

The Ohio State University

Corvus vs. Competitors University

Trial ID: 18BAYERUNIV Location: Western Branch G-6 Trial Year: 2018
 Protocol ID: HP18USWGMG Investigator: Dr. Mark M. Loux
 Project ID: Study Director:
 Sponsor Contact: David Lamore, Bayer CropScience

General Trial Information

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 °: 39.85947 N
 Longitude of LL Corner °: 83.67525 W
 Altitude of LL Corner, Unit: 1088.00 FT

Conducted Under GLP: No
 Conducted Under GEP: No

Investigator: Dr. Mark M. Loux

Crop Description

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

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

Planting Date: Apr-29-2018
 Planting Method: PLANTD planted
 Planting Equipment: FPP finger pickup planter
 Emergence Date: May-10-2018

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: AMARE Amaranthus retroflexus
 Common Name: Redroot pigweed

Pest 4 Type: W Code: CHEAL Chenopodium album
 Common Name: common lambsquarters

Pest 5 Type: W Code: ECHCG Echinochloa crus-galli
 Common Name: Common barnyard grass

Pest 6 Type: W Code: SIDSP Sida spinosa
 Common Name: Prickly sida

Pest 7 Type: W Code: ABUTH Abutilon theophrasti
 Common Name: velvetleaf

Site and Design

Treated Plot Width: 6.67 FT
 Treated Plot Length: 30 FT
 Treated Plot Area: 200.1 FT² Treatments: 10
 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
Application Date: Apr-30-2018
Appl. Start Time: 10:00 AM
Appl. Stop Time: 10:20 AM
Application Method: SPRAY
Application Timing: PRE
Application Placement: BROSOI
Air Temperature, Unit: 60 F
% Relative Humidity: 35
Wind Velocity, Unit: 4 MPH
Wind Direction: SW
Dew Presence (Y/N): N no
Soil Temperature, Unit: 50 F
Soil Moisture: NORMAL
% Cloud Cover: 30
Next Moisture Occurred On: May-3-2018
Time to Next Moisture, Unit: 3 DAY
Moisture 1 Week after Appl.: 1.19 IN

Crop Stage At Each Application

A
Crop 1 Code, BBCH Scale: ZEAMX BCOR

Pest Stage At Each Application

A
Pest 1 Code, Type, Scale: SETFA W
Density, Unit: 120 m2
Pest 2 Code, Type, Scale: AMBTR W
Density, Unit: 3 m2
Pest 3 Code, Type, Scale: AMARE W
Density, Unit: 7 m2
Pest 4 Code, Type, Scale: CHEAL W
Density, Unit: 188 m2
Pest 5 Code, Type, Scale: ECHCG W
Density, Unit: 53 m2
Pest 6 Code, Type, Scale: SIDSP W
Density, Unit: 1 m2
Pest 7 Code, Type, Scale: ABUTH W
Density, Unit: 4 m2

Application Equipment

A
Appl. Equipment: 6 foot TTI
Equipment Type: SPRBAC
Operation Pressure, Unit: 42 PSI
Nozzle Type: TTI
Nozzle Size: 110015
Nozzle Spacing, Unit: 18 IN
Boom Length, Unit: 6.67 FT
Boom Height, Unit: 20 IN
Ground Speed, Unit: 3 MPH
Carrier: WATER
Spray Volume, Unit: 15 GPA
Mix Size, Unit: 1 L
Propellant: CO2

