

The Ohio State University

PRE fb POST Weed Control Programs in Corn I

Trial ID: 13PRPOC1 Location: WESTERN BRANCH F-8 E Trial Year: 2013
 Protocol ID: HP13USABL Investigator: Dr. Mark M. Loux
 Project ID: Study Director: Anthony F. Dobbels
 Sponsor Contact: Dave Lamore, Bayer CropScience

General Trial Information

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

Trial Location

City: South Charleston **Country:** USA United States
State/Prov.: Ohio
Postal Code: 45368 **Climate Zone:** US Warm Continental

Latitude of LL Corner °: 3951.604 N
Longitude of LL Corner °: 8340.189 W

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: Pioneer P1018AMX
Description: RR/LL

Planting Rate, Unit: 32097 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Soil Temperature, Unit: 58 F
Soil Moisture: NORMAL normal, adequate
Seed Bed: MEDIUM medium

Planting Date: May-6-2013
Planting Method: PLANTD planted
Planting Equipment: FPP Finger Pickup Planter
Emergence Date: May-17-2013
Harvest Date: Oct-21-2013
Harvested Width, Unit: 5 FT
Harvested Length, Unit: 40 FT
Harvest Equipment: Massey Ferguson 8 XP
% Standard Moisture: 15.5
Moisture Meter: Harvest Master
Weighing Equipment: Harvest Master

Pest Description

Pest 1 Type: W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed

Pest 2 Type: W **Code:** IPOHE *Ipomoea hederacea*
Common Name: Ivyleaf morningglory

Pest 3 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters

Pest 4 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 5 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf

Pest 6 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail

Pest 7 Type: W **Code:** HIBTR *Hibiscus trionum*
Common Name: Venice mallow

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 40 FT
Treated Plot Area: 266.8 FT2 **Treatments:** 20
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)

No. Previous Crop Year

1. Soybean 2012

Soil Description

Description Name: F-8 East
% OM: 3.1 **Texture:** SICL silty clay loam
pH: 5.9 **Soil Name:** Kokomo
CEC: 17.3 **Fert. Level:** G good
Soil Drainage: G good

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	Application Description		
	A	B	C
Application Date:	May-6-2013	May-21-2013	Jun-7-2013
Appl. Start Time:	11:30 AM	9:15 AM	1:30 PM
Appl. Stop Time:	12:00 PM	9:45 AM	2:00 PM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	V3	POST
Application Placement:	BROSOI	BROFOL	BROFOL
Air Temperature, Unit:	60 F	75 F	67 F
% Relative Humidity:	100	70	77
Wind Velocity, Unit:	7 MPH	5 MPH	1.5 MPH
Wind Direction:	SE	SW	NNW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	56 F	70 F	64 F
Soil Moisture:	NORMAL	NORMAL	MOIST
% Cloud Cover:	100	40	50
Next Moisture Occurred On:	May-6-2013	May-22-2013	Jun-10-2013
Time to Next Moisture, Unit:	1 HR	1 DAY	3 DAY

	Crop Stage At Each Application					
	A		B		C	
Crop 1 Code, BBCH Scale:	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR
Stage Scale Used:			BBCH		BBCH	
Stage Majority, Percent:			13	100	16	100
Stage Minimum, Percent:			13	100	16	100
Stage Maximum, Percent:			13	100	16	100
Height, Unit:			3	IN	13	IN
Height Minimum, Maximum:			2	3	13	14

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Pest Stage At Each Application

	A		B		C	
Pest 1 Code, Type, Scale:	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent:			12	100	14	50
Stage Minimum, Percent:					14	50
Stage Maximum, Percent:					18	50
Height, Unit:			0.5	IN	4	IN
Height Minimum, Maximum:			0.5	0.5	1	4
Density, Unit:					4	M2
Pest 2 Code, Type, Scale:	IPOHE	W	IPOHE	W	IPOHE	W
Stage Majority, Percent:			10	100	10	75
Stage Minimum, Percent:					10	75
Stage Maximum, Percent:					14	25
Height, Unit:			1	IN	1.5	IN
Height Minimum, Maximum:			1	1	1.5	3
Density, Unit:					1	M2
Pest 3 Code, Type, Scale:	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent:			12	100	18	50
Stage Minimum, Percent:					10	50
Stage Maximum, Percent:					18	50
Height, Unit:			1	IN	1	IN
Height Minimum, Maximum:			1	1	1	4
Density, Unit:					8	M2
Pest 4 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:			14	100	14	50
Stage Minimum, Percent:					14	50
Stage Maximum, Percent:					18	50
Height, Unit:			3	IN	4	IN
Height Minimum, Maximum:			1	3	4	8
Density, Unit:					20	M2
Pest 5 Code, Type, Scale:	ABUTH	W	ABUTH	W	ABUTH	W
Stage Majority, Percent:			11	100	14	50
Stage Minimum, Percent:					10	50
Stage Maximum, Percent:					14	50
Height, Unit:			0.5	IN	1	IN
Height Minimum, Maximum:			0.5	0.5	1	4
Density, Unit:					4	M2
Pest 6 Code, Type, Scale:	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent:			13	100	14	100
Stage Minimum, Percent:					14	100
Stage Maximum, Percent:					14	100
Height, Unit:			1	IN	1	IN
Height Minimum, Maximum:			1	1	1	3
Density, Unit:					200	M2
Pest 7 Code, Type, Scale:	HIBTR	W	HIBTR	W	HIBTR	W
Stage Majority, Percent:					14	100
Stage Minimum, Percent:					14	100
Stage Maximum, Percent:					14	100
Height, Unit:					1	IN
Height Minimum, Maximum:					1	3

