

Bayer Corn Herbicides, University Demo

Trial ID: 19BAYERUNIV Location: Trial Year: 2019
Protocol ID: 19BAYERUNIV Investigator: Dr. Mark M. Loux
Project ID: HP19USAWMU Study Director: Anthony Dobbels
Sponsor Contact: David Lamore, Bayer CropScience

General Trial Information

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

Trial Status: E established
ARM Trial Created On: Mar-26-2019

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 °: 39.85781 N
Longitude of LL Corner °: 83.67007 W
Altitude of LL Corner: 1189.00 Ft

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Anthony Dobbels

Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: C ZEAMX Zea mays Corn **Stage Scale:** BBCH
Entry Date: Apr-15-2019
Variety: Seed Consultants SC10AGT96
Attributes: Agrisure GT/CB/LL
Planting Date: Apr-12-2019 **Planting Rate:** 32097 S/A
Depth: 1.5 IN
Rows per Plot: 4 **Planting Method:** SEEDED seeded
Row Spacing: 30 IN **Planting Equipment:** FPP finger pickup planter
Seed Bed: SMOOTH smooth
Soil Temperature: 58 F **Soil Moisture:** SLIDRY slightly dry
Emergence Date: May-3-2019

Pest Description

- Pest 1 Type:** W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed **Entry Date:** May-29-2019
- Pest 2 Type:** W **Code:** CHEAL Chenopodium album
Common Name: common lambsquarters **Entry Date:** May-29-2019
- Pest 3 Type:** W **Code:** ABUTH Abutilon theophrasti
Common Name: velvetleaf **Entry Date:** May-29-2019
- Pest 4 Type:** W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail **Entry Date:** May-29-2019
- Pest 5 Type:** W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyard grass **Entry Date:** Jun-7-2019
- Pest 6 Type:** W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed **Entry Date:** Jun-7-2019
- Pest 7 Type:** W **Code:** IPOHE Ipomoea hederacea
Common Name: ivy-leaf morning glory **Entry Date:** Jun-7-2019

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT **Experimental Unit:** 1 PLOT plot
Treated Plot Area: 300 FT2 **Treatments:** 10 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Previous

No. Crop Year
1. SOYBEAN 2018

Field Prep./Maintenance:

Fall chisel plow, spring finishing tool, and cultipacker.

Soil Description

Description Name: Big E
 % Sand: 44 % 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
Application Date	Apr-13-2019	May-29-2019
Appl. Start Time	8:00 AM	8:15 AM
Appl. Stop Time	9:00 AM	8:45 AM
Application Method	SPRAY	SPRAY
Application Timing	PRE	POST
Application Placement	BROSOI	BROFOL
Applied By	Ackley	Kiley
Appl. Entry Date	Apr-15-2019	May-29-2019
Air Temperature Start, Stop	43 47 F	72 73 F
% Relative Humidity Start, Stop	77 74	82 83
Wind Velocity+Dir. Start	3 MPH W	11 MPH SW
Wind Velocity+Dir. Stop	2 MPH WSW	12 MPH SW
Wind Velocity+Dir. Max	3 MPH W	11 MPH SW
Wet Leaves (Y/N)	N no	N no
Soil Temperature	46 F	69 F
Soil Moisture	DRY	SLIWET
Soil Surface Condition	SMOOTH	SMOOTH
% Cloud Cover	20	80
Next Moisture Occurred On	Apr-14-2019	May-29-2019
Time to Next Moisture	1 DAY	30 MIN
Moisture 6 Hours after Appl.	0 IN	0.01 IN
Moisture 1 Week after Appl.	2.35 IN	0.66 IN

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	ZEAMX BCOR	ZEAMX BCOR
Days after Emergence	-20	26
Stage Scale Used	BBCH	VR
Stage Majority, Percent		V4 100
Height Average		10 in

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	AMBTR W	AMBTR W
Stage Majority, Percent		16 90
Stage Minimum, Percent		14 10
Stage Maximum, Percent		16 90
Height Average		4 in
Height Minimum, Maximum		3 6
Density Average		10 M2
Density Min, Max		4 16
Pest 2 Code, Type, Scale	CHEAL W	CHEAL W
Stage Majority, Percent		14 80
Stage Minimum, Percent		12 20
Stage Maximum, Percent		14 80
Height Average		3 in
Height Minimum, Maximum		2 4
Density Average		36 M2
Density Min, Max		4 80
Pest 3 Code, Type, Scale	ABUTH W	ABUTH W
Stage Majority, Percent		12 100
Height Average		1.5 in
Height Minimum, Maximum		1 2
Density Average		6 M2
Density Min, Max		4 12
Pest 4 Code, Type, Scale	SETFA W	SETFA W
Stage Majority, Percent		12 100
Height Average		1.5 in
Height Minimum, Maximum		1 2
Density Average		230 M2
Density Min, Max		80 400
Pest 5 Code, Type, Scale	ECHCG W	ECHCG W
Density Average		136 M2
Density Min, Max		4 240
Pest 6 Code, Type, Scale	AMARE W	AMARE W
Density Average		7 M2
Density Min, Max		4 4
Pest 7 Code, Type, Scale	IPOHE W	IPOHE W
Density Average		5 M2
Density Min, Max		4 12