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	SETFA	AMBTR	SETFA	AMBTR	AMBTR	CHEAL					
Pest Name	Giant foxtail	Giant ragweed	Giant foxtail	Giant ragweed	common lambsqu						
Crop Code	ZEAMX		ZEAMX								
Crop Name	Corn		Corn								
Rating Date	May-14-2018	May-14-2018	May-14-2018	May-30-2018	May-30-2018	May-30-2018					
Rating Type	PHYGEN	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1	1					
Days After First/Last Applic.	14 14	14 14	14 14	30 30	30 30	30 30					
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	30 DA-A	30 DA-A	30 DA-A					
Days After Emergence	4 DE-1	4 DE-1	4 DE-1	20 DE-1	20 DE-1	20 DE-1					
Number of Decimals	0	0	0	0	0	0					
Trt No.	Treatment Name	Rate	Appl Unit	Code	1*	2*	3*	4*	5*	6*	7*
1	UTC				0 -	0 b	0	0 -	0	0 b	0 b
2	Corvus	0.115 lb ai/a	A		0 -	98 a	95 -	0 -	83 ab	83 a	97 a
	AAtrex	0.75 lb ai/a	A								
	Warrant	1.5 lb ai/a	A								
3	Corvus	0.115 lb ai/a	A		0 -	100 a	87 -	0 -	89 ab	75 a	100 a
	AAtrex	0.75 lb ai/a	A								
	Dual II Magnum	0.96 lb ai/a	A								
4	Corvus	0.115 lb ai/a	A		0 -	100 a	93 -	0 -	91 ab	75 a	100 a
	AAtrex	0.75 lb ai/a	A								
	Outlook	0.75 lb ai/a	A								
5	Corvus	0.115 lb ai/a	A		1 -	100 a	90 -	0 -	96 a	93 a	100 a
	Degree Xtra	2.02 lb ai/a	A								
6	Acuron	2.15 lb ai/a	A		0 -	100 a	90 -	0 -	78 b	77 a	100 a
7	Lumax EZ	2.48 lb ai/a	A		1 -	100 a	86 -	0 -	94 a	73 a	100 a
8	Resicore	2.06 lb ai/a	A		0 -	100 a	95 -	0 -	91 ab	78 a	100 a
	AAtrex	0.75 lb ai/a	A								
9	Harness Max	2.24 lb ai/a	A		0 -	100 a	92 -	0 -	98 a	78 a	100 a
	AAtrex	0.75 lb ai/a	A								
10	Corvus	0.115 lb ai/a	A		0 -	100 a	88 -	0 -	91 ab	85 a	100 a
	AAtrex	0.75 lb ai/a	A								
	Zidua	0.0016 lb ai/a	A								
	LSD P=.05				1.4	1.6	13.9	.	9.8	20.3	3.1
	Standard Deviation				0.8	0.9	8.0	0.0	5.6	9.0	1.8
	CV				397.91	1.01	8.87	0.0	6.25	12.58	2.04
	Levene's F				0.889	0.957	0.128	0.00	0.272		1.00
	Levene's Prob(F)				0.552	0.501	0.997	.	0.967		0.471
	Skewness				3.66*	-2.8044*	-0.0397	.	-0.6578	-2.1437*	-2.7914*
	Kurtosis				12.2066*	6.2909*	-1.6358	.	-0.4461	4.379*	6.2406*
	Replicate F				0.474	1.446	3.050	0.000	11.813	7.106	1.000
	Replicate Prob(F)				0.6302	0.2615	0.0755	1.0000	0.0007	0.0258	0.3874
	Treatment F				0.842	3601.000	0.490	0.000	3.746	16.455	894.333
	Treatment Prob(F)				0.5887	0.0001	0.8456	1.0000	0.0118	0.0001	0.0001

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls).
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

* Adjusted means

Excluded replicate 2 in column 6

Could not calculate LSD (% mean diff) for columns 4,8,9,10,14,15,19,20 because error mean square = 0.

