

The Ohio State University

Bayer Northern Weed Management Programs Corvus, Balance Flexx, Capreno, Laudis, Liberty / Fld. Corn / Univ. Demos

Trial ID: 14PRPOC1 Location: Western Branch F-7 W Trial Year: 2014
 Protocol ID: 14PRPOC1 Investigator: Dr. Mark M. Loux
 Project ID: HP14USABLL Study Director: Anthony Dobbels
 Sponsor Contact: Dain Bruns, Syngenta

General Trial Information

Study Director: Anthony Dobbels
Investigator: Dr. Mark M. Loux

Trial Location

City: South Charleston **Country:** USA United States
State/Prov.: Ohio
Postal Code: 45368 **Climate Zone:** US Warm Continental
Latitude of LL Corner °: 39.86036 N
Longitude of LL Corner °: 83.67307 W

Contacts

Study Director: Anthony Dobbels
Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: ZEAMX Zea mays
Variety: Seed Consultants 11HR12
Description: RR/LL

Planting Rate, Unit: 32097 S/A
Depth, Unit: 1.75 IN
Row Spacing, Unit: 30 IN

Soil Temperature, Unit: 56 F
Soil Moisture: GOOD good
Seed Bed: MEDIUM medium

Planting Date: Apr-26-2014
Planting Method: SEEDED seeded
Planting Equipment: FPP Finger Pickup Planter
Emergence Date: May-12-2014
Harvest Date: Sep-30-2014
Harvested Width, Unit: 5 FT
Harvested Length, Unit: 30 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:** SETFA *Setaria faberi*
Common Name: Giant foxtail
- Pest 2 Type:** W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed
- Pest 3 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed
- Pest 4 Type:** W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters
- Pest 5 Type:** W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed
- Pest 6 Type:** W **Code:** POLPY *Persicaria pensylvanica*
Common Name: Pennsylvania smartweed
- Pest 7 Type:** W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf
- Pest 8 Type:** W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 30 FT
Treated Plot Area: 200.1 FT2 **Treatments:** 16
Replications: 3

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 2013

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Soil Description

Description Name: F-7 West
% OM: 3.8 **Texture:** SICL silty clay loam
pH: 7.2 **Soil Name:** Kokomo
CEC: 23.6 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	Apr-26-2014	May-27-2014	Jun-5-2014
Appl. Start Time:	6:00 PM	8:50 AM	10:30 AM
Appl. Stop Time:	6:30 PM	9:15 AM	11:00 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPO	POST
Application Placement:	BROSOI	BROSOI	BROFOL
Applied By:	Ackley	Loux	Loux
Air Temperature, Unit:	74 F	75.7 F	66 f
% Relative Humidity:	47	72.2	73
Wind Velocity, Unit:	7 MPH	5.7 MPH	5.5 MPH
Wind Direction:	N	W	W
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	62 F	68 F	62 F
Soil Moisture:	DRY	DRY	MOIST
% Cloud Cover:	5	25	10
Next Moisture Occurred On:	Apr-28-2014	Jun-2-2014	Jun-8-2014
Time to Next Moisture, Unit:	1.5 DAY	6 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:	DESC		DESC		DESC	
Stage Majority, Percent:	13	100	15	100		
Height, Unit:	11	IN	18	IN		
Height Minimum, Maximum:	11	13	17	19		

