

Ohio State University Horticulture and Crop Science

PRE fb POST WEED CONTROL IN CORN I

Title No. 2:
Trial ID: 10PRPOC1 Protocol ID: 10PRPOC1
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 °:** 39.86024 N
State/Prov.: Ohio **Longitude of LL Corner °:** 83.67149 W
Postal Code: 45368 **Altitude of LL Corner, Unit:** 1109.00 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

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:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 3 Type: W **Code:** POLPY *Polygonum pensylvanicum*
Common Name: Pennsylvania smartweed

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

Pest 5 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 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	B
Application Date:	4/20/10	5/31/10
Time of Day:	3:00 P.M.	10:00 A.M
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Application Placement:	BROSOI	BROFO
Applied By:	Loux	Ackley
Air Temperature, Unit:	64 F	78 F
% Relative Humidity:	32	72
Wind Velocity, Unit:	3 MPH	6 MPH
Wind Direction:	N	ESE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	58 F	74 F
Soil Moisture:	DRY	DRY
% Cloud Cover:	15	15
Next Rain Occurred On:	4/24/10	6/2/10

Crop Stage At Each Application

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

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		14 100
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6
Density, Unit:		62.4 M2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		18 100
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6
Density, Unit:		5.2 M2
Pest 3 Code, Type, Scale:	POLPY W	POLPY W
Stage Majority, Percent:		15 100
Height, Unit:		4 IN
Height Minimum, Maximum:		4 5
Density, Unit:		13.2 M2
Pest 4 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:		16 100
Height, Unit:		4 IN
Height Minimum, Maximum:		2 4
Density, Unit:		32 M2
Pest 5 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:		15 100
Height, Unit:		4 IN
Height Minimum, Maximum:		3 4

Application Equipment

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

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Crop Code					ZEAMX	ZEAMX	ZEAMX	
Rating Date					9/14/10	9/14/10	9/14/10	
Rating Type					YIELD	MOICON	YIELD	
Rating Unit					LBS	%	BU	
Trt-Eval Interval								
Plant-Eval Interval					147 DP-1	147 DP-1	147 DP-1	
Days After Emergence					134 DE	134 DE	134 DE	
BBCH Scale					BCOR	BCOR	BCOR	
Crop Scientific Name					Zea mays	Zea mays	Zea mays	
Crop Name					Corn	Corn	Corn	
Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	34	35	36
1	Integrity	5.57	16 oz/a		A	49.1 b	22.5 a	233.4 a
1	Guardsman Max	5	1.5 pt/a					
2	Integrity	5.57	16 oz/a		A	49.9 ab	24.1 a	232.2 a
2	Roundup PowerMax	4.5	22 oz/a		B			
2	NIS	100	6.4 oz/a					
2	N-PAK AMS	100	4 qt/a					
3	Lexar	3.7	2.25 qt/a		A	50.4 ab	24.6 a	233.0 a
3	Roundup PowerMax	4.5	22 oz/a		B			
3	NIS	100	6.4 oz/a					
3	N-PAK AMS	100	4 qt/a					
4	Corvus	2.63	3.33 oz/a		A	52.6 ab	24.3 a	244.0 a
4	Atrazine	4	1 qt/a					
4	Roundup PowerMax	4.5	22 oz/a		B			
4	NIS	100	6.4 oz/a					
4	N-PAK AMS	100	4 qt/a					
5	Harness Extra 5.6	5.6	1.5 qt/a		A	53.5 ab	23.5 a	250.9 a
5	Roundup PowerMax	4.5	22 oz/a		B			
5	NIS	100	6.4 oz/a					
5	N-PAK AMS	100	4 qt/a					
6	Surestart	4.25	1.75 pt/a		A	53.4 ab	24.6 a	246.7 a
6	Roundup PowerMax	4.5	22 oz/a		B			
6	NIS	100	6.4 oz/a					
6	N-PAK AMS	100	4 qt/a					
7	Integrity	5.57	16 oz/a		A	53.2 ab	23.1 a	251.3 a
7	Roundup PowerMax	4.5	22 oz/a		B			
7	Status	56	2.5 oz/a					
7	NIS	100	6.4 oz/a					
7	N-PAK AMS	100	4 qt/a					
8	Lumax	3.94	2 qt/a		A	51.5 ab	25.1 a	236.5 a
8	Touchdown Total	4.17	24 oz/a		B			
8	N-PAK AMS	100	4 qt/a					
9	Lexar	3.7	2.25 qt/a		A	52.1 ab	22.7 a	247.1 a
9	Touchdown Total	4.17	24 oz/a		B			
9	N-PAK AMS	100	4 qt/a					
10	Bicep II Magnum	5.5	1.3 qt/a		A	52.5 ab	25.5 a	239.8 a
10	Touchdown Total	4.17	24 oz/a		B			
10	N-PAK AMS	100	4 qt/a					
11	Bicep II Magnum	5.5	1.3 qt/a		A	52.1 ab	23.3 a	245.4 a
11	Halex GT	4.38	3.6 pt/a		B			
11	NIS	100	6.4 oz/a					
11	N-PAK AMS	100	4 qt/a					
12	Lexar	3.7	1.75 qt/a		A	55.2 a	25.0 a	254.0 a
12	Halex GT	4.38	3.6 pt/a		B			

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Trt	Treatment	Form	Other	Other	Appl				
No.	Name	Conc	Rate	Rate	Unit	Code	34	35	36
12	NIS	100	6.4	oz/a					
12	N-PAK AMS	100	4	qt/a					
13	Lumax	3.94	1.5	qt/a	A		51.5 ab	23.8 a	240.2 a
13	Halex GT	4.38	3.6	pt/a	B				
13	NIS	100	6.4	oz/a					
13	N-PAK AMS	100	4	qt/a					
14	Harness Extra 5.6	5.6	1.5	qt/a	A		51.1 ab	25.1 a	235.0 a
14	Yukon	67.5	4	oz/a	B				
14	Roundup PowerMax	4.5	22	oz/a					
14	NIS	100	3.2	oz/a					
14	N-PAK AMS	100	2	qt/a					
15	Prequel	100			A		53.8 ab	23.6 a	252.3 a
15	rimsulfuron	25	1	oz/a	A				
15	isoxaflutole	75	0.67	oz/a					
15	Abundit	3	32	oz/a	B				
15	N-PAK AMS	100	4	qt/a					
16	UTC						38.4 c	28.4 a	168.6 b
	LSD (P=.05)						5.32	3.90	22.36
	Standard Deviation						3.19	2.34	13.41
	CV						6.22	9.62	5.63
	Bartlett's X2						26.881	19.555	11.193
	P(Bartlett's X2)						0.03*	0.19	0.739
	Replicate F						6.586	1.436	6.461
	Replicate Prob(F)						0.0043	0.2538	0.0046
	Treatment F						4.185	1.095	6.641
	Treatment Prob(F)						0.0004	0.4007	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*34*(100-35)/84.5