

Capreno/Acetochlor Rate Titration

Trial ID: 19CAPRENO

Location:

Trial Year: 2019

Protocol ID: 19CAPRENO

Investigator: Dr. Mark M. Loux

Project ID: HP19USAWMJ

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 °: 39.858 N

Longitude of LL Corner °: 83.66998 W

Altitude of LL Corner: 1194.00 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

BBCH Scale: BCOR

Entry Date: Apr-15-2019

Stage Scale: VR

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: Apr-26-2019

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*

Common Name: Giant foxtail

Entry Date: May-14-2019

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*

Common Name: Giant ragweed

Entry Date: May-14-2019

Pest 3 Type: W **Code:** AMARE *Amaranthus retroflexus*

Common Name: Redroot pigweed

Entry Date: May-14-2019

Pest 4 Type: W **Code:** POLPY *Persicaria pensylvanica*

Common Name: annual smartweed

Entry Date: May-14-2019

Pest 5 Type: W **Code:** CHEAL *Chenopodium album*

Common Name: common lambsquarters

Entry Date: May-14-2019

Pest 6 Type: W **Code:** ABUTH *Abutilon theophrasti*

Common Name: velvetleaf

Entry Date: May-14-2019

Pest 7 Type: W **Code:** ECHCG *Echinochloa crus-galli*

Common Name: Common barnyard grass

Entry Date: Jun-7-2019

Pest 8 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:** 12

Tillage Type: CONTIL conventional-till

Replications: 4

Study Design: RACOB L Randomized Complete Block (RCB)

Previous

No. Crop

1. SOYBEAN

Field Prep./Maintenance:

Fall chisel, spring finishing tool and cultipacker

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

Application Date May-14-2019
 Appl. Start Time 9:30 AM
 Appl. Stop Time 10:00 AM
 Application Method SPRAY
 Application Timing EPO
 Application Placement BROFOL
 Applied By Reeb
 Appl. Entry Date May-14-2019
 Air Temperature Start, Stop 51 55 F
 % Relative Humidity Start, Stop 78 64
 Wind Velocity+Dir. Start 9 MPH NW
 Wind Velocity+Dir. Stop 8 MPH NW
 Wind Velocity+Dir. Max 9 MPH NW
 Wet Leaves (Y/N) N no
 Soil Temperature 47 F
 Soil Moisture wet
 Soil Surface Condition WET
 % Cloud Cover 0
 Next Moisture Occurred On May-16-2019
 Time to Next Moisture 2 DAY
 Moisture 6 Hours after Appl. 0 IN
 Moisture 1 Week after Appl. 2.14 IN

Crop Stage At Each Application

A

Crop 1 Code, BBCH Scale ZEAMX BCOR
 Days after Emergence 18
 Stage Majority, Percent V2 100
 Height Average 3 IN
 Height Minimum, Maximum 3 3.5

Pest Stage At Each Application

A

Pest 1 Code, Type, Scale SETFA W
 Stage Majority, Percent 11 100
 Height Average 1.5 in
 Height Minimum, Maximum 1 1.5
 Density Average 437 M2
 Density Min, Max 320 596
 Pest 2 Code, Type, Scale AMBTR W
 Stage Majority, Percent 12 100
 Height Average 2 IN
 Height Minimum, Maximum 1 2
 Density Average 14 M2
 Density Min, Max 12 16
 Pest 3 Code, Type, Scale AMARE W
 Stage Majority, Percent 14 100
 Height Average 0.5 in
 Height Minimum, Maximum 0.25 0.5
 Density Average 4 m2
 Density Min, Max 4 8
 Pest 4 Code, Type, Scale POLPY W
 Stage Majority, Percent 12 100
 Height Average 1 in
 Height Minimum, Maximum 0.5 1
 Density Average 5 M2
 Pest 5 Code, Type, Scale CHEAL W
 Stage Majority, Percent 14 100
 Height Average 1 in
 Height Minimum, Maximum 0.5 1
 Density Average 27 M2
 Density Min, Max 12 72
 Pest 6 Code, Type, Scale ABUTH W
 Stage Majority, Percent 13 100
 Height Average 1 in
 Height Minimum, Maximum 0.5 1
 Pest 7 Code, Type, Scale ECHCG W
 Density Average 196 M2
 Density Min, Max 144 252
 Pest 8 Code, Type, Scale IPOHE W
 Density Average 1 m2

Date **By** **Context** **Notes**
 Mar-26-2019 Dr. Mark M. Loux STATUS Automatically added by ARM: Trial Status updated to 'S' during trial creation.
 Apr-15-2019 Dr. Mark M. Loux STATUS Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