Application Equipment

	A		B		C	
Appl. Equipment:	6 foot boom	10' AI XR	10' AI XR		10' AI XR	
Equipment Type:	SPRBAC	SPRBAC	SPRBAC		SPRBAC	
Operation Pressure, Unit:	46 PSI	46 PSI	46 PSI		46 PSI	
Nozzle Type:	AI XR	AI XR	AI XR		AI XR	
Nozzle Size:	110015	110015	110015		110015	
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN		18 IN	
Boom Length, Unit:	6 FT	10 FT	10 FT		10 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:	15 GPA	15 GPA	15 GPA		15 GPA	
Mix Size, Unit:	1 Liters	0.33 Gallons	0.33 Gallons		0.33 Gallons	
Propellant:	CO2	CO2	CO2		CO2	

Date By Notes
Jun-14-2013 Dobbels Phyto Leaf Malformation = ALS type stacking of internodes

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
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	Oct-21-2013	Oct-21-2013	Oct-21-2013
Rating Type	YIELD	MOICON	YIELD
Rating Unit	LBS	%	BU
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit	200 FT2	200 FT2	200 FT2
Number of Subsamples	1	1	1
Days After First/Last Applic.	168 136	168 136	168 136
Trt-Eval Interval			
Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1
Days After Emergence	157 DE-1	157 DE-1	157 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	28	29	30
1	UTC					22.9 g	18.7 a	85.8 d
2	Lexar EZ	3.5 qt/a		PRE	A	62.2 a-f	16.9 a	238.1 abc
3	Lumax EZ	3.25 qt/a		PRE	A	58.9 c-f	16.3 a	226.8 abc
3	AAtrex	1.5 qt/a		PRE	A			
4	Corvus	5.6 oz/a		PRE	A	63.3 a-d	16.8 a	242.3 ab
4	Atrazine	1.5 qt/a		PRE	A			
5	Instigate 6 oz					55.8 f	16.1 a	215.3 c
5	Rimsulfuron	1 oz/a		PRE	A			
5	Mesotrione	5 oz/a		PRE	A			
5	Atrazine	1.5 qt/a		PRE	A			
6	Tripleflex	2 pt/a		PRE	A	56.4 ef	17.0 a	215.3 c
6	Atrazine	1.5 qt/a		PRE	A			
7	Lexar EZ	3 qt/a		PRE	A	59.8 b-f	15.9 a	231.2 abc
8	Balance Flexx	6 oz/a		PRE	A	62.4 a-f	17.3 a	237.7 abc
8	Bicep II Magnum	2 qt/a		PRE	A			
9	Capreno	3 oz/a		V3	B	62.3 a-f	16.4 a	239.6 abc
9	Atrazine	1 qt/a		V3	B			
9	Roundup PowerMax	22 oz/a		V3	B			
9	N-PAK AMS	1.5 qt/a		V3	B			
10	Capreno	3 oz/a		V3	B	62.9 a-e	17.5 a	238.8 abc
10	Roundup PowerMax	22 oz/a		V3	B			
10	Clarity	1 pt/a		V3	B			
10	N-PAK AMS	1.5 qt/a		V3	B			
11	Halex GT	3.6 pt/a		V3	B	62.5 a-f	18.2 a	235.5 abc
11	Atrazine	2 pt/a		V3	B			
11	NIS	4.8 oz/a		V3	B			
11	N-PAK AMS	1.5 qt/a		V3	B			

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.