Application Equipment

	A	B
Appl. Equipment	6 foot TTI	10' AI XR
Equipment Type	SPRBAC	SPRBAC
Operation Pressure	48 PSI	42 PSI
Nozzle Type	TTI	AI XR
Nozzle Size	110015	110015
Nozzle Spacing	18 IN	18 IN
Boom Length	6.67 FT	10 FT
Boom Height	20 IN	20 IN
Ground Speed	3 MPH	3 MPH
Carrier	WATER	WATER
Application Amount	15 GPA	15 GPA
Mix Size	2 Liters	2 Liters
Propellant	COMCO2	COMCO2

Date **By** **Context** **Notes**
 Mar-26-2019 Dr. Mark M. Loux STATUS Automatically added by ARM: Trial Status updated to 'S' during trial creation.
 May-30-2019 Dr. Mark M. Loux STATUS Automatically added by ARM: Trial Status updated to 'E' when Emergence Date entered.

SE Definitions

1. Crop Type, Code C

	W Weed SETFA	W Weed AMBTR	W Weed CHEAL	W Weed AMARE	W Weed ABUTH
Pest Type	Giant foxtail	Giant ragweed	common lambsqu>	Redroot pigweed	velvetleaf
Pest Code					
Pest Name					
Crop Type, Code	C -	C -	C -	C -	C -
Crop Name					
Rating Date	May-28-2019	May-28-2019	May-28-2019	May-28-2019	May-28-2019
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Data Entry Date	May-29-2019	May-29-2019	May-29-2019	May-29-2019	May-29-2019
Days After First/Last Applic.	45 45	45 45	45 45	45 45	45 45
Trt-Eval Interval	45 DA-A	45 DA-A	45 DA-A	45 DA-A	45 DA-A
Days After Emergence	25 DE-1	25 DE-1	25 DE-1	25 DE-1	25 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Appl Code	1*	2*	3*	4*	5*
1	UTC					0 d	0 b	0 c	0 -	0 c
2	Corvus	92 g ai/ha	4 oz/a		A	86 bc	83 a	100 a	100 -	100 a
2	AAtrex	1680 g ai/ha	1.5 qt/a		A					
2	Harness Max	1340 g ai/ha	40 oz/a		B					
2	AAtrex	560 g ai/ha	16 oz/a		B					
2	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
2	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
3	Balance Flexx	70 g ai/ha	4 oz/a		A	100 a	78 a	100 a	100 -	100 a
3	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A					
3	Capreno	120 g ai/ha	3 oz/a		B					
3	AAtrex	560 g ai/ha	16 oz/a		B					
3	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
3	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
3	Superb HC	0.5 % v/v	0.5 % v/v		B					
4	Corvus	92 g ai/ha	4 oz/a		A	89 abc	79 a	100 a	100 -	100 a
4	AAtrex	1680 g ai/ha	1.5 qt/a		A					
4	Diflexx Duo	454 g ai/ha	32 oz/a		B					
4	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
4	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
4	Superb HC	0.5 % v/v	0.5 % v/v		B					
5	Balance Flexx	70 g ai/ha	4 oz/a		A	96 ab	84 a	100 a	100 -	100 a
5	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A					
5	Diflexx Duo	454 g ai/ha	32 oz/a		B					
5	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
5	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
5	Superb HC	0.5 % v/v	0.5 % v/v		B					