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMARE	ABUTH	SETFA	AMBTR	CHEAL				
Pest Name	Redroot pigweed	velvetleaf	Giant foxtail	Giant ragweed	common lambsqu>				
Crop Code	ZEAMX								
Crop Name	Corn								
Rating Date	May-30-2018	May-30-2018	Jun-11-2018	Jun-11-2018	Jun-11-2018				
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1				
Days After First/Last Applic.	30 30	30 30	42 42	42 42	42 42				
Trt-Eval Interval	30 DA-A	30 DA-A	42 DA-A	42 DA-A	42 DA-A				
Days After Emergence	20 DE-1	20 DE-1	32 DE-1	32 DE-1	32 DE-1				
Number of Decimals	0	0	0	0	0				
Trt Treatment	Rate	Appl							
No. Name	Rate	Unit	Code	8*	9*	10*	11*	12*	13*
1 UTC				0 -	0 -	0 -	0	0 b	0 b
2 Corvus	0.115 lb ai/a A			100 -	100 -	0 -	86 -	85 a	100 a
AAtrex	0.75 lb ai/a A								
Warrant	1.5 lb ai/a A								
3 Corvus	0.115 lb ai/a A			100 -	100 -	0 -	85 -	90 a	100 a
AAtrex	0.75 lb ai/a A								
Dual II Magnum	0.96 lb ai/a A								
4 Corvus	0.115 lb ai/a A			100 -	100 -	0 -	88 -	85	100 a
AAtrex	0.75 lb ai/a A								
Outlook	0.75 lb ai/a A								
5 Corvus	0.115 lb ai/a A			100 -	100 -	0 -	92 -	85 a	100 a
Degree Xtra	2.02 lb ai/a A								
6 Acuron	2.15 lb ai/a A			100 -	100 -	0 -	81 -	80 a	98 a
7 Lumax EZ	2.48 lb ai/a A			100 -	100 -	0 -	84 -	80 a	100 a
8 Resicore	2.06 lb ai/a A			100 -	100 -	0 -	92 -	83 a	100 a
AAtrex	0.75 lb ai/a A								
9 Harness Max	2.24 lb ai/a A			100 -	100 -	0 -	93 -	84 a	100 a
AAtrex	0.75 lb ai/a A								
10 Corvus	0.115 lb ai/a A			100 -	100 -	0 -	93 -	81 a	100 a
AAtrex	0.75 lb ai/a A								
Zidua	0.0016 lb ai/a A								
LSD P=.05				.	.	.	10.5	9.8	1.6
Standard Deviation				0.0	0.0	0.0	6.1	5.7	0.9
CV				0.0	0.0	0.0	6.89	7.62	1.02
Levene's F				0.00	0.00	0.00	0.27	0.62	1.00
Levene's Prob(F)				.	.	.	0.968	0.75	0.471
Skewness				-2.8091*	-2.8091*	.	0.0934	-2.3949*	-2.8046*
Kurtosis				6.3081*	6.3081*	.	-1.1462	4.5625*	6.2913*
Replicate F				0.000	0.000	0.000	0.509	2.001	1.000
Replicate Prob(F)				1.0000	1.0000	1.0000	0.6106	0.1676	0.3874
Treatment F				0.000	0.000	0.000	1.554	73.632	3587.667
Treatment Prob(F)				1.0000	1.0000	1.0000	0.2155	0.0001	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMARE	ABUTH	SETFA	AMBTR	CHEAL	ABUTH				
Pest Name	Redroot pigweed	velvetleaf	Giant foxtail	Giant common ragweed	lambsqu>	velvetleaf				
Crop Code										
Crop Name										
Rating Date	Jun-11-2018	Jun-11-2018	Jun-25-2018	Jun-25-2018	Jun-25-2018	Jun-25-2018				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1				
Days After First/Last Applic.	42 42	42 42	56 56	56 56	56 56	56 56				
Trt-Eval Interval	42 DA-A	42 DA-A	56 DA-A	56 DA-A	56 DA-A	56 DA-A				
Days After Emergence	32 DE-1	32 DE-1	46 DE-1	46 DE-1	46 DE-1	46 DE-1				
Number of Decimals	0	0	0	0	0	0				
Trt No.	Treatment Name	Rate	Appl Unit	Code	14*	15*	16*	17*	18*	19*
1	UTC				0 -	0 -	0	0	0 b	0 -
2	Corvus	0.115 lb ai/a A			100 -	100 -	88 -	87 -	98 a	100 -
	AAtrex	0.75 lb ai/a A								
	Warrant	1.5 lb ai/a A								
3	Corvus	0.115 lb ai/a A			100 -	100 -	91 -	86 -	100 a	100 -
	AAtrex	0.75 lb ai/a A								
	Dual II Magnum	0.96 lb ai/a A								
4	Corvus	0.115 lb ai/a A			100 -	100 -	88 -	85 -	100 a	100 -
	AAtrex	0.75 lb ai/a A								
	Outlook	0.75 lb ai/a A								
5	Corvus	0.115 lb ai/a A			100 -	100 -	93 -	89 -	100 a	100 -
	Degree Xtra	2.02 lb ai/a A								
6	Acuron	2.15 lb ai/a A			100 -	100 -	81 -	84 -	95 a	100 -
7	Lumax EZ	2.48 lb ai/a A			100 -	100 -	90 -	82 -	100 a	100 -
8	Resicore	2.06 lb ai/a A			100 -	100 -	88 -	84 -	100 a	100 -
	AAtrex	0.75 lb ai/a A								
9	Harness Max	2.24 lb ai/a A			100 -	100 -	96 -	86 -	100 a	100 -
	AAtrex	0.75 lb ai/a A								
10	Corvus	0.115 lb ai/a A			100 -	100 -	90 -	89 -	100 a	100 -
	AAtrex	0.75 lb ai/a A								
	Zidua	0.0016 lb ai/a A								
	LSD P=.05						9.6	10.7	4.8	
	Standard Deviation				0.0	0.0	5.6	6.2	2.8	0.0
	CV				0.0	0.0	6.21	7.22	3.12	0.0
	Levene's F				0.00	0.00	0.208	0.733	0.933	0.00
	Levene's Prob(F)						0.985	0.662	0.518	
	Skewness				-2.8091*	-2.8091*	-0.2091	0.5815	-2.767*	-2.8091*
	Kurtosis				6.3081*	6.3081*	-1.0685	0.825	6.1429*	6.3081*
	Replicate F				0.000	0.000	4.985	1.852	1.714	0.000
	Replicate Prob(F)				1.0000	1.0000	0.0208	0.1890	0.2082	1.0000
	Treatment F				0.000	0.000	1.577	0.356	381.000	0.000
	Treatment Prob(F)				1.0000	1.0000	0.2082	0.9292	0.0001	1.0000

