7.1	10.3	11.6	2.1	14.2	6.9	1.4	0.3
CV						8.23	12.56	12.73	2.23	15.22	7.59	117.26	135.62
Bartlett's X2						26.307	28.681	29.753	0.0	10.535	6.679	0.567	0.0
P(Bartlett's X2)						0.05*	0.026*	0.001*	.	0.005*	0.463	0.451	.
Replicate F						0.464	3.311	1.434	0.941	0.806	2.860	0.232	0.971
Replicate Prob(F)						0.6329	0.0493	0.2533	0.4007	0.4554	0.0720	0.7939	0.3894
Treatment F						32.621	8.656	9.324	375.197	4.377	34.438	24.511	29.360
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001

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Rating Date	6/28/10	6/28/10	6/28/10	6/28/10	6/28/10	7/20/10	7/20/10	7/20/10					
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL					
Rating Unit	%	%	%	%	%	%	%	%					
Trt-Eval Interval	28 DA-D	28 DA-D	28 DA-D	28 DA-D	28 DA-D	50 DA-D	50 DA-D	50 DA-D					
Plant-Eval Interval	69 DP-1	69 DP-1	69 DP-1	69 DP-1	69 DP-1	91 DP-1	91 DP-1	91 DP-1					
Days After Emergence	56 DE-	56 DE-	56 DE-	56 DE-	56 DE-	78 DE-	78 DE-	78 DE-					
Pest Code	CHEAL	AMARE	ABUTH	POLPY	SIDSP	SETFA	AMBTR	CHEAL					
Crop Code													
Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	17	18	19	20	21	22	23	24
14	Laudis	3.5	2 oz/a										
14	N-PAK AMS	100	2 qt/a										
15	Balance Flexx	2	3 oz/a		A	57	100	100	100	66	90	87	73
15	Atrazine	4	2 pt/a										
15	Ignite	2.34	22 oz/a		D								
15	N-PAK AMS	100	2 qt/a										
16	Balance Flexx	2	3 oz/a		A	100	100	100	100	77	93	93	97
16	Atrazine	4	2 pt/a										
16	Roundup PowerMax	4.5	22 oz/a		D								
16	N-PAK AMS	100	2 qt/a										
17	Surestart	4.25	1.75 pt/a		A	100	100	100	100	88	98	97	100
17	Durango DMA	4	24 oz/a		D								
17	N-PAK AMS	100	2 qt/a										
18	UTC					0	0	0	0	0	0	0	0
LSD (P=.05)		5.2	7.1	8.5		14.1	12.5	8.0	11.9	6.5			
Standard Deviation		3.1	4.2	5.1		8.5	7.5	4.8	7.1	3.9			
CV		3.4	4.53	5.49		9.15	9.42	5.62	8.47	4.27			
Bartlett's X2		2.757	1.021	1.353		1.021	14.727	28.608	22.09	7.106			
P(Bartlett's X2)		0.252	0.60	0.508		0.60	0.545	0.027*	0.077	0.213			
Replicate F		1.995	0.730	1.234		0.775	2.298	0.133	0.238	2.453			
Replicate Prob(F)		0.1526	0.4900	0.3047		0.4689	0.1168	0.8762	0.7895	0.1021			
Treatment F		194.324	91.905	62.898		23.154	24.715	62.905	29.383	111.106			
Treatment Prob(F)		0.0001	0.0001	0.0001		0.0001	0.0001	0.0001	0.0001	0.0001			