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL	AMARE	ABUTH
Pest Name	Giant foxtail	Giant ragweed	common lambsqu>	Redroot pigweed	velvetleaf
Crop Type, Code	C -	C -	C -	C -	C -
Crop Name					
Rating Date	May-28-2019	May-28-2019	May-28-2019	May-28-2019	May-28-2019
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Data Entry Date	May-29-2019	May-29-2019	May-29-2019	May-29-2019	May-29-2019
Days After First/Last Applic.	45 45	45 45	45 45	45 45	45 45
Trt-Eval Interval	45 DA-A	45 DA-A	45 DA-A	45 DA-A	45 DA-A
Days After Emergence	25 DE-1	25 DE-1	25 DE-1	25 DE-1	25 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	1*	2*	3*	4*	5*
6	Balance Flexx	70 g ai/ha	4 oz/a		A	80 c	76 a	100 a	100 -	100 a
6	AAtrex	1680 g ai/ha	1.5 qt/a		A					
6	Diflexx Duo	454 g ai/ha	32 oz/a		B					
6	Warrant	1260 g ai/ha	1.5 qt/a		B					
6	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
6	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
6	Superb HC	0.5 % v/v	0.5 % v/v		B					
7	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A	98 ab	75 a	98 a	100 -	80 b
7	Laudis	92 g ai/ha	3 oz/a		B					
7	Warrant	1260 g ai/ha	1.5 qt/a		B					
7	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
7	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
7	Superb HC	0.5 % v/v	0.5 % v/v		B					
8	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A	100 a	69 a	100 a	100 -	95 a
8	Capreno	120 g ai/ha	3 oz/a		B					
8	Warrant	1260 g ai/ha	1.5 qt/a		B					
8	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
8	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
8	Superb HC	0.5 % v/v	0.5 % v/v		B					
9	Corvus	92 g ai/ha	4 oz/a		A	99 a	80 a	100 a	100 -	100 a
9	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A					
9	Diflexx	280 g ai/ha	8 oz/a		B					
9	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
9	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
9	Superb HC	0.5 % v/v	0.5 % v/v		B					
10	Acuron	600 g ai/ha	1.25 pt/a		A	91 ab	61	90 b	100 -	99 a
10	Acuron	600 g ai/ha	1.25 pt/a		B					
10	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
10	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
10	Superb HC	0.5 % v/v	0.5 % v/v		B					
LSD P=.05						8.0	10.8	5.6	.	11.1
Standard Deviation						5.5	7.4	3.9	0.0	7.7
CV						6.54	10.69	4.38	0.0	8.79
Levene's F						1.695	1.451	16.111	0.00	0.00
Levene's Prob(F)						0.134	0.221	0.001*	.	.
Skewness						-2.4214*	-2.159*	-2.6651*	-2.7717*	-2.3976*
Kurtosis						4.7257*	3.6087*	5.5636*	5.9791*	4.326*
Replicate F						0.630	1.305	1.491	0.000	0.984
Replicate Prob(F)						0.6017	0.2957	0.2394	1.0000	0.4156
Treatment F						121.406	50.682	260.337	0.000	66.778
Treatment Prob(F)						0.0001	0.0001	0.0001	1.0000	0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	ECHCG	AMBTR	CHEAL
Pest Name	Giant foxtail	Common barnyar>	Giant ragweed	common lambsqu>
Crop Type, Code	C ZEAMX	C -	C -	C -
Crop Name	Corn			
Rating Date	Jun-5-2019	Jun-11-2019	Jun-11-2019	Jun-11-2019
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Data Entry Date	Jun-5-2019	Jul-18-2019	Jul-18-2019	Jul-18-2019
Days After First/Last Applic.	53 7	59 13	59 13	59 13
Trt-Eval Interval	7 DA-B	13 DA-B	13 DA-B	13 DA-B
Days After Emergence	33 DE-1	39 DE-1	39 DE-1	39 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Code	6*	7*	8*	9*	10*
1	UTC						0 -	0 b	0 b	0	0 -
2	Corvus	92 g ai/ha	4 oz/a		A		0 -	100 a	100 a	100 -	100 -
2	AAtrex	1680 g ai/ha	1.5 qt/a		A						
2	Harness Max	1340 g ai/ha	40 oz/a		B						
2	AAtrex	560 g ai/ha	16 oz/a		B						
2	Roundup Powermax	1260 g ai/ha	32 oz/a		B						
2	N Pak AMS	2.5 % v/v	2.5 % v/v		B						
3	Balance Flexx	70 g ai/ha	4 oz/a		A		0 -	100 a	100 a	92 -	100 -
3	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A						
3	Capreno	120 g ai/ha	3 oz/a		B						
3	AAtrex	560 g ai/ha	16 oz/a		B						
3	Roundup Powermax	1260 g ai/ha	32 oz/a		B						
3	N Pak AMS	2.5 % v/v	2.5 % v/v		B						
3	Superb HC	0.5 % v/v	0.5 % v/v		B						
4	Corvus	92 g ai/ha	4 oz/a		A		0 -	89 a	90 a	89 -	100 -
4	AAtrex	1680 g ai/ha	1.5 qt/a		A						
4	Diflexx Duo	454 g ai/ha	32 oz/a		B						
4	Roundup Powermax	1260 g ai/ha	32 oz/a		B						
4	N Pak AMS	2.5 % v/v	2.5 % v/v		B						
4	Superb HC	0.5 % v/v	0.5 % v/v		B						
5	Balance Flexx	70 g ai/ha	4 oz/a		A		0 -	100 a	100 a	97 -	100 -
5	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A						
5	Diflexx Duo	454 g ai/ha	32 oz/a		B						
5	Roundup Powermax	1260 g ai/ha	32 oz/a		B						
5	N Pak AMS	2.5 % v/v	2.5 % v/v		B						
5	Superb HC	0.5 % v/v	0.5 % v/v		B						