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Pest Scientific Name			
Pest Name			
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	Oct-21-2013	Oct-21-2013	Oct-21-2013
Rating Type	YIELD	MOICON	YIELD
Rating Unit	LBS	%	BU
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit	200 FT2	200 FT2	200 FT2
Number of Subsamples	1	1	1
Days After First/Last Applic.	168 136	168 136	168 136
Trt-Eval Interval			
Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1
Days After Emergence	157 DE-1	157 DE-1	157 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	28	29	30
12	Tripleflex	1.5 pt/a		V3	B	64.2 a-d	17.4 a	244.3 ab
12	Roundup PowerMax	22 oz/a		V3	B			
12	N-PAK AMS	1.5 qt/a		V3	B			
13	Balance Flexx	4 oz/a		PRE	A	62.5 a-f	17.3 a	238.0 abc
13	Atrazine	1.5 qt/a		PRE	A			
13	Tripleflex	1.5 pt/a		V3	B			
13	Liberty	22 oz/a		V3	B			
13	N-PAK AMS	1.5 qt/a		V3	B			
14	Corvus	3.5 oz/a		PRE	A	65.7 abc	16.9 a	251.2 ab
14	Atrazine	1 qt/a		PRE	A			
14	Status	5 oz/a		POST	C			
14	Roundup PowerMax	22 oz/a		POST	C			
14	N-PAK AMS	1.5 qt/a		POST	C			
15	Degree Xtra	3.2 qt/a		PRE	A	63.4 a-d	16.7 a	243.1 ab
15	Laudis	2 oz/a		POST	C			
15	Clarity	8 oz/a		POST	C			
15	MSO	0.6 qt/a		POST	C			
15	N-PAK AMS	1.5 qt/a		POST	C			
16	Balance Flexx	4 oz/a		PRE	A	56.1 ef	17.0 a	214.5 c
16	Atrazine	1.5 qt/a		PRE	A			
16	Clarity	8 oz/a		POST	C			
16	Liberty	22 oz/a		POST	C			
16	N-PAK AMS	1.5 qt/a		POST	C			
17	Resolve Q 1.5 oz					66.7 a	17.5 a	253.2 a
17	Rimsulfuron	1.1 oz/a		PRE	A			
17	Thifensulfuron	0.15 oz/a		PRE	A			
17	Atrazine	1.5 qt/a		PRE	A			
17	Roundup PowerMax	22 oz/a		POST	C			
17	N-PAK AMS	1.5 qt/a		POST	C			
18	Keystone NXT	2.4 qt/a		PRE	A	58.8 def	16.7 a	225.3 bc
18	Hornet	3 oz/a		PRE	A			
19	Surestart	2 pt/a		PRE	A	64.0 a-d	17.1 a	244.0 ab
19	Durango DMA	1.5 pt/a		POST	C			
19	N-PAK AMS	1.5 qt/a		POST	C			

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Pest Code			
Pest Scientific Name			
Pest Name			
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	Oct-21-2013	Oct-21-2013	Oct-21-2013
Rating Type	YIELD	MOICON	YIELD
Rating Unit	LBS	%	BU
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit	200 FT2	200 FT2	200 FT2
Number of Subsamples	1	1	1
Days After First/Last Applic.	168 136	168 136	168 136
Trt-Eval Interval			
Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1
Days After Emergence	157 DE-1	157 DE-1	157 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt Treatment No. Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	28	29	30
20 Surestart	2 pt/a		PRE	A	66.5 ab	18.0 a	251.0 ab
20 Surestart	1.5 pt/a		POST	C			
20 Durango DMA	1.5 pt/a		POST	C			
20 N-PAK AMS	1.5 qt/a		POST	C			

LSD (P=.05)	6.83	1.55	26.69
Standard Deviation	4.83	1.10	18.87
CV	8.07	6.42	8.26
Bartlett's X2	33.757	21.067	28.628
P(Bartlett's X2)	0.02*	0.333	0.072
Skewness	-2.611*	0.8522*	-2.6335*
Kurtosis	7.259*	0.5331	7.4336*
Replicate F	2.379	0.474	2.367
Replicate Prob(F)	0.0791	0.7013	0.0803
Treatment F	14.757	1.508	14.186
Treatment Prob(F)	0.0001	0.1179	0.0001

Crop Code
ZEAMX, BCOR, Zea mays, = US

Rating Type
YIELD = yield
MOICON = moisture content

Rating Unit
% = percent
BU = bushel

PLOT = total plot

FT2 = square foot
Plant-Eval Interval
168 DP-1 = 1 ZEAMX May-6-2013

ARM Action Codes
TY1 = 3.889286*[28]*(100-[29])/84.5