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Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Stage Majority, Percent:		13 100	12 100
Height, Unit:		2 IN	1.5 IN
Height Minimum, Maximum:		2 2.5	1 2
Density, Unit:		166 M2	166 M2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:		14 100	19 100
Height, Unit:		4 IN	8 IN
Height Minimum, Maximum:		4 5	7 9
Density, Unit:		14.66 M2	14.66 M2
Pest 3 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W
Stage Majority, Percent:		14 100	
Height, Unit:		2 IN	
Height Minimum, Maximum:		1 2	
Density, Unit:		3.33 M2	
Pest 4 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W
Stage Majority, Percent:		14 100	
Height, Unit:		2 IN	
Height Minimum, Maximum:		1 2	
Density, Unit:		7.33 M2	
Pest 5 Code, Type, Scale:	AMARE W	AMARE W	AMARE W
Stage Majority, Percent:		12 100	
Height, Unit:		1 IN	
Height Minimum, Maximum:		0.75 1	
Density, Unit:		9.66 M2	
Pest 6 Code, Type, Scale:	POLPY W	POLPY W	POLPY W
Stage Majority, Percent:		12 100	
Height, Unit:		1 IN	
Height Minimum, Maximum:		1 2	
Density, Unit:		2 M2	
Pest 7 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:		12 100	
Height, Unit:		1 IN	
Height Minimum, Maximum:		0.5 1	
Density, Unit:		4.33 M2	
Pest 8 Code, Type, Scale:	SIDSP W	SIDSP W	SIDSP W
Stage Majority, Percent:		12 100	
Height, Unit:		0.5 IN	
Height Minimum, Maximum:		0.5 0.75	
Density, Unit:		12 M2	

Application Equipment

	A	B	C
Appl. Equipment:	6 FOOT BOOM	6 FOOT BOOM	6 FOOT BOOM
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	46 PSI	46 PSI
Nozzle Type:	AI XR	AI XR	AI XR
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN
Boom Length, Unit:	6.67 FT	6.67 FT	10 FT
Boom Height, Unit:	20 IN	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA
Mix Size, Unit:	1 Liters	1 Liters	1 Liters
Propellant:	CO2	CO2	CO2

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Trt No.	Treatment Name	Other Rate	Other Rate	Unit	Appl Code	Appl Description	31	32	33	34
1	UTC						26.1 f	22.3 a	125.0 e	54.2 c
2	Corvus	5.6 oz/a			A	PRE	37.3 de	18.5 d	186.6 cd	59.3 a
2	Atrazine	1.5 qt/a			A	PRE				
3	Verdict	15 oz/a			A	PRE	32.4 ef	20.4 bc	158.4 de	57.7 ab
3	Zidua	2 oz/a			A	PRE				
3	Atrazine	1.5 qt/a			A	PRE				
4	Tripleflex	3 pt/a			A	PRE	42.9 bcd	19.5 bcd	211.6 abc	57.4 ab
4	Atrazine	1.5 qt/a			A	PRE				
5	Lexar EZ	3 qt/a			A	PRE	42.9 bcd	19.6 bcd	211.6 abc	59.0 a
6	Balance Flexx	4 oz/a			A	PRE	41.3 cd	18.8 cd	205.6 bc	57.9 ab
6	Bicep II Magnum	2 qt/a			A	PRE				
7	Capreno	3 oz/a			B	EPO	48.0 abc	20.6 b	234.3 ab	56.6 b
7	Atrazine	1 qt/a			B	EPO				
7	Roundup PowerMax	32 oz/a			B	EPO				
7	N PAK AMS	1.5 qt/a			B	EPO				
8	Capreno	3 oz/a			B	EPO	48.3 abc	18.4 d	241.7 ab	57.7 ab
8	Clarity	1 pt/a			B	EPO				
8	Roundup PowerMax	32 oz/a			B	EPO				
8	N PAK AMS	1.5 qt/a			B	EPO				
9	Halex GT	3.6 pt/a			B	EPO	51.6 a	19.5 bcd	254.9 a	57.7 ab
9	Atrazine	1 qt/a			B	EPO				
9	NIS	4.8 oz/a			B	EPO				
9	N PAK AMS	1.5 qt/a			B	EPO				
10	Tripleflex	1.5 pt/a			B	EPO	50.0 ab	20.1	246.0 ab	56.7 b
10	Roundup PowerMax	32 oz/a			B	EPO				
10	N PAK AMS	1.5 qt/a			B	EPO				

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.
 Missing data estimates are included in columns: Average=31,32,33,34