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	ECHCG	AMBTR	CHEAL
Pest Name	Giant foxtail	Common barnyar>	Giant ragweed	common lambsqu>
Crop Type, Code	C ZEAMX	C -	C -	C -
Crop Name	Corn			
Rating Date	Jun-5-2019	Jun-11-2019	Jun-11-2019	Jun-11-2019
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Data Entry Date	Jun-5-2019	Jul-18-2019	Jul-18-2019	Jul-18-2019
Days After First/Last Applic.	53 7	59 13	59 13	59 13
Trt-Eval Interval	7 DA-B	13 DA-B	13 DA-B	13 DA-B
Days After Emergence	33 DE-1	39 DE-1	39 DE-1	39 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	6*	7*	8*	9*	10*
6	Balance Flexx	70 g ai/ha	4 oz/a		A	0 -	100 a	100 a	96 -	100 -
6	AAtrex	1680 g ai/ha	1.5 qt/a		A					
6	Diflexx Duo	454 g ai/ha	32 oz/a		B					
6	Warrant	1260 g ai/ha	1.5 qt/a		B					
6	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
6	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
6	Superb HC	0.5 % v/v	0.5 % v/v		B					
7	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A	0 -	100 a	100 a	91 -	100 -
7	Laudis	92 g ai/ha	3 oz/a		B					
7	Warrant	1260 g ai/ha	1.5 qt/a		B					
7	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
7	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
7	Superb HC	0.5 % v/v	0.5 % v/v		B					
8	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A	0 -	100 a	100 a	91 -	100 -
8	Capreno	120 g ai/ha	3 oz/a		B					
8	Warrant	1260 g ai/ha	1.5 qt/a		B					
8	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
8	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
8	Superb HC	0.5 % v/v	0.5 % v/v		B					
9	Corvus	92 g ai/ha	4 oz/a		A	0 -	98 a	99 a	91 -	100 -
9	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A					
9	Diflexx	280 g ai/ha	8 oz/a		B					
9	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
9	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
9	Superb HC	0.5 % v/v	0.5 % v/v		B					
10	Acuron	600 g ai/ha	1.25 pt/a		A	0 -	100 a	100 a	90 -	100 -
10	Acuron	600 g ai/ha	1.25 pt/a		B					
10	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
10	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
10	Superb HC	0.5 % v/v	0.5 % v/v		B					
LSD P=.05						.	8.9	9.3	8.9	.
Standard Deviation						0.0	6.1	6.4	6.1	0.0
CV						0.0	6.93	7.21	6.56	0.0
Levene's F						0.00	1.571	0.979	0.714	0.00
Levene's Prob(F)						.	0.169	0.476	0.677	.
Skewness						.	-2.6043*	-2.6067*	-0.2713	-2.7717*
Kurtosis						.	5.2304*	5.2367*	-1.4954	5.9791*
Replicate F						0.000	0.836	0.892	1.069	0.000
Replicate Prob(F)						1.0000	0.4860	0.4581	0.3807	1.0000
Treatment F						0.000	104.307	96.007	1.470	0.000
Treatment Prob(F)						1.0000	0.0001	0.0001	0.2198	1.0000

