

Trial ID: 19CORNSHOW_2 Location: Western Branch Big E Trial Year: 2019
 Protocol ID: Investigator: Dr. Mark M. Loux
 Project ID: Study Director:
 Sponsor Contact:

General Trial Information

Investigator: Dr. Mark M. Loux

Trial Status: E established

ARM Trial Created On: May-16-2019

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 °: 39.85682 N
 Longitude of LL Corner °: 83.67017 W
 Altitude of LL Corner: 1183.00 ft

Conducted Under GLP: No

Conducted Under GEP: No

Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: C ZEAMX Zea mays Corn Stage Scale: VR
 Entry Date: May-17-2019
 Variety: DKC62-52RIB
 Attributes: SMARTSTAX RIB COMPLETE
 Planting Rate: 32097 S/A
 Depth: 1.5 IN
 Rows per Plot: 4 Planting Method: PLANTD planted
 Row Spacing: 30 IN Planting Equipment: PP plot planter
 Seed Bed: MEDIUM medium
 Soil Moisture: DRY dry
 Soil Temperature: 65 F
 Emergence Date: May-27-2019
 Harvested Width: 5 FT
 Harvested Length: 30 FT

% Standard Moisture: 15.5

Pest Description

Pest 1 Type: W Code: SETFA Setaria faberi
 Common Name: Giant foxtail Entry Date: Jun-3-2019
 Pest 2 Type: W Code: AMBTR Ambrosia trifida
 Common Name: Giant ragweed Entry Date: Jun-3-2019
 Pest 3 Type: W Code: CHEAL Chenopodium album
 Common Name: common lambsquarters Entry Date: Jun-3-2019
 Pest 4 Type: W Code: POLPY Persicaria pensylvanica
 Common Name: annual smartweed Entry Date: Jun-3-2019
 Pest 5 Type: W Code: AMARE Amaranthus retroflexus
 Common Name: Redroot pigweed Entry Date: Jun-3-2019
 Pest 6 Type: W Code: ECHCG Echinochloa crus-galli
 Common Name: Common barnyard grass Entry Date: Jun-7-2019
 Pest 7 Type: W Code: ABUTH Abutilon theophrasti
 Common Name: velvetleaf Entry Date: Jun-7-2019
 Pest 8 Type: W Code: SIDSP Sida spinosa
 Common Name: Prickly sida Entry Date: Jun-7-2019
 Pest 9 Type: W Code: IPOHE Ipomoea hederacea
 Common Name: ivy-leaf morning glory Entry Date: Jun-21-2019
 Pest10 Type: W Code: HIBTR Hibiscus trionum
 Common Name: Venice mallow Entry Date: Jun-21-2019

Site and Design

Treated Plot Width: 6.67 FT Site Type: FIELD field
 Treated Plot Length: 30 FT Experimental Unit: 1 PLOT plot
 Treated Plot Area: 200.1 FT2 Treatments: 14 Tillage Type: CONTIL conventional-till
 Replications: 4 Study Design: RACOB� Randomized Complete Block (RCB)

Previous

No. Crop Year
 1. SOYBEAN 2018

Soil Description

Description Name: Big E
% Sand: 45 **% OM:** 3.1 **Texture:** L loam
% Silt: 45 **pH:** 6.6 **Soil Name:** Kokomo
% Clay: 11 **CEC:** 15.2 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C
Application Date	May-16-2019	Jun-3-2019	Jun-21-2019
Appl. Start Time	8:30 PM	9:30 AM	9:40 AM
Appl. Stop Time	9:00 PM	9:45 AM	10:15 AM
Application Method	SPRAY	SPRAY	BROADC
Application Timing	PRE	EPO	POST
Application Placement	BROSOI	BROFOL	BROFOL
Applied By	LOUX	KILEY	KILEY/LAMB
Appl. Entry Date	May-17-2019	Jun-3-2019	Jun-21-2019
Air Temperature Start, Stop	74 74 F	59 59 F	64 64 F
% Relative Humidity Start, Stop	45 45	55 55	78 78
Wind Velocity+Dir. Start	12 MPH SSW 6	6 MPH NE 8	6 MPH NNW
Wind Velocity+Dir. Stop	12 MPH SSW 6	6 MPH NE 8	6 MPH NNW
Wind Velocity+Dir. Max	12 MPH SSW 6	6 MPH NE 8	6 MPH NNW
Wet Leaves (Y/N)	N no	N no	N no
Soil Temperature	65 F	53 F	63 F
Soil Moisture	DRY	SLIWET	DAMP
Soil Surface Condition	SMOOTH	SMOOTH	SMOOH
% Cloud Cover	80	0	20
Next Moisture Occurred On	May-17-2019	Jun-5-2019	Jun-21-2019
Time to Next Moisture	3 HR	2 DAY	2 HR
Moisture 6 Hours after Appl.	0.32 IN	0 IN	0.01 IN
Moisture 1 Week after Appl.	2.54 IN	0.36 IN	1.21 IN

