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
State/Prov.: Ohio
Postal Code: 45368
Country: USA
Latitude of LL Corner °: 39.86021 N
Longitude of LL Corner °: 83.67121 W
Altitude of LL Corner, Unit: 1104.00 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
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 Temperature, Unit: 55 F
Soil Moisture: DRY dry
Emergence Date: 5/3/10
Harvest Date: 9/14/10
Harvest Equipment: MASSEY 8 XP
Harvested Width, Unit: 5 FT
Harvested Length, Unit: 30 FT
% Standard Moisture: 15.5
Moisture Meter: HARVEST MASTER
Weighing Equipment: HARVEST MASTER 401

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
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

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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
Stage Majority, Percent:		12 100	14 100	16 100
Height, Unit:		3 IN	9 IN	15 IN
Height Minimum, Maximum:				13 17

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
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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Sponsor Contact:

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	30	31	32
	Crop Code					ZEAMX	ZEAMX	ZEAMX
	BBCH Scale					BCOR	BCOR	BCOR
	Crop Scientific Name					Zea mays	Zea mays	Zea mays
	Crop Name					Corn	Corn	Corn
	Rating Date					9/14/10	9/14/10	9/14/10
	Rating Type					YIELD	MOICON	YIELD
	Rating Unit					LBS	%	BU
	Number of Subsamples					1	1	1
	Trt-Eval Interval							
	Plant-Eval Interval					147 DP-1	147 DP-1	147 DP-1
	Days After Emergence					134 DE	134 DE	134 DE
1	Lexar	3.7	3.5	qt/a	A	50.2 abc	22.4 a	238.9 ab
2	Corvus	2.63	5.6	oz/a	A	48.6 abc	23.5 a	227.7 ab
2	Atrazine	4	3	pt/a				
3	Balance Flexx	2	6	oz/a	A	49.3 abc	21.3 a	238.0 ab
3	Atrazine	4	3	pt/a				
4	Corvus	2.63	5.6	oz/a	B	48.4 abc	21.7 a	232.0 ab
4	Atrazine	4	2	pt/a				
5	Balance Flexx	2	6	oz/a	B	46.8 bc	22.3 a	223.2 b
5	Atrazine	4	2	pt/a				
6	Capreno	3.46	3	oz/a	B	45.5 bc	23.1 a	214.7 b
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	44.8 c	21.8 a	214.0 b
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	48.0 abc	24.5 a	222.1 b
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	47.2 abc	20.4 a	229.9 ab
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	46.9 bc	23.5 a	219.4 b
10	Durango DMA	4	24	oz/a				
10	N-PAK AMS	100	2	qt/a				
11	Capreno	3.46	3	oz/a	C	51.3 ab	23.9 a	239.2 ab
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	51.2 ab	23.7 a	240.1 ab
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	51.2 ab	24.1 a	238.3 ab
13	Capreno	3.46	3	oz/a	D			
13	Roundup PowerMax	4.5	11	oz/a				
13	COC	100	0.8	qt/a				

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	Crop Code					ZEAMX	ZEAMX	ZEAMX
	BBCH Scale					BCOR	BCOR	BCOR
	Crop Scientific Name					Zea mays	Zea mays	Zea mays
	Crop Name					Corn	Corn	Corn
	Rating Date					9/14/10	9/14/10	9/14/10
	Rating Type					YIELD	MOICON	YIELD
	Rating Unit					LBS	%	BU
	Number of Subsamples					1	1	1
	Trt-Eval Interval							
	Plant-Eval Interval					147 DP-1	147 DP-1	147 DP-1
	Days After Emergence					134 DE	134 DE	134 DE
13	N-PAK AMS	100	2	qt/a				
14	Corvus	2.63	3	oz/a	A	50.9 abc	24.0 a	236.8 ab
14	Ignite	2.34	22	oz/a	D			
14	Laudis	3.5	2	oz/a				
14	N-PAK AMS	100	2	qt/a				
15	Balance Flexx	2	3	oz/a	A	51.3 ab	24.6 a	237.3 ab
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	53.5 a	22.6 a	254.0 a
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	50.1 abc	23.5 a	235.2 ab
17	Durango DMA	4	24	oz/a	D			
17	N-PAK AMS	100	2	qt/a				
18	UTC					34.0 d	26.1 a	154.0 c
	LSD (P=.05)					6.40	3.63	27.55
	Standard Deviation					3.84	2.18	16.52
	CV					7.95	9.39	7.26
	Bartlett's X2					14.051	11.269	21.456
	P(Bartlett's X2)					0.664	0.842	0.207
	Replicate F					21.640	3.559	19.411
	Replicate Prob(F)					0.0001	0.0402	0.0001
	Treatment F					3.667	1.199	4.840
	Treatment Prob(F)					0.0008	0.3187	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Crop Code
ZEAMX, BCOR, Zea mays, = US
Rating Type
YIELD = yield
MOICON = moisture content
Rating Unit
% = percent
BU = bushel
Plant-Eval Interval
147 DP-1 = 1 4/20/10
ARM Action Codes
TY1 = 5.185714*30*(100-31)/84.5