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Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	31	32	33	34
11	Balance Flexx	4 oz/a		A	PRE	45.6 a-d	19.7 bcd	225.0 abc	57.7 ab
11	Atrazine	1.5 qt/a		A	PRE				
11	Tripleflex	1.5 pt/a		B	EPO				
11	Liberty	22 oz/a		B	EPO				
11	N PAK AMS	1.5 qt/a		B	EPO				
12	Corvus	4 oz/a		A	PRE	47.0 abc	19.4 bcd	232.6 ab	58.4 ab
12	Atrazine	1 qt/a		A	PRE				
12	DiFlexx	8 oz/a		C	POST				
12	Roundup PowerMax	32 oz/a		C	POST				
12	N PAK AMS	1.5 qt/a		C	POST				
13	Degree Xtra	3.2 qt/a		A	PRE	51.8 a	20.1 bcd	254.0 a	56.9 b
13	Laudis	3 oz/a		C	POST				
13	Roundup PowerMax	32 oz/a		C	POST				
13	N PAK AMS	1.5 qt/a		C	POST				
14	Degree Xtra	3.2 qt/a		A	PRE	46.9 abc	19.2 bcd	232.5 ab	57.7 ab
14	Laudis	3 oz/a		C	POST				
14	Stratego YLD	2 oz/a		C	POST				
14	Roundup PowerMax	32 oz/a		C	POST				
14	N PAK AMS	1.5 qt/a		C	POST				
15	Corvus	4 oz/a		A	PRE	48.5 abc	19.2 bcd	240.6 ab	57.6 ab
15	Atrazine	1.5 qt/a		A	PRE				
15	DiFlexx	8 oz/a		C	POST				
15	Liberty	22 oz/a		C	POST				
15	N PAK AMS	1.5 qt/a		C	POST				

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Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn	Corn
Rating Date	Sep-30-2014	Sep-30-2014	Sep-30-2014	Sep-30-2014
Rating Type	WEIGHT	MOICON	YIELD	WEITES
Rating Unit	LBS	%	BU	LBS
Number of Subsamples	1	1	1	1
Rating Timing				
Days After First/Last Applic.	157 117	157 117	157 117	157 117
Trt-Eval Interval				
Plant-Eval Interval	157 DP-1	157 DP-1	157 DP-1	157 DP-1
Days After Emergence	141 DE-1	141 DE-1	141 DE-1	141 DE-1
ARM Action Codes		ET10	TY1	
Number of Decimals	1	1	1	1

Trt Treatment No. Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	31	32	33	34
16 Corvus	4 oz/a		A	PRE	49.1 abc	19.6 bcd	242.5 ab	57.8 ab
16 Atrazine	1.5 qt/a		A	PRE				
16 DiFlexx	8 oz/a		C	POST				
16 Stratego YLD	2 oz/a		C	POST				
16 Liberty	22 oz/a		C	POST				
16 N PAK AMS	1.5 qt/a		C	POST				
LSD (P=.05)					8.54	1.67	43.79	2.04
Standard Deviation					5.11	1.00	26.19	1.22
CV					11.51	5.07	11.96	2.12
Grand Mean					44.37	19.66	218.93	57.52
Bartlett's X2					13.372	21.428	14.338	28.069
P(Bartlett's X2)					0.497	0.065	0.425	0.014*
Skewness					-1.0126*	1.2742*	-1.0456*	-0.4377
Kurtosis					0.5084	2.7988*	0.7013	2.438*
Replicate F					0.851	0.259	0.808	0.387
Replicate Prob(F)					0.4379	0.7738	0.4559	0.6829
Treatment F					5.843	2.738	5.617	2.576
Treatment Prob(F)					0.0001	0.0127	0.0001	0.0148

Crop Code
 ZEAMX, BCOR, Zea mays, = US
Rating Type
 WEIGHT = weight
 MOICON = moisture content
 YIELD = yield
 WEITES = weight - test
Rating Unit
 % = percent
 BU = bushel
Plant-Eval Interval
 157 DP-1 = 1 ZEAMX Apr-26-2014
ARM Action Codes
 ET10 = Excluded treatment 10
 TY1 = 5.185714*[31]*(100-[32])/84.5