SE Definitions

1.
Crop Type, Code C

Pest Type				W Weed	W Weed	W Weed
Pest Code				SETFA	AMBTR	CHEAL
Pest Name				Giant foxtail	Giant ragweed	common lambsqu>
Crop Type, Code	C ZEAMX	C ZEAMX	C ZEAMX	C -	C -	C -
Crop Name	Corn	Corn	Corn			
Rating Date	May-22-2019	May-22-2019	Jun-3-2019	Jun-3-2019	Jun-3-2019	Jun-3-2019
Rating Type	PHYCHL	PHYNEC	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Data Entry Date	May-23-2019	May-23-2019	Jun-3-2019	Jun-3-2019	Jun-3-2019	Jun-3-2019
Days After First/Last Applic.	8 8	8 8	20 20	20 20	20 20	20 20
Trt-Eval Interval	8 DA-A	8 DA-A	20 DA-A	20 DA-A	20 DA-A	20 DA-A
Days After Emergence	26 DE-1	26 DE-1	38 DE-1	38 DE-1	38 DE-1	38 DE-1
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	1*	2*	3*	4*	5*	6*
1	UTC				A	0 b	0 c	0 -	0 c	0 b	0 -
2	Capreno	119.9 g ai/ha	3 oz/a		A	5 a	0 c	0 -	100 a	88 a	100 -
	2 Degree Xtra	3403 g ai/ha	3 qt/a		A						
	2 Roundup Powermax	1263 g ai/ha	32 oz/a		A						
	2 N Pak AMS	2.5 % v/v	1.5 qt/a		A						
	2 Superb HC	0.5 % v/v	0.3 qt/a		A						
3	Capreno	119.9 g ai/ha	3 oz/a		A	4 a	0 c	0 -	100 a	86 a	100 -
	3 Degree Xtra	2550 g ai/ha	2.25 qt/a		A						
	3 Roundup Powermax	1263 g ai/ha	32 oz/a		A						
	3 N Pak AMS	2.5 % v/v	1.5 qt/a		A						
	3 Superb HC	0.5 % v/v	0.3 qt/a		A						
4	Capreno	119.9 g ai/ha	3 oz/a		A	4 a	0 c	0 -	100 a	81 a	100 -
	4 Degree Xtra	1700 g ai/ha	1.5 qt/a		A						
	4 Roundup Powermax	1263 g ai/ha	32 oz/a		A						
	4 N Pak AMS	2.5 % v/v	1.5 qt/a		A						
	4 Superb HC	0.5 % v/v	0.3 qt/a		A						
5	Capreno	119.9 g ai/ha	3 oz/a		A	5 a	0 bc	0 -	91 a	85 a	100 -
	5 Harness Max	1350 g ai/ha	40 oz/a		A						
	5 Roundup Powermax	1263 g ai/ha	32 oz/a		A						
	5 N Pak AMS	2.5 % v/v	1.5 qt/a		A						
	5 Superb HC	0.5 % v/v	0.3 qt/a		A						
6	Harness Max	1840 g ai/ha	55 oz/a		A	6 a	4 a	0 -	98 a	85 a	100 -
	6 Atrazine	1122 g ai/ha	32 oz/a		A						
	6 Roundup Powermax	1263 g ai/ha	32 oz/a		A						
	6 N Pak AMS	2.5 % v/v	1.5 qt/a		A						
	6 Superb HC	0.5 % v/v	0.3 qt/a		A						
7	Diflexx Duo	453.6 g ai/ha	32 oz/a		A	4 a	1 bc	0 -	100 a	88 a	100 -
	7 Degree Xtra	2550 g ai/ha	2.25 qt/a		A						
	7 Roundup Powermax	1263 g ai/ha	32 oz/a		A						
	7 N Pak AMS	2.5 % v/v	2.5 % v/v		A						
	7 Superb HC	0.5 % v/v	0.5 % v/v		A						
8	Capreno	119.9 g ai/ha	3 oz/a		A	5	0 c	0 -	83 b	89 a	100 -
	8 Atrazine	1120 g ai/ha	32 oz/a		A						
	8 Roundup Powermax	1263 g ai/ha	32 oz/a		A						
	8 N Pak AMS	2.5 % v/v	2.5 % v/v		A						
	8 Superb HC	0.5 % v/v	0.5 % v/v		A						
9	Degree Xtra	3400 g ai/ha	3 qt/a		A	2 b	0 bc	0 -	96 a	88 a	100 -
	9 Roundup Powermax	1263 g ai/ha	32 oz/a		A						
	9 N Pak AMS	2.5 % v/v	2.5 % v/v		A						

Pest Type							W Weed	W Weed	W Weed		
Pest Code							SETFA	AMBTR	CHEAL		
Pest Name							Giant foxtail	Giant ragweed	common		
Crop Type, Code	C ZEAMX	C ZEAMX	C ZEAMX	C -	C -			lambsqu>			
Crop Name	Corn	Corn	Corn					C -			
Rating Date	May-22-2019	May-22-2019	Jun-3-2019	Jun-3-2019	Jun-3-2019			Jun-3-2019			
Rating Type	PHYCHL	PHYNEC	PHYGEN	CONTRO	CONTRO			CONTRO			
Rating Unit	%	%	%	%	%			%			
Number of Subsamples	1	1	1	1	1			1			
Data Entry Date	May-23-2019	May-23-2019	Jun-3-2019	Jun-3-2019	Jun-3-2019			Jun-3-2019			
Days After First/Last Applic.	8 8	8 8	20 20	20 20	20 20			20 20			
Trt-Eval Interval	8 DA-A	8 DA-A	20 DA-A	20 DA-A	20 DA-A			20 DA-A			
Days After Emergence	26 DE-1	26 DE-1	38 DE-1	38 DE-1	38 DE-1			38 DE-1			
Number of Decimals	0	0	0	0	0			0			
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	1*	2*	3*	4*	5*	6*
10	Acuron	1500 g ai/ha	50 oz/a		A	5 a	2 abc	0 -	91 a	85 a	100 -
10	Roundup Powermax	1263 g ai/ha	32 oz/a		A						
10	N Pak AMS	2.5 % v/v	2.5 % v/v		A						
10	NIS	0.25 % v/v	0.25 % v/v		A						
11	Resicore	1150 g ai/ha	40 oz/a		A	5 a	4 a	0 -	93 a	91 a	100 -
11	Atrazine	1120 g ai/ha	32 oz/a		A						
11	Roundup Powermax	1263 g ai/ha	32 oz/a		A						
11	N Pak AMS	2.5 % v/v	2.5 % v/v		A						
11	NIS	0.25 % v/v	0.25 % v/v		A						
12	Halex GT	2200 g ai/ha	1.8 qt/a		A	5 a	2 ab	0 -	95 a	86 a	100 -
12	Atrazine	1120 g ai/