

Bayer Weed Control Programs in Corn

Trial ID: 15BAYERCORN Location: Western Branch Big E Trial Year: 2015
 Protocol ID: 15BAYERCORN Investigator: Dr. Mark M. Loux
 Project ID: HP15USABLD Study Director: Anthony Dobbels
 Sponsor Contact: David Lamore, Bayer CropScience

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:** USWARM US Warm Continental

Latitude of LL Corner °: 39.85762 N
Longitude of LL Corner °: -83.67004 W

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Anthony Dobbels

Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: ZEAMX Zea mays
Variety: SCS 1105 AM
Description: RR / LL

Corn

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

Planting Date: 5-3-2015
Planting Method: PLANTD planted
Planting Equipment: FPP Finger Pickup Planter
Emergence Date: 5-9-2015
Harvest Date: 10-1-2015

Soil Temperature, Unit: 60 F
Soil Moisture: NORMAL normal, adequate
Seed Bed: MEDIUM medium

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:** 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:** HIBTR *Hibiscus trionum*
Common Name: Venice mallow
- Pest 7 Type:** W **Code:** POLPY *Persicaria pensylvanica*
Common Name: Pennsylvania smartweed
- Pest 8 Type:** W **Code:** SOLPT *Solanum ptycanthum*
Common Name: Eastern black nightshade

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² Treatments: 16
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 2014

Soil Description

Description Name: Big E
% OM: 2.8 Texture: SIL silt loam
pH: 5.9 Soil Name: Kokomo
CEC: 17.44 Fert. Level: G good
Soil Drainage: G good

Additional Measured Elements

Date Element Quantity Unit
4-24-2015 NH3 180 LBS

Application Description

	A	B	C
Application Date:	5-4-2015	5-22-2015	6-3-2015
Appl. Start Time:	11:00 AM	9:00 AM	9:00 AM
Appl. Stop Time:	11:20 AM	9:15 AM	9:15 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPO	POST
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	Bethel	Bethel	Bethel
Air Temperature, Unit:	73 F	55 F	60 F
% Relative Humidity:	45	69	85
Wind Velocity, Unit:	10 MPH	7 MPH	4 MPH
Wind Direction:	SW	WSW	NNE
Dew Presence (Y/N):	N no	N no	Y yes
Soil Temperature, Unit:	58 F	52 F	59 F
Soil Moisture:	DRY	DRY	WET
% Cloud Cover:	40	0	100
Next Moisture Occurred On:	5-5-2015	5-26-2015	6-5-2015
Time to Next Moisture, Unit:	14 HR	4 DAY	2 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	15	
Height, Unit:			6	IN	12	IN
Height Minimum, Maximum:					10	12

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 80
Stage Minimum, Percent:			12 80
Stage Maximum, Percent:			13 20
Height, Unit:		3 IN	3 IN
Height Minimum, Maximum:		2 3	2 5
Density, Unit:		21 M2	21 M2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:		14 100	16 80
Stage Minimum, Percent:			14 20
Stage Maximum, Percent:			16 80
Height, Unit:		3 IN	4 IN
Height Minimum, Maximum:		2 3	3 4
Density, Unit:		4 M2	4 M2
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W
Stage Majority, Percent:		14 100	14 80
Stage Minimum, Percent:			14 80
Stage Maximum, Percent:			16 20
Height, Unit:		1 IN	1 IN
Height Minimum, Maximum:		0.5 1	0.5 1
Density, Unit:		5 M2	5 M2
Pest 4 Code, Type, Scale:	AMARE W	AMARE W	AMARE W
Stage Majority, Percent:		14 100	
Height, Unit:		0.5 IN	
Height Minimum, Maximum:		0.5 1	
Density, Unit:		2 M2	
Pest 5 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:		12 100	13 90
Stage Minimum, Percent:			13 90
Stage Maximum, Percent:			14 10
Height, Unit:		1 IN	2 IN
Height Minimum, Maximum:		0.5 1	1 2
Density, Unit:		1 M2	1 M2
Pest 6 Code, Type, Scale:	HIBTR W	HIBTR W	HIBTR W
Stage Majority, Percent:		12 100	12 100
Stage Minimum, Percent:			12 100
Stage Maximum, Percent:			12 100
Height, Unit:		1 IN	2 IN
Height Minimum, Maximum:		0.5 1	0.5 2
Density, Unit:		0.5 M2	0.5 M2
Pest 7 Code, Type, Scale:	POLPY W	POLPY W	POLPY W
Stage Majority, Percent:		10 90	
Stage Minimum, Percent:		10 90	
Stage Maximum, Percent:		11 10	
Height, Unit:		0.5 IN	
Height Minimum, Maximum:		0.25 1	
Density, Unit:		1 M2	
Pest 8 Code, Type, Scale:	SOLPT W	SOLPT W	SOLPT W
Stage Majority, Percent:		10 100	
Height, Unit:		0.25 IN	
Height Minimum, Maximum:		0.125 0.25	
Density, Unit:		2 M2	