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMARE	ABUTH	SETFA	ECHCG	AMBTR
Pest Name	Redroot pigweed	velvetleaf	Giant foxtail	Common barnyar>	Giant ragweed
Crop Type, Code	C -	C -	C -	C -	C -
Crop Name					
Rating Date	Jun-11-2019	Jun-11-2019	Jun-25-2019	Jun-25-2019	Jun-25-2019
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Data Entry Date	Jul-18-2019	Jul-18-2019	Jun-25-2019	Jun-25-2019	Jun-25-2019
Days After First/Last Applic.	59 13	59 13	73 27	73 27	73 27
Trt-Eval Interval	13 DA-B	13 DA-B	27 DA-B	27 DA-B	27 DA-B
Days After Emergence	39 DE-1	39 DE-1	53 DE-1	53 DE-1	53 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	11*	12*	13*	14*	15*
1	UTC					0 -	0 b	0 c	0 c	0
2	Corvus	92 g ai/ha	4 oz/a		A	100 -	100 a	100 a	100 a	94 -
	2 AAtrex	1680 g ai/ha	1.5 qt/a		A					
	2 Harness Max	1340 g ai/ha	40 oz/a		B					
	2 AAtrex	560 g ai/ha	16 oz/a		B					
	2 Roundup Powermax	1260 g ai/ha	32 oz/a		B					
	2 N Pak AMS	2.5 % v/v	2.5 % v/v		B					
3	Balance Flexx	70 g ai/ha	4 oz/a		A	100 -	100 a	99 a	99 a	86 -
	3 Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A					
	3 Capreno	120 g ai/ha	3 oz/a		B					
	3 AAtrex	560 g ai/ha	16 oz/a		B					
	3 Roundup Powermax	1260 g ai/ha	32 oz/a		B					
	3 N Pak AMS	2.5 % v/v	2.5 % v/v		B					
	3 Superb HC	0.5 % v/v	0.5 % v/v		B					
4	Corvus	92 g ai/ha	4 oz/a		A	100 -	100 a	85 b	85 b	91 -
	4 AAtrex	1680 g ai/ha	1.5 qt/a		A					
	4 Diflexx Duo	454 g ai/ha	32 oz/a		B					
	4 Roundup Powermax	1260 g ai/ha	32 oz/a		B					
	4 N Pak AMS	2.5 % v/v	2.5 % v/v		B					
	4 Superb HC	0.5 % v/v	0.5 % v/v		B					
5	Balance Flexx	70 g ai/ha	4 oz/a		A	100 -	100 a	94 a	95 a	91 -
	5 Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A					
	5 Diflexx Duo	454 g ai/ha	32 oz/a		B					
	5 Roundup Powermax	1260 g ai/ha	32 oz/a		B					
	5 N Pak AMS	2.5 % v/v	2.5 % v/v		B					
	5 Superb HC	0.5 % v/v	0.5 % v/v		B					

The Ohio State University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMARE	ABUTH	SETFA	ECHCG	AMBTR
Pest Name	Redroot pigweed	velvetleaf	Giant foxtail	Common barnyar>	Giant ragweed
Crop Type, Code	C -	C -	C -	C -	C -
Crop Name					
Rating Date	Jun-11-2019	Jun-11-2019	Jun-25-2019	Jun-25-2019	Jun-25-2019
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Data Entry Date	Jul-18-2019	Jul-18-2019	Jun-25-2019	Jun-25-2019	Jun-25-2019
Days After First/Last Applic.	59 13	59 13	73 27	73 27	73 27
Trt-Eval Interval	13 DA-B	13 DA-B	27 DA-B	27 DA-B	27 DA-B
Days After Emergence	39 DE-1	39 DE-1	53 DE-1	53 DE-1	53 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	11*	12*	13*	14*	15*
6	Balance Flexx	70 g ai/ha	4 oz/a		A	100 -	100 a	100 a	100 a	87 -
6	AAtrex	1680 g ai/ha	1.5 qt/a		A					
6	Diflexx Duo	454 g ai/ha	32 oz/a		B					
6	Warrant	1260 g ai/ha	1.5 qt/a		B					
6	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
6	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
6	Superb HC	0.5 % v/v	0.5 % v/v		B					
7	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A	100 -	100 a	100 a	100 a	79 -
7	Laudis	92 g ai/ha	3 oz/a		B					
7	Warrant	1260 g ai/ha	1.5 qt/a		B					
7	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
7	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
7	Superb HC	0.5 % v/v	0.5 % v/v		B					
8	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A	100 -	100 a	100 a	100 a	77 -
8	Capreno	120 g ai/ha	3 oz/a		B					
8	Warrant	1260 g ai/ha	1.5 qt/a		B					
8	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
8	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
8	Superb HC	0.5 % v/v	0.5 % v/v		B					
9	Corvus	92 g ai/ha	4 oz/a		A	100 -	100 a	88 b	88 b	86 -
9	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A					
9	Diflexx	280 g ai/ha	8 oz/a		B					
9	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
9	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
9	Superb HC	0.5 % v/v	0.5 % v/v		B					
10	Acuron	600 g ai/ha	1.25 pt/a		A	100 -	100 a	98 a	98 a	85 -
10	Acuron	600 g ai/ha	1.25 pt/a		B					
10	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
10	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
10	Superb HC	0.5 % v/v	0.5 % v/v		B					
LSD P=.05							0.4 - 0.4	6.0	6.1	14.1
Standard Deviation						0.0	0.0t	4.2	4.2	9.6
CV						0.0	0.06t	4.82	4.88	11.18
Levene's F						0.00	0.778	1.039	1.106	0.425
Levene's Prob(F)						.	0.638	0.433	0.388	0.896
Skewness						-2.7717*	-2.7717*	-2.5619*	-2.5603*	-0.3533
Kurtosis						5.9791*	5.9791*	5.1925*	5.1864*	0.1849
Replicate F						0.000	1.253	0.553	0.474	0.273
Replicate Prob(F)						1.0000	0.3101	0.6504	0.7027	0.8440
Treatment F						0.000	1175958.393	219.256	213.629	1.320
Treatment Prob(F)						1.0000	0.0001	0.0001	0.0001	0.2810