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Pest Type W Weed
 Pest Code AMARE
 Pest Name Redroot
 pigweed

Crop Code
 Crop Name
 Rating Date Jun-25-2018
 Rating Type CONTRO
 Rating Unit %
 Number of Subsamples 1
 Days After First/Last Applic. 56 56
 Trt-Eval Interval 56 DA-A
 Days After Emergence 46 DE-1
 Number of Decimals 0

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	20*
1	UTC				0 -
2	Corvus	0.115 lb ai/a	A		100 -
	AAtrex	0.75 lb ai/a	A		
	Warrant	1.5 lb ai/a	A		
3	Corvus	0.115 lb ai/a	A		100 -
	AAtrex	0.75 lb ai/a	A		
	Dual II Magnum	0.96 lb ai/a	A		
4	Corvus	0.115 lb ai/a	A		100 -
	AAtrex	0.75 lb ai/a	A		
	Outlook	0.75 lb ai/a	A		
5	Corvus	0.115 lb ai/a	A		100 -
	Degree Xtra	2.02 lb ai/a	A		
6	Acuron	2.15 lb ai/a	A		100 -
7	Lumax EZ	2.48 lb ai/a	A		100 -
8	Resicore	2.06 lb ai/a	A		100 -
	AAtrex	0.75 lb ai/a	A		
9	Harness Max	2.24 lb ai/a	A		100 -
	AAtrex	0.75 lb ai/a	A		
10	Corvus	0.115 lb ai/a	A		100 -
	AAtrex	0.75 lb ai/a	A		
	Zidua	0.0016 lb ai/a	A		
	LSD P=.05				.
	Standard Deviation				0.0
	CV				0.0
	Levene's F				0.00
	Levene's Prob(F)				.
	Skewness				-2.8091*
	Kurtosis				6.3081*
	Replicate F				0.000
	Replicate Prob(F)				1.0000
	Treatment F				0.000
	Treatment Prob(F)				1.0000

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Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US

AMBTR, Ambrosia trifida, Giant ragweed = US

CHEAL, Chenopodium album, common lambsquarters = US

AMARE, Amaranthus retroflexus, Redroot pigweed = US

ABUTH, Abutilon theophrasti, velvetleaf = US

Crop Code

ZEAMX, BCOR, Zea mays, Corn = US

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

Rating Unit

% = percent