Crop Stage At Each Application

	A		B		C	
Crop 1 Code, BBCH Scale	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR
Days after Emergence	-11		7		25	
Stage Scale Used	VR		VR		VR	
Stage Majority, Percent			V3 100		V5 100	
Height Average			4 IN		24 IN	
Height Minimum, Maximum					22 26	

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale	SETFA W	SETFA W	SETFA W
Stage Majority, Percent	12	100	15
Height Average	3	IN	16
Height Minimum, Maximum	3	6	4
Density Average	61	PLA/m2	61
Density Min, Max	48	72	48
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent	12	60	19
Stage Minimum, Percent	12	60	16
Stage Maximum, Percent	14	40	19
Height Average	1.5	IN	7
Height Minimum, Maximum	1	1.5	3
Density Average	2	PLA/m2	2
Density Min, Max	1	3	1
Pest 3 Code, Type, Scale	CHEAL W	CHEAL W	CHEAL W
Stage Majority, Percent	14	80	19
Stage Minimum, Percent	14	80	
Stage Maximum, Percent	16	20	
Height Average	1.5	IN	7
Height Minimum, Maximum	1	1.5	2
Density Average	36	PLA/m2	36
Density Min, Max	8	80	8
Pest 4 Code, Type, Scale	POLPY W	POLPY W	POLPY W
Stage Majority, Percent	13	100	15
Height Average	2	IN	4
Height Minimum, Maximum	1	2	2
Density Average	0.33	PLA/m2	0.33
Density Min, Max	0	2	0
Pest 5 Code, Type, Scale	AMARE W	AMARE W	AMARE W
Stage Majority, Percent	14	80	
Stage Minimum, Percent	12	20	
Stage Maximum, Percent	14	80	
Height Average	0.5	IN	
Height Minimum, Maximum	0.5	1	
Density Average	10	PLA/m2	
Density Min, Max	12	18	
Pest 6 Code, Type, Scale	ECHCG W	ECHCG W	ECHCG W
Stage Majority, Percent			13
Height Average			16
Height Minimum, Maximum			4
Density Average			17
Density Min, Max			12
Pest 7 Code, Type, Scale	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent	12	100	
Height Average	0.5	IN	
Height Minimum, Maximum	0.25	0.5	
Density Average	2	PLA/m2	
Density Min, Max	4	4	
Pest 8 Code, Type, Scale	SIDSP W	SIDSP W	SIDSP W
Stage Majority, Percent	11	80	
Stage Minimum, Percent	11	80	
Stage Maximum, Percent	12	20	
Height Average	0.5	IN	
Height Minimum, Maximum	0.5	0.5	
Density Average	6	PLA/m2	
Density Min, Max	8	8	
Pest 9 Code, Type, Scale	IPOHE W	IPOHE W	IPOHE W
Stage Majority, Percent			12
Height Average			7
Height Minimum, Maximum			2
Density Average			0.33
Density Min, Max			0
Pest10 Code, Type, Scale	HIBTR W	HIBTR W	HIBTR W
Stage Majority, Percent			12
Stage Minimum, Percent			12
Stage Maximum, Percent			13
Height Average			4
Height Minimum, Maximum			2
Density Average			0.25
Density Min, Max			0

Application Equipment

	A	B	C
Appl. Equipment	6 foot TTI	6' BACKPACK	6' BACKPACK
Equipment Type	SPRBAC	BACCAI	BACCAI
Operation Pressure	48 PSI	44 PSI	44 PSI
Nozzle Type	TTI	AIXR	AIXR
Nozzle Size	110015	11015	11015
Nozzle Spacing	18 IN	18 IN	18 IN
Boom Length	6.67 FT	6.67 FT	6.67 FT
Boom Height	20 IN	20 IN	20 IN
Ground Speed	3 MPH	3 MPH	3 MPH
Carrier	WATER	WATER	WATER
Application Amount	15 GPA	15 gal/ac	15 gal/ac
Mix Size	1 Liters	1 liters	1 liters
Propellant	COMCO2	COMCO2	COMCO2

Context Date By Notes
 STATUS May-16-2019 Dr. Mark M. Loux Automatically added by ARM: Trial Status updated to 'S' during trial creation.
 STATUS May-17-2019 Dr. Mark M. Loux Automatically added by ARM: Trial Status updated to 'E' when Application Date entered.

