

The Ohio State University

Corn Showcase Treatments

Trial ID: 18CORNSHOWA Location: Western Branch G-6 Trial Year: 2018
 Protocol ID: 18CORNSHOW Investigator: Dr. Mark M. Loux
 Project ID: Study Director: Anthony Dobbels
 Sponsor Contact:

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 °: 39.85942 N
Longitude of LL Corner °: 83.67477 W
Altitude of LL Corner, Unit: 1088.00 FT

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

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

Crop 1: ZEAMX Zea mays
Variety: P1197AM
Description: Pioneer RR/LL 111

Crop Description

Planting Date: Apr-29-2018
Planting Method: PLANT
Planting Equipment: FPP finger pickup planter
Emergence Date: May-10-2018
Harvest Date: Oct-2-2018
Harvested Width, Unit: 5 FT
Harvested Length, Unit: 30 FT
Harvest Equipment: Massey 8 XP
% Standard Moisture: 15
Moisture Meter: Mirrus by Harvest Master
Weighing Equipment: Mirrus by Harvest Master

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

Rows per Plot: 4

Soil Temperature, Unit: 58 F
Soil Moisture: SLIWET slightly wet, moist
Seed Bed: CLODDY cloddy

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:** IPOHE Ipomoea hederacea
Common Name: ivy-leaf morning glory

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 30 FT
Treated Plot Area: 200.1 FT² **Treatments:** 18
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 2017

Soil Description

Description Name: G-6
% Sand: 33 **% OM:** 2.2 **Texture:** SICL silty clay loam
% Silt: 53 **pH:** 5.9 **Soil Name:** Kokomo
% Clay: 15 **CEC:** 14.8 **Fert. Level:** G good
Soil Drainage: G good

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Application Description

	A	B	C
Application Date:	Apr-30-2018	May-16-2018	May-29-2018
Appl. Start Time:	1:00 PM	11:00 AM	12:00 PM
Appl. Stop Time:	1:15 PM	11:10 AM	12:15 PM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPO	POST
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	Ackley	Dobbels	Ackley,Lamb
Air Temperature, Unit:	64 F	66 F	81 F
% Relative Humidity:	25	77	63
Wind Velocity, Unit:	4 MPH	3 MPH	10 MPH
Wind Direction:	SW	NE	SE
Dew Presence (Y/N):	N no	Y yes	N no
Soil Temperature, Unit:	60 F	66 F	80 F
Soil Moisture:	SLIWET	SLIWET	DRY
% Cloud Cover:	20	100	40
Next Moisture Occurred On:	May-3-2018	May-17-2018	May-31-2018
Time to Next Moisture, Unit:	3 DAY	1 DAY	2 DAY
Moisture 1 Week after Appl.:	0.71 IN	1.41 IN	0.55 IN

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:			12		16	60
Stage Minimum, Percent:					15	40
Stage Maximum, Percent:					16	60
Height, Unit:			5 IN		20 IN	
Height Minimum, Maximum:			4 7		18 26	

Pest Stage At Each Application

	A		B		C	
Pest 1 Code, Type, Scale:	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent:	11	100	16	100		
Diameter, Unit:	1	IN				
Height, Unit:	1	IN	6	IN		
Height Minimum, Maximum:			0.5	10		
Density, Unit:			295	m2		
Pest 2 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:	12	100	18	100		
Height, Unit:	1.5	IN	7	IN		
Height Minimum, Maximum:			1	14		
Density, Unit:			17	m2		
Pest 3 Code, Type, Scale:	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent:	11	100	16	100		
Diameter, Unit:	1	IN				
Height, Unit:	1	IN	3	IN		
Height Minimum, Maximum:			1	7.5		
Density, Unit:			97	m2		
Pest 4 Code, Type, Scale:	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent:	12	100				
Diameter, Unit:	1	IN				
Height, Unit:	1	IN				
Density, Unit:			13	m2		
Pest 5 Code, Type, Scale:	ABUTH	W	ABUTH	W	ABUTH	W
Stage Majority, Percent:	11	100	16	100		
Diameter, Unit:	2	IN				
Height, Unit:	1	IN	3	IN		
Height Minimum, Maximum:			1	6		
Density, Unit:			4	m2		
Pest 6 Code, Type, Scale:	IPOHE	W	IPOHE	W	IPOHE	W
Stage Majority, Percent:	10	100	16	100		
Diameter, Unit:	3	IN				
Height, Unit:	1.5	IN	4.5	IN		
Height Minimum, Maximum:			1	8		