Application Equipment

	A	B	C
Appl. Equipment:	6 FOOT BOOM	10' AI XR	10' AI XR
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	10 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:	2 Liters	2 Liters	2 Liters
Propellant:	CO2	CO2	CO2

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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		10-1-2015	10-1-2015	10-1-2015	10-1-2015		
Rating Type		YIELD	MOICON	YIELD	WEITES		
Rating Unit		LBS	%	BU	LBS		
Sample Size, Unit	1	PLOT		1	A		
Number of Subsamples		1	1	1	1		
Assessed By							
Days After First/Last Applic.		150	120	150	120	150	120
Trt-Eval Interval							
Plant-Eval Interval		151 DP-1	151 DP-1	151 DP-1	151 DP-1		
Days After Emergence		145 DE-1	145 DE-1	145 DE-1	145 DE-1		
ARM Action Codes				TY1			
Number of Decimals			1	1	1		1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	26	27	28	29
1	UTC					31.2 h	19.2 a	155.0 f	57.0 a
2	Corvus	5.6 oz/a		A	PRE	45.0 efg	19.7 a	221.8 de	57.9 a
2	Atrazine	1.5 qt/a		A	PRE				
3	Verdict	15 oz/a		A	PRE	46.3 d-g	18.7 a	230.6 cde	57.5 a
3	Zidua	2 oz/a		A	PRE				
3	Atrazine	1.5 qt/a		A	PRE				
4	Tripleflex	3 pt/a		A	PRE	43.8 g	19.4 a	216.3 e	57.3 a
4	Atrazine	1.5 qt/a		A	PRE				
5	Acuron	3 qt/a		A	PRE	48.3 a-f	19.0 a	239.7 abc	57.8 a
6	Balance Flexx	4 oz/a		A	PRE	44.9 fg	19.6 a	221.4 de	57.6 a
6	Bicep II Magnum	2 qt/a		A	PRE				
7	Capreno	3 oz/a		B	EPO	48.6 a-d	19.1 a	241.1 abc	57.6 a
7	Atrazine	32 oz/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	47.3 c-f	19.2 a	234.6 bcd	57.0 a
8	DiFlexx	8 oz/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	50.4 abc	19.8 a	248.0 ab	57.4 a
9	Atrazine	32 oz/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	49.0 a-d	20.2 a	239.9 abc	57.3 a
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.

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	26	27	28	29
11	Balance Flexx	4 oz/a		A	PRE	51.7 a	19.6 a	255.2 a	57.3 a
11	Atrazine	48 oz/a		A	PRE				
11	Tripleflex	1.5 pt/a		C	POST				
11	Liberty	22 oz/a		C	POST				
11	N PAK AMS	1.5 qt/a		C	POST				
12	Corvus	3.5 oz/a		A	PRE	50.5 abc	19.6 a	249.4 ab	57.5 a
12	Atrazine	32 oz/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 qt/a		A	PRE	48.5 a-e	19.5 a	239.4 abc	57.3 a
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 qt/a		A	PRE	51.0 ab	19.5 a	251.7 a	57.0 a
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	3.5 oz/a		A	PRE	48.1 b-f	18.5 a	240.5 abc	57.9 a
15	Atrazine	32 oz/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				
16	Corvus	3.5 oz/a		A	PRE	49.1 a-d	19.8 a	241.7 abc	57.2 a
16	Atrazine	32 oz/a		A	PRE				
16	DiFlexx	8 oz/a		C	POST				
16	N PAK AMS	1.5 qt/a		C	POST				
LSD P=.05						3.52	1.09	16.87	0.78
Standard Deviation						2.47	0.76	11.84	0.54
CV						5.26	3.94	5.09	0.95
Grand Mean						47.09	19.38	232.89	57.40
Bartlett's X2						21.138	23.486	15.202	12.362
P(Bartlett's X2)						0.132	0.074	0.437	0.651
Skewness						-1.7815*	-0.642*	-1.9124*	-0.3499
Kurtosis						3.7219*	0.1907	4.4608*	0.4509
Replicate F						5.469	21.375	2.971	4.846
Replicate Prob(F)						0.0027	0.0001	0.0417	0.0053
Treatment F						15.048	1.321	15.751	1.230
Treatment Prob(F)						0.0001	0.2296	0.0001	0.2861

Crop Code
ZEAMX, BCOR, Zea mays, = US

Rating Type

YIELD = yield

MOICON = moisture content

WEITES = weight - test

Rating Unit

% = percent

BU = bushel

PLOT = total plot

A = acre

Plant-Eval Interval

151 DP-1 = 1 ZEAMX 5-3-2015

ARM Action Codes

TY1 = $5.185714 * [26] * (100 - [27]) / 84.5$