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	CHEAL	AMARE	ABUTH	SETFA	ECHCG
Pest Name	common lambsqu	Redroot pigweed	velvetleaf	Giant foxtail	Common barnyar>
Crop Type, Code	C -	C -	C -	C -	C -
Crop Name					
Rating Date	Jun-25-2019	Jun-25-2019	Jun-25-2019	Jul-18-2019	Jul-18-2019
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Data Entry Date	Jun-25-2019	Jun-25-2019	Jun-25-2019	Jul-18-2019	Jul-18-2019
Days After First/Last Applic.	73 27	73 27	73 27	96 50	96 50
Trt-Eval Interval	27 DA-B	27 DA-B	27 DA-B	50 DA-B	50 DA-B
Days After Emergence	53 DE-1	53 DE-1	53 DE-1	76 DE-1	76 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	16*	17*	18*	19*	20*
1	UTC					0 -	0 -	0 -	0 c	0 d
2	Corvus	92 g ai/ha	4 oz/a		A	100 -	100 -	100 -	100 a	100 a
2	AAtrex	1680 g ai/ha	1.5 qt/a		A					
2	Harness Max	1340 g ai/ha	40 oz/a		B					
2	AAtrex	560 g ai/ha	16 oz/a		B					
2	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
2	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
3	Balance Flexx	70 g ai/ha	4 oz/a		A	100 -	100 -	100 -	95 a	96 a
3	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A					
3	Capreno	120 g ai/ha	3 oz/a		B					
3	AAtrex	560 g ai/ha	16 oz/a		B					
3	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
3	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
3	Superb HC	0.5 % v/v	0.5 % v/v		B					
4	Corvus	92 g ai/ha	4 oz/a		A	100 -	100 -	100 -	80 b	81 c
4	AAtrex	1680 g ai/ha	1.5 qt/a		A					
4	Diflexx Duo	454 g ai/ha	32 oz/a		B					
4	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
4	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
4	Superb HC	0.5 % v/v	0.5 % v/v		B					
5	Balance Flexx	70 g ai/ha	4 oz/a		A	100 -	100 -	100 -	88 ab	92 ab
5	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A					
5	Diflexx Duo	454 g ai/ha	32 oz/a		B					
5	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
5	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
5	Superb HC	0.5 % v/v	0.5 % v/v		B					

