

The Ohio State University

BASF Corn Program Approaches

Trial ID: 14PRPOC5
Protocol ID: 14PRPOC5
Project ID: MKD-H-US-2014-CH2

Location: Western Branch Trial Year: 2014
Investigator: Dr. Mark M. Loux
Study Director: Anthony Dobbels
Sponsor Contact: Trevor Kraus, BASF

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 °: 39.8603 N
Longitude of LL Corner °: 83.67229 W

Contacts

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

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: Pioneer P1184AM
Description: RR/LL

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

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

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

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:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters
- Pest 4 Type:** W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed
- Pest 5 Type:** W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf
- Pest 6 Type:** W **Code:** POLPY *Persicaria pensylvanica*
Common Name: Pennsylvania smartweed

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT2 **Treatments:** 12
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

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

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Application Description

	A	B
Application Date:	Apr-26-2014	May-27-2014
Appl. Start Time:	6:00 PM	8:50 AM
Appl. Stop Time:	6:30 PM	9:15 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	EPO
Application Placement:	BROSOI	BROSOI
Applied By:	Ackley	Ackley
Air Temperature, Unit:	74 F	75.7 F
% Relative Humidity:	47	72.2
Wind Velocity, Unit:	7 MPH	5.7 MPH
Wind Direction:	N	W
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	62 F	68 F
Soil Moisture:	DRY	DRY
% Cloud Cover:	5	25
Next Moisture Occurred On:	Apr-28-2014	Jun-2-2014
Time to Next Moisture, Unit:	1.5 DAY	6 DAY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:		DESC
Stage Majority, Percent:		13 100
Height, Unit:		11 IN
Height Minimum, Maximum:		11 13

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		13 100
Height, Unit:		2 IN
Height Minimum, Maximum:		2 2.5
Density, Unit:		189 M2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		14 100
Diameter, Unit:		1.5 IN
Height, Unit:		4 IN
Height Minimum, Maximum:		4 5
Density, Unit:		10 M2
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:		14 100
Height, Unit:		2 IN
Height Minimum, Maximum:		1 2
Density, Unit:		10.33 M2
Pest 4 Code, Type, Scale:	AMARE W	AMARE W
Stage Majority, Percent:		14 100
Height, Unit:		1 IN
Height Minimum, Maximum:		0.5 1
Density, Unit:		8.66 M2
Pest 5 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:		12 100
Height, Unit:		1 IN
Height Minimum, Maximum:		0.5 1
Density, Unit:		2 M2
Pest 6 Code, Type, Scale:	POLPY W	POLPY W
Stage Majority, Percent:		12 100
Height, Unit:		1 IN
Height Minimum, Maximum:		1 2
Density, Unit:		5.33 M2

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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:	6.67 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	2 Liters
Propellant:	CO2	CO2

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Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	31	32	33	34
1	Verdict	18 oz/a		A	PRE	47.62860 a	17.971 a	239.7 a	58.4377 a
1	Roundup PowerMax	32 oz/a		B	POST				
1	Status	5 oz/a		B	POST				
2	Verdict	18 oz/a		A	PRE	45.07787 a	18.185 a	226.3 a	58.3927 a
2	Roundup PowerMax	32 oz/a		B	POST				
2	Armezon	0.75 oz/a		B	POST				
2	Atrazine	0.5 qt/a		B	POST				
3	Surestart II	2.5 pt/a		A	PRE	45.77687 a	19.013 a	227.5 a	57.5953 a
3	Roundup PowerMax	32 oz/a		B	POST				
4	Dual II Magnum	1 pt/a		A	PRE	46.66464 a	18.559 a	233.2 a	58.9797 a
4	Halex GT	3.6 pt/a		B	POST				
4	NIS	4.8 oz/a		B	POST				
5	Lumax EZ	1.5 qt/a		A	PRE	46.68464 a	18.246 a	233.9 a	59.4333 a
5	Halex GT	3.6 pt/a		B	POST				
5	NIS	4.8 oz/a		B	POST				
6	Surestart II	2.5 pt/a		B	POST	47.96730 a	18.908 a	238.4 a	58.4363 a
6	Roundup PowerMax	32 oz/a		B	POST				
7	Corvus	4.5 oz/a		A	PRE	45.19404 a	17.972 a	227.5 a	58.9567 a
7	Laudis	3 oz/a		B	POST				
7	Roundup PowerMax	32 oz/a		B	POST				
8	Armezon	0.75 oz/a		B	POST	47.18010 a	18.532 a	235.9 a	58.5360 a
8	Outlook	18 oz/a		B	POST				
8	Roundup PowerMax	32 oz/a		B	POST				
8	Atrazine	0.5 qt/a		B	POST				
9	Halex GT	3.6 pt/a		B	POST	47.13607 a	18.182 a	236.6 a	59.0933
9	NIS	4.8 oz/a		B	POST				
10	Laudis	3 oz/a		B	POST	44.29544 a	17.945 a	222.6 a	58.9807 a
10	Roundup PowerMax	32 oz/a		B	POST				
10	Atrazine	0.5 qt/a		B	POST				

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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Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	31	32	33	34
11	Armezon	0.75 oz/a		B	POST	45.47887 a	18.026 a	228.7 a	58.9357 a
11	Roundup PowerMax	32 oz/a		B	POST				
11	Atrazine	0.5 qt/a		B	POST				
12	UTC					41.55570	20.195 a	203.2	57.9153 a
	LSD (P=.05)					5.275578	0.0315t	24.82	1.24838
	Standard Deviation					3.097429	0.0186t	14.57	0.73296
	CV					6.69	1.44	6.29	1.25
	Grand Mean					46.28	1.29t	231.84	58.6
	Bartlett's X2					5.995	8.808	4.445	18.017
	P(Bartlett's X2)					0.816	0.64	0.925	0.055
	Skewness					-0.5113	0.4202	-0.4382	-0.802
	Kurtosis					-0.0434	1.3465	-0.2517	1.033
	Replicate F					7.932	3.971	7.361	0.161
	Replicate Prob(F)					0.0029	0.0337	0.0040	0.8525
	Treatment F					0.437	1.733	0.444	1.565
	Treatment Prob(F)					0.9104	0.1311	0.9062	0.1890

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
 ET12 = Excluded treatment 12
 AL = Automatic log transformation of X+1
 ET9 = Excluded treatment 9
 TY1 = 5.185714*[31]*(100-[32])/84.5