

The Ohio State University

Weed Control in Corn With Anthem and Anthem ATZ

Trial ID: 13PRPOC3
Protocol ID: 13PRP0C3
Project ID: PYRX.COR.13.JPR.01

Location: Trial Year:
Investigator: Dr. Mark M. Loux
Study Director:
Sponsor Contact: Joe Reed, FMC

General Trial Information

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 °: 3951.608 N
Longitude of LL Corner °: 8340.259 W

Crop Description

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

Corn

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

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

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

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:** STEME *Stellaria media*
Common Name: Common chickweed

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 40 FT
Treated Plot Area: 266.8 FT² **Treatments:** 12
Replications: 4

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

No. Previous Crop Year
1. soybean 2012

Soil Description

Description Name: F-8 Middle
% OM: 2 **Texture:** CL clay loam
pH: 7 **Soil Name:** Celina
CEC: 11.5 **Fert. Level:** G good
Soil Drainage: G good

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Application Equipment

	A	B
Appl. Equipment:	6 foot boom	10' AI XR
Equipment Type:	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	46 PSI
Nozzle Type:	AI XR	AI XR
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN
Boom Length, Unit:	6 FT	10 FT
Boom Height, Unit:	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA
Mix Size, Unit:	1 Liters	0.33 Gallons
Propellant:	CO2	CO2

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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-21-201	Oct-21-201	Oct-21-201
	3	3	3
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.	168 153	168 153	168 153
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		AL	TY1
Number of Decimals	1	1	1

Trt Treatment No. Name	Other Rate	Other Rate	Growth Unit	Appl Stage	Code	30	31	32
1 miss applied						52.9 b	16.7 a	202.7 b
2 Anthem ATZ	32 oz/a		PRE	A		59.2 a	16.4 a	227.9 a
3 Anthem ATZ	32 oz/a		PRE	A		60.0 a	17.4 a	228.0 a
3 Atrazine	0.5 qt/a		PRE	A				
4 Anthem ATZ	32 oz/a		PRE	A		59.9 a	16.5 a	230.1 a
4 Atrazine	0.5 qt/a		V-3	B				
4 Roundup PowerMax	22 oz/a		V-3	B				
4 N-PAK AMS	1.5 qt/a		V-3	B				
5 Anthem	8 oz/a		PRE	A		61.5 a	17.8 a	232.6 a
5 F9387	3 oz/a		V-3	B				
5 Roundup PowerMax	22 oz/a		V-3	B				
5 N-PAK AMS	1.5 qt/a		V-3	B				
6 Anthem ATZ	32 oz/a		PRE	A		60.8 a	17.1 a	232.0 a
6 F9387	3 oz/a		V-3	B				
6 Roundup PowerMax	22 oz/a		V-3	B				
6 N-PAK AMS	1.5 qt/a		V-3	B				
7 Anthem ATZ	32 oz/a		PRE	A		59.8 a	17.3 a	227.8 a
7 Sharpen	2 oz/a		PRE	A				
7 Roundup PowerMax	22 oz/a		V-3	B				
7 N-PAK AMS	1.5 qt/a		V-3	B				
8 Verdict	14 oz/a		PRE	A		59.7 a	17.1 a	227.4 a
8 Roundup PowerMax	22 oz/a		V-3	B				
8 N-PAK AMS	1.5 qt/a		V-3	B				
9 Bicep Lite II Magnum	1.9 qt/a		PRE	A		58.5 a	17.4 a	222.0 a
9 Callisto	3 oz/a		V-3	B				
9 Roundup PowerMax	22 oz/a		V-3	B				
9 N-PAK AMS	1.5 qt/a		V-3	B				

Means followed by same letter do not significantly differ (P=.05, LSD)
t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1
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ARM Action Codes		AL	TY1
Number of Decimals	1	1	1

Trt Treatment No. Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	30	31	32
10 Lumax EZ	2.5 qt/a		PRE	A	60.4 a	16.4 a	232.5 a
10 Roundup PowerMax	22 oz/a		V-3	B			
10 N-PAK AMS	1.5 qt/a		V-3	B			
11 Anthem ATZ	32 oz/a		PRE	A	58.5 a	16.1 a	225.7 a
11 Hornet	3 oz/a		PRE	A			
11 Roundup PowerMax	22 oz/a		V-3	B			
11 N-PAK AMS	1.5 qt/a		V-3	B			
12 Surestart	2 pt/a		PRE	A	59.0 a	17.0 a	225.3 a
12 Roundup PowerMax	22 oz/a		V-3	B			
12 N-PAK AMS	1.5 qt/a		V-3	B			
LSD (P=.05)					3.63	0.05t	13.60
Standard Deviation					2.51	0.03t	9.42
CV					4.24	2.55	4.17
Bartlett's X2					9.695	8.622	10.823
P(Bartlett's X2)					0.558	0.657	0.458
Skewness					-0.576	0.5917	-0.6012
Kurtosis					-0.0319	-0.6674	0.2794
Replicate F					0.993	0.520	1.571
Replicate Prob(F)					0.4083	0.6713	0.2149
Treatment F					3.004	0.628	2.913
Treatment Prob(F)					0.0071	0.7915	0.0086

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
AL = Automatic log transformation of X+1
TY1 = 3.889286*[30]*(100-[31])/84.5