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Application Equipment

	A	B	C
Appl. Equipment:	6 foot TTI	6' AI XR	6 foot AIXR
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operation Pressure, Unit:	42 PSI	46 PSI	42 PSI
Nozzle Type:	TTI	AI XR	AIXR
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN
Boom Length, Unit:	6.67 FT	6 FT	6.67 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 L	2 L	1 L
Propellant:	COMCO2	CO2	COMCO2

Pest Type				
Pest Code				
Pest Name				
Crop Code		ZEAMX	ZEAMX	ZEAMX
Crop Name		Corn	Corn	Corn
Rating Date		Oct-2-2018	Oct-2-2018	Oct-2-2018
				8
Rating Type		WEIGHT	MOICON	YIELD
Rating Unit		LBS	%	BU
Number of Subsamples		2	2	2
Rating Timing				
Days After First/Last Applic.		155 126	155 126	155 126
Trt-Eval Interval				
Days After Emergence		145 DE-1	145 DE-1	145 DE-1
ARM Action Codes			ER2	TY1
Number of Decimals		1	1	1

Trt No.	Treatment Name	Other Rate	Other Unit	Appl Code	39*	40*	41*	42*
1	Resicore	1.25 qt/a	A		39.2 efg	17.1 -	199.9 ef	54.2 abc
1	Atrazine	1 qt/a	A					
2	Cinch ATZ	2 qt/a	A		33.4 g	17.3 -	171.0 f	54.1 abc
2	Instigate	5.25 oz/a	A					
2	rimsulfuron	0.875 oz/a	A					
2	mesotrione	4.38 oz/a	A					
3	Surestart II	3 pt/a	A		36.2 fg	17.2 -	182.0 f	53.0 abc
3	Atrazine	2 pt/a	A					
4	Resicore	1.25 qt/a	A		56.0 ab	18.6 -	278.8 ab	55.2 a
4	Atrazine	1 qt/a	A					
4	Resicore	1.25 qt/a	C					
4	Durango DMA	1 qt/a	C					
4	N Pak AMS	2.5 % v/v	C					
5	Acuron	3 qt/a	A		43.9 def	17.1 -	221.1 de	53.3 abc
6	Acuron	1.5 qt/a	A		54.3 abc	18.1 -	273.0 abc	53.8 abc
6	Halex GT	3.6 pt/a	C					
6	NIS	0.25 % v/v	C					
6	N Pak AMS	2.5 % v/v	C					
7	Acuron	1.5 qt/a	A		55.7 ab	17.7 -	279.7 ab	52.2 bc
7	Acuron	1.5 qt/a	C					
7	Roundup PowerMax	26 oz/a	C					
7	N Pak AMS	2.5 % v/v	C					

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Pest Code								
Pest Name								
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX				
Crop Name	Corn	Corn	Corn	Corn				
Rating Date	Oct-2-2018	Oct-2-2018	Oct-2-2018	Oct-2-2018				
Rating Type	WEIGHT	MOICON	YIELD	WEITES				
Rating Unit	LBS	%	BU	BLS				
Number of Subsamples	2	2	2	2				
Rating Timing								
Days After First/Last Applic.	155 126	155 126	155 126	155 126				
Trt-Eval Interval								
Days After Emergence	145 DE-1	145 DE-1	145 DE-1	145 DE-1				
ARM Action Codes		ER2	TY1	ER2				
Number of Decimals	1	1	1	1				
Trt No.	Treatment	Other Rate	Other Rate	Appl Unit Code	39*	40*	41*	42*
8	Anthem Maxx	4.3 oz/a		A	56.6 ab	17.8 -	285.3 a	54.0 abc
8	Atrazine	32 oz/a		A				
8	Callisto	3 oz/a		C				
8	Atrazine	16 oz/a		C				
8	Roundup PowerMax	32 oz/a		C				
8	COC	1 % v/v		C				
8	N Pak AMS	2.5 % v/v		C				
9	Anthem Maxx	4.3 oz/a		A	55.1 ab	18.3 -	275.6 ab	54.5 abc
9	Atrazine	32 oz/a		A				
9	Impact	0.75 oz/a		C				
9	Atrazine	16 oz/a		C				
9	Roundup PowerMax	32 oz/a		C				
9	COC	1 % v/v		C				
9	N Pak AMS	2.5 % v/v		C				
10	Anthem Maxx	4.3 oz/a		B	56.2 ab	17.4 -	283.6 a	54.8 ab
10	Atrazine	32 oz/a		B				
10	Callisto	3 oz/a		B				
10	Roundup PowerMax	32 oz/a		B				
10	COC	1 % v/v		B				
10	N Pak AMS	2.5 % v/v		B				
11	Coyote	64 oz/a		A	54.7 ab	18.2 -	273.5 ab	55.0 a
11	Atrazine	48 oz/a		A				
11	Interline	29 oz/a		C				
11	N Pak AMS	2.5 % v/v		C				
12	Coyote	64 oz/a		A	49.1 bcd	17.7 -	245.0 bcd	53.6 abc
12	Tricor	8 oz/a		A				
12	Interline	29 oz/a		C				
12	N Pak AMS	2.5 % v/v		C				
13	Dual II Magnum	1.67 pt/a		A	47.0 cde	18.3 -	234.3 cde	53.3 abc
13	Shieldex	1 oz/a		C				
13	MSO	0.5 % v/v		C				
13	N Pak AMS	2.5 % v/v		C				
14	Dual II Magnum	1.67 pt/a		A	57.6 a	18.1 -	286.0 a	54.8 ab
14	Shieldex	1.35 oz/a		C				
14	MSO	0.5 % v/v		C				
14	N Pak AMS	2.5 % v/v		C				
15	Dual II Magnum	1.67 pt/a		A	52.7 abc	16.5 -	267.9 abc	54.4 abc
15	Shieldex	1 oz/a		C				
15	Atrazine	1 pt/a		C				
15	MSO	0.5 % v/v		C				
15	N Pak AMS	2.5 % v/v		C				