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	CHEAL	AMARE	ABUTH	SETFA	ECHCG
Pest Name	common lambsqu>	Redroot pigweed	velvetleaf	Giant foxtail	Common barnyar>
Crop Type, Code	C -	C -	C -	C -	C -
Crop Name					
Rating Date	Jun-25-2019	Jun-25-2019	Jun-25-2019	Jul-18-2019	Jul-18-2019
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Data Entry Date	Jun-25-2019	Jun-25-2019	Jun-25-2019	Jul-18-2019	Jul-18-2019
Days After First/Last Applic.	73 27	73 27	73 27	96 50	96 50
Trt-Eval Interval	27 DA-B	27 DA-B	27 DA-B	50 DA-B	50 DA-B
Days After Emergence	53 DE-1	53 DE-1	53 DE-1	76 DE-1	76 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	16*	17*	18*	19*	20*
6	Balance Flexx	70 g ai/ha	4 oz/a		A	100 -	100 -	100 -	90 ab	95 ab
6	AAtrex	1680 g ai/ha	1.5 qt/a		A					
6	Diflexx Duo	454 g ai/ha	32 oz/a		B					
6	Warrant	1260 g ai/ha	1.5 qt/a		B					
6	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
6	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
6	Superb HC	0.5 % v/v	0.5 % v/v		B					
7	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A	100 -	100 -	100 -	96 a	95 ab
7	Laudis	92 g ai/ha	3 oz/a		B					
7	Warrant	1260 g ai/ha	1.5 qt/a		B					
7	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
7	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
7	Superb HC	0.5 % v/v	0.5 % v/v		B					
8	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A	100 -	100 -	100 -	100 a	99 a
8	Capreno	120 g ai/ha	3 oz/a		B					
8	Warrant	1260 g ai/ha	1.5 qt/a		B					
8	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
8	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
8	Superb HC	0.5 % v/v	0.5 % v/v		B					
9	Corvus	92 g ai/ha	4 oz/a		A	100 -	100 -	100 -	78 b	85 bc
9	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A					
9	Diflexx	280 g ai/ha	8 oz/a		B					
9	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
9	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
9	Superb HC	0.5 % v/v	0.5 % v/v		B					
10	Acuron	600 g ai/ha	1.25 pt/a		A	100 -	100 -	100 -	100 a	98 a
10	Acuron	600 g ai/ha	1.25 pt/a		B					
10	Roundup Powermax	1260 g ai/ha	32 oz/a		B					
10	N Pak AMS	2.5 % v/v	2.5 % v/v		B					
10	Superb HC	0.5 % v/v	0.5 % v/v		B					
LSD P=.05						.	.	.	9.7	7.6
Standard Deviation						0.0	0.0	0.0	5.6	5.3
CV						0.0	0.0	0.0	6.83	6.26
Levene's F						0.00	0.00	0.00	2.391	0.839
Levene's Prob(F)						.	.	.	0.05	0.587
Skewness						-2.7717*	-2.7717*	-2.7717*	-2.3618*	-2.4752*
Kurtosis						5.9791*	5.9791*	5.9791*	4.7072*	4.9218*
Replicate F						0.000	0.000	0.000	0.239	0.412
Replicate Prob(F)						1.0000	1.0000	1.0000	0.7902	0.7454
Treatment F						0.000	0.000	0.000	85.339	130.924
Treatment Prob(F)						1.0000	1.0000	1.0000	0.0001	0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	CHEAL	AMARE	ABUTH
Pest Name	Giant ragweed	common lambsqu	Redroot pigweed	velvetleaf
Crop Type, Code	C -	C -	C -	C -
Crop Name				
Rating Date	Jul-18-2019	Jul-18-2019	Jul-18-2019	Jul-18-2019
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Data Entry Date	Jul-18-2019	Jul-18-2019		Jul-18-2019
Days After First/Last Applic.	96 50	96 50	96 50	96 50
Trt-Eval Interval	50 DA-B	50 DA-B	50 DA-B	50 DA-B
Days After Emergence	76 DE-1	76 DE-1	76 DE-1	76 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	21*	22*	23*	24*
1	UTC					0 b	0 -	0 -	0 -
2	Corvus	92 g ai/ha	4 oz/a		A	100 a	100 -	100 -	100 -
2	AAtrex	1680 g ai/ha	1.5 qt/a		A				
2	Harness Max	1340 g ai/ha	40 oz/a		B				
2	AAtrex	560 g ai/ha	16 oz/a		B				
2	Roundup Powermax	1260 g ai/ha	32 oz/a		B				
2	N Pak AMS	2.5 % v/v	2.5 % v/v		B				
3	Balance Flexx	70 g ai/ha	4 oz/a		A	87 a	100 -	100 -	100 -
3	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A				
3	Capreno	120 g ai/ha	3 oz/a		B				
3	AAtrex	560 g ai/ha	16 oz/a		B				
3	Roundup Powermax	1260 g ai/ha	32 oz/a		B				
3	N Pak AMS	2.5 % v/v	2.5 % v/v		B				
3	Superb HC	0.5 % v/v	0.5 % v/v		B				
4	Corvus	92 g ai/ha	4 oz/a		A	88 a	100 -	100 -	100 -
4	AAtrex	1680 g ai/ha	1.5 qt/a		A				
4	Diflexx Duo	454 g ai/ha	32 oz/a		B				
4	Roundup Powermax	1260 g ai/ha	32 oz/a		B				
4	N Pak AMS	2.5 % v/v	2.5 % v/v		B				
4	Superb HC	0.5 % v/v	0.5 % v/v		B				
5	Balance Flexx	70 g ai/ha	4 oz/a		A	85 a	100 -	100 -	100 -
5	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A				
5	Diflexx Duo	454 g ai/ha	32 oz/a		B				
5	Roundup Powermax	1260 g ai/ha	32 oz/a		B				
5	N Pak AMS	2.5 % v/v	2.5 % v/v		B				
5	Superb HC	0.5 % v/v	0.5 % v/v		B				