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Rating Date	7/20/10									
Rating Type	CONTROL CONTROL CONTROL CONTROL CONTROL									
Rating Unit	%									
Trt-Eval Interval	50 DA-D	50 DA-D	50 DA-D	50 DA-D	50 DA-D					
Plant-Eval Interval	91 DP-1	91 DP-1	91 DP-1	91 DP-1	91 DP-1					
Days After Emergence	78 DE-	78 DE-	78 DE-	78 DE-	78 DE-					
Pest Code	AMARE	ABUTH	POLPY	SIDSP	IPOHE					
Crop Code										
Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	25	26	27	28	29
1	Lexar	3.7	3.5 qt/a		A	100	100	95	92	90
2	Corvus	2.63	5.6 oz/a		A	100	100	100	96	93
	2 Atrazine	4	3 pt/a							
3	Balance Flexx	2	6 oz/a		A	100	100	94	92	90
	3 Atrazine	4	3 pt/a							
4	Corvus	2.63	5.6 oz/a		B	100	100	100	94	96
	4 Atrazine	4	2 pt/a							
5	Balance Flexx	2	6 oz/a		B	100	100	100	92	95
	5 Atrazine	4	2 pt/a							
6	Capreno	3.46	3 oz/a		B	100	95	100	86	95
	6 Roundup PowerMax	4.5	11 oz/a							
	6 COC	100	0.8 qt/a							
	6 N-PAK AMS	100	2 qt/a							
7	Halex GT	4.38	3.6 pt/a		B	100	100	100	83	85
	7 NIS	100	6.4 oz/a							
	7 N-PAK AMS	100	2 qt/a							
8	Halex GT	4.38	3.6 pt/a		B	100	100	100	85	85
	8 Atrazine	4	1 pt/a							
	8 NIS	100	6.4 oz/a							
	8 N-PAK AMS	100	2 qt/a							
9	Corvus	2.63	5.6 oz/a		B	100	100	100	93	90
	9 Roundup PowerMax	4.5	22 oz/a							
	9 N-PAK AMS	100	2 qt/a							
10	Surestart	4.25	1.75 pt/a		B	98	100	100	92	85
	10 Durango DMA	4	24 oz/a							
	10 N-PAK AMS	100	2 qt/a							
11	Capreno	3.46	3 oz/a		C	100	100	100	93	88
	11 Roundup PowerMax	4.5	11 oz/a							
	11 COC	100	0.8 qt/a							
	11 N-PAK AMS	100	2 qt/a							
12	Corvus	2.63	3 oz/a		A	100	100	100	95	97
	12 Laudis	3.5	3 oz/a		D					
	12 Roundup PowerMax	4.5	11 oz/a							
	12 MSO	100	0.8 qt/a							
	12 N-PAK AMS	100	2 qt/a							
13	Balance Flexx	2	4 oz/a		A	100	100	100	99	97
	13 Capreno	3.46	3 oz/a		D					
	13 Roundup PowerMax	4.5	11 oz/a							
	13 COC	100	0.8 qt/a							
	13 N-PAK AMS	100	2 qt/a							
14	Corvus	2.63	3 oz/a		A	100	100	100	95	98
	14 Ignite	2.34	22 oz/a		D					

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Rating Date	7/20/10	7/20/10	7/20/10	7/20/10	7/20/10					
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL					
Rating Unit	%	%	%	%	%					
Trt-Eval Interval	50 DA-D	50 DA-D	50 DA-D	50 DA-D	50 DA-D					
Plant-Eval Interval	91 DP-1	91 DP-1	91 DP-1	91 DP-1	91 DP-1					
Days After Emergence	78 DE-	78 DE-	78 DE-	78 DE-	78 DE-					
Pest Code	AMARE	ABUTH	POLPY	SIDSP	IPOHE					
Crop Code										
Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	25	26	27	28	29
14	Laudis	3.5	2 oz/a							
14	N-PAK AMS	100	2 qt/a							
15	Balance Flexx	2	3 oz/a		A	100	100	100	82	93
15	Atrazine	4	2 pt/a							
15	Ignite	2.34	22 oz/a		D					
15	N-PAK AMS	100	2 qt/a							
16	Balance Flexx	2	3 oz/a		A	100	100	100	83	95
16	Atrazine	4	2 pt/a							
16	Roundup PowerMax	4.5	22 oz/a		D					
16	N-PAK AMS	100	2 qt/a							
17	Surestart	4.25	1.75 pt/a		A	100	100	100	94	93
17	Durango DMA	4	24 oz/a		D					
17	N-PAK AMS	100	2 qt/a							
18	UTC					0	0	0	0	0
LSD (P=.05)		1.2	3.5	4.9		9.7	10.3			
Standard Deviation		0.7	2.1	2.9		5.8	6.2			
CV		0.74	2.23	3.13		6.77	7.11			
Bartlett's X2		0.0	0.0	0.007		9.995	8.596			
P(Bartlett's X2)		.	.	0.931		0.867	0.803			
Replicate F		0.941	1.058	0.375		0.579	0.160			
Replicate Prob(F)		0.4007	0.3589	0.6903		0.5660	0.8528			
Treatment F		3382.533	376.310	191.608		42.992	38.338			
Treatment Prob(F)		0.0001	0.0001	0.0001		0.0001	0.0001			

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PRE fb POST WEED CONTROL IN CORN 2

Title No. 2:
Trial ID: 10PRPOC2 Protocol ID: 10PRPOC2
Location: WESTERN BRANCH F-7 Study Director: Anthony F. Dobbels
Project ID: Investigator: Dr. Mark M. Loux
Sponsor Contact:

Rating Type

PHYGEN = phytotoxicity - general / injury

Rating Unit

% = percent

Plant-Eval Interval

41 DP-1 = 1 4/20/10

48 DP-1 = 1 4/20/10

55 DP-1 = 1 4/20/10

69 DP-1 = 1 4/20/10

91 DP-1 = 1 4/20/10

Pest Code

SETFA, *Setaria faberi*, = US

AMBTR, *Ambrosia trifida*, = US

CHEAL, *Chenopodium album*, = US

AMARE, *Amaranthus retroflexus*, = US

ABUTH, *Abutilon theophrasti*, = US

POLPY, *Polygonum pensylvanicum*, = US

SIDSP, *Sida spinosa*, = US

IPOHE, *Ipomoea hederacea*, = US

Crop Code

ZEAMX, BCOR, *Zea mays*, = US