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Pest Type				
Pest Code				
Pest Name				
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Crop Name	Corn	Corn	Corn	Corn
Rating Date	Oct-2-2018	Oct-2-2018	Oct-2-2018	Oct-2-2018
Rating Type	WEIGHT	MOICON	YIELD	WEITES
Rating Unit	LBS	%	BU	BLS
Number of Subsamples	2	2	2	2
Rating Timing				
Days After First/Last Applic.	155 126	155 126	155 126	155 126
Trt-Eval Interval				
Days After Emergence	145 DE-1	145 DE-1	145 DE-1	145 DE-1
ARM Action Codes		ER2	TY1	ER2
Number of Decimals	1	1	1	1
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	
				39* 40* 41* 42*
16 Dual II Magnum	1.67 pt/a		A	56.6 ab 18.3 - 283.0 ab 52.2 bc
16 Shieldex	1.35 oz/a		C	
16 Atrazine	1 pt/a		C	
16 MSO	0.5 % v/v		C	
16 N Pak AMS	2.5 % v/v		C	
17 Verdict	10 oz/a		A	53.6 abc 17.8 - 269.1 abc 49.0 d
17 Armezon Pro	16 oz/a		C	
17 Atrazine	1 qt/a		C	
17 NIS	0.25 % v/v		C	
17 N Pak AMS	2.5 % v/v		C	
18 UTC				4.1 h 15.9 - 20.6 g 52.0 c
LSD P=.05	7.07	2.42		34.36 2.65
Standard Deviation	4.22	1.19		20.51 1.26
CV	8.67	10.07		8.4 2.35
Levene's F	0.786			0.795
Levene's Prob(F)	0.697			0.687
Skewness	-2.2417*	-0.4509		-2.2893* -1.2506*
Kurtosis	4.8949*	-0.0533		5.1452* 1.0118
Randomized Complete Block (RCB) AIC	352.5137	192.1761		522.0093 NA
Spatial AIC	SPa 327.3528	SPb 188.9428		SPa 498.059 NA
Analyzed as	CRD+SPa	CRD+SPb		CRD+SPa RCB
Replicate F	10.893	0.253		11.482 15.734
Replicate Prob(F)	0.0003	0.6183		0.0002 0.0010
Treatment F	29.803	1.018		31.355 2.843
Treatment Prob(F)	0.0001	0.4634		0.0001 0.0189

Crop Code

ZEAMX, BCOR, Zea mays, Corn = US

Rating Type

WEIGHT = weight

MOICON = moisture content

YIELD = yield

WEITES = weight - test

Rating Unit

% = percent

BU = bushel

ARM Action Codes

ER2 = Excluded replicate 2

TY1 = 5.185714*[39]*(100-[40])/85

SPa = Cubic spatial trend

SPb = Nearest row neighbor