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	CHEAL	AMARE	ABUTH
Pest Name	Giant ragweed	common lambsqu>	Redroot pigweed	velvetleaf
Crop Type, Code	C -	C -	C -	C -
Crop Name				
Rating Date	Jul-18-2019	Jul-18-2019	Jul-18-2019	Jul-18-2019
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Data Entry Date	Jul-18-2019	Jul-18-2019		Jul-18-2019
Days After First/Last Applic.	96 50	96 50	96 50	96 50
Trt-Eval Interval	50 DA-B	50 DA-B	50 DA-B	50 DA-B
Days After Emergence	76 DE-1	76 DE-1	76 DE-1	76 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	21*	22*	23*	24*
6	Balance Flexx	70 g ai/ha	4 oz/a		A	86 a	100 -	100 -	100 -
6	AAtrex	1680 g ai/ha	1.5 qt/a		A				
6	Diflexx Duo	454 g ai/ha	32 oz/a		B				
6	Warrant	1260 g ai/ha	1.5 qt/a		B				
6	Roundup Powermax	1260 g ai/ha	32 oz/a		B				
6	N Pak AMS	2.5 % v/v	2.5 % v/v		B				
6	Superb HC	0.5 % v/v	0.5 % v/v		B				
7	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A	81 a	100 -	100 -	100 -
7	Laudis	92 g ai/ha	3 oz/a		B				
7	Warrant	1260 g ai/ha	1.5 qt/a		B				
7	Roundup Powermax	1260 g ai/ha	32 oz/a		B				
7	N Pak AMS	2.5 % v/v	2.5 % v/v		B				
7	Superb HC	0.5 % v/v	0.5 % v/v		B				
8	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A	78 a	100 -	100 -	100 -
8	Capreno	120 g ai/ha	3 oz/a		B				
8	Warrant	1260 g ai/ha	1.5 qt/a		B				
8	Roundup Powermax	1260 g ai/ha	32 oz/a		B				
8	N Pak AMS	2.5 % v/v	2.5 % v/v		B				
8	Superb HC	0.5 % v/v	0.5 % v/v		B				
9	Corvus	92 g ai/ha	4 oz/a		A	86 a	100 -	100 -	100 -
9	Harness Xtra 5.6	2820 g ai/ha	1.8 qt/a		A				
9	Diflexx	280 g ai/ha	8 oz/a		B				
9	Roundup Powermax	1260 g ai/ha	32 oz/a		B				
9	N Pak AMS	2.5 % v/v	2.5 % v/v		B				
9	Superb HC	0.5 % v/v	0.5 % v/v		B				
10	Acuron	600 g ai/ha	1.25 pt/a		A	88 a	100 -	100 -	100 -
10	Acuron	600 g ai/ha	1.25 pt/a		B				
10	Roundup Powermax	1260 g ai/ha	32 oz/a		B				
10	N Pak AMS	2.5 % v/v	2.5 % v/v		B				
10	Superb HC	0.5 % v/v	0.5 % v/v		B				
LSD P=.05						14.2	.	.	.
Standard Deviation						9.8	0.0	0.0	0.0
CV						12.53	0.0	0.0	0.0
Levene's F						1.762	0.00	0.00	0.00
Levene's Prob(F)						0.118	.	.	.
Skewness						-2.1492*	-2.7717*	-2.7717*	-2.7717*
Kurtosis						3.9646*	5.9791*	5.9791*	5.9791*
Replicate F						0.299	0.000	0.000	0.000
Replicate Prob(F)						0.8260	1.0000	1.0000	1.0000
Treatment F						32.767	0.000	0.000	0.000
Treatment Prob(F)						0.0001	1.0000	1.0000	1.0000

Bayer Corn Herbicides, University Demo

Trial ID: 19BAYERUNIV Location: Trial Year: 2019
Protocol ID: 19BAYERUNIV Investigator: Dr. Mark M. Loux
Project ID: HP19USAWMU Study Director: Anthony Dobbels
Sponsor Contact: David Lamore, Bayer CropScience

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
ECHCG, Echinochloa crus-galli, Common barnyard grass = US

Crop Type, Code

C, G-ByrC7 = EPPO species (Bayer) codes
ZEAMX, BCOR, Zea mays, Corn = US

Rating Type

CONTRO = control / burndown or knockdown
PHYGEN = phytotoxicity - general / injury

Rating Unit

% = percent