SE Definitions

1.

Crop Type, Code C

	C	C	C	C
	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Pest Type				
Pest Code				
Pest Name				
Crop Type, Code	Corn	Corn	Corn	Corn
Crop Name	Corn	Corn	Corn	Corn
Rating Date	Oct-9-2019	Oct-9-2019	Oct-9-2019	Oct-9-2019
Rating Type	WEIGHT	MOICON	YIELD	WEITES
Rating Unit	LBS	%	BU	LBS
Number of Subsamples	1	1	1	1
Data Entry Date	Oct-10-2019	Oct-10-2019	Oct-10-2019	Oct-10-2019
Rating Timing				
Days After First/Last Applic.	146 110	146 110	146 110	146 110
Trt-Eval Interval				
Days After Emergence	135 DE-1	135 DE-1	135 DE-1	135 DE-1
ARM Action Codes			TY1	
Number of Decimals			1	

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	29*	30*	31*	32*
1	Resicore	2.06 lb ai/a		2.5 qt/a		A	45.425 a	18.75 -	226.5 a	55.10 -
1	Atrazine	1 lb ai/a		1 qt/a		A				
1	Durango DMA	1 lb ae/a		32 oz/a		C				
1	N Pak AMS	2.5 % v/v		2.5 % v/v		C				
2	Surestart II	1.56 lb ai/a		3 pt/a		A	45.020 a	18.55 -	225.0 a	55.50 -
2	Atrazine	1.5 lb ai/a		1.5 qt/a		A				
2	Durango DMA	1 lb ae/a		32 oz/a		C				
2	N Pak AMS	2.5 % v/v		2.5 % v/v		C				
3	Resicore	1.03 lb ai/a		1.25 qt/a		A	46.350 a	18.98 -	230.4 a	55.20 -
3	Atrazine	1 lb ai/a		1 qt/a		A				
3	Resicore	1.03 lb ai/a		1.25 qt/a		C				
3	Durango DMA	1 lb ae/a		32 oz/a		C				
3	N Pak AMS	2.5 % v/v		2.5 % v/v		C				
4	Cinch ATZ	2.9 lb ai/a		2.1 qt/a		A	46.695 a	17.83 -	235.5 a	55.63 -
4	REALM Q 4 OZ					C				
4	rimsulfuron	0.0188 lb ai/a		1.2 oz/a		C				
4	mesotrione	0.078 lb ai/a		2.5 oz/a		C				
4	isoxadifin-ethyl	0.0047 lb ai/a		0.15 oz/a		C				
4	Atrazine	0.5 lb ai/a		16 oz/a		C				
4	COC	1 % v/v		1 % v/v		C				
4	N Pak AMS	2.5 % v/v		2.5 % v/v		C				
5	Acuron	2.58 lb ai/a		3 qt/a		A	44.288 a	18.35 -	222.0 a	55.55 -
6	Acuron	1.29 lb ai/a		1.5 qt/a		A	47.373 a	17.55 -	239.6 a	55.58 -
6	Halex GT	1.97 lb ai/a		3.6 pt/a		C				
6	AAtrex	0.5 lb ai/a		1 pt/a		C				
6	NIS	0.25 % v/v		0.25 % v/v		C				
6	N Pak AMS	2.5 % v/v		2.5 % v/v		C				

Pest Type				
Pest Code				
Pest Name				
Crop Type, Code	C ZEAMX	C ZEAMX	C ZEAMX	C ZEAMX
Crop Name	Corn	Corn	Corn	Corn
Rating Date	Oct-9-2019	Oct-9-2019	Oct-9-2019	Oct-9-2019
Rating Type	WEIGHT	MOICON	YIELD	WEITES
Rating Unit	LBS	%	BU	LBS
Number of Subsamples	1	1	1	1
Data Entry Date	Oct-10-2019	Oct-10-2019	Oct-10-2019	Oct-10-2019
Rating Timing				
Days After First/Last Applic.	146 110	146 110	146 110	146 110
Trt-Eval Interval				
Days After Emergence	135 DE-1	135 DE-1	135 DE-1	135 DE-1
ARM Action Codes			TY1	
Number of Decimals			1	

Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Appl Unit	Code	29*	30*	31*	32*
7	Bicep II Magnum	1.79 lb ai/a	1.3 qt/a		A		47.375 a	18.23 -	237.6 a	55.53 -
7	Halex GT	1.97 lb ai/a	3.6 pt/a		C					
7	AAtrex	0.5 lb ai/a	1 pt/a		C					
7	NIS	0.25 % v/v	0.25 % v/v		C					
7	N Pak AMS	2.5 % v/v	2.5 % v/v		C					
8	Halex GT	2.2 lb ai/a	4 pt/a		C		43.960 a	18.23 -	220.6 a	55.33 -
8	AAtrex	0.5 lb ai/a	1 pt/a		C					
8	NIS	0.25 % v/v	0.25 % v/v		C					
8	N Pak AMS	2.5 % v/v	2.5 % v/v		C					
9	Harness Xtra 5.6	2.24 lb ai/a	3.2 pt/a		A		47.605 a	18.38 -	238.5 a	55.10 -
9	ImpactZ	0.356 lb ai/a	10.7 oz/a		C					
9	MSO	1 % v/v	19.2 oz/a		C					
9	N Pak AMS	2.5 % v/v	3 pt/a		C					
10	Harness Xtra 5.6	2.24 lb ai/a	3.2 pt/a		A		45.180 a	17.48 -	228.7 a	55.10 -
10	ImpactZ	0.266 lb ai/a	8 oz/a		C					
10	Liberty	0.402 lb ai/a	22 oz/a		C					
10	MSO	1 % v/v	19.2 oz/a		C					
10	N Pak AMS	2.5 % v/v	3 pt/a		C					
11	Harness Xtra 5.6	2.24 lb ai/a	3.2 pt/a		A		46.858 a	19.05 -	232.6 a	55.08 -
11	Shieldex	0.035 lb ai/a	1.35 oz/a		C					
11	Atrazine	0.335 lb ai/a	0.67 pt/a		C					
11	MSO	1 % v/v	19.2 oz/a		C					
11	N Pak AMS	2.5 % v/v	3 pt/a		C					
12	Harness	1.53 lb ai/a	1.75 pt/a		B		44.295 a	18.53 -	221.5 a	55.60 -
12	Impact	0.0219 lb ai/a	1 oz/a		B					
12	Atrazine	0.5 lb ai/a	1 pt/a		B					
12	MSO	0.5 % v/v	9.6 oz/a		B					
12	N Pak AMS	2.5 % v/v	3 pt/a		B					
13	Harness	1.53 lb ai/a	1.75 pt/a		B		45.210 a	18.55 -	225.9 a	55.60 -
13	Impact	0.0219 lb ai/a	1 oz/a		B					
13	Roundup Powermax	1.13 lb ae/a	32 oz/a		B					
13	Atrazine	0.5 lb ai/a	1 pt/a		B					
13	MSO	0.25 % v/v	4.8 oz/a		B					
13	N Pak AMS	2.5 % v/v	3 pt/a		B					
14	UTC						35.405 b	17.83 -	178.6 b	55.28 -
LSD P=.05							4.9789	1.238	24.77	0.851
Standard Deviation							3.4811	0.865	17.32	0.595
CV							7.72	4.73	7.67	1.07
Grand Mean							45.0741	18.304	225.92	55.368
Levene's F							1.049	0.74	1.217	0.529
Levene's Prob(F)							0.427	0.715	0.301	0.893
Skewness							-0.96*	-0.0639	-0.9963*	-0.4917
Kurtosis							0.1915	-0.1174	0.2366	0.5244
Replicate F							5.415	2.336	4.603	0.776
Replicate Prob(F)							0.0033	0.0886	0.0075	0.5143
Treatment F							3.060	1.278	3.032	0.550
Treatment Prob(F)							0.0034	0.2672	0.0037	0.8776

Crop Type, Code
C = EPP0 species (Bayer) codes

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

TY1 = $5.185714 * [29] * (100 - [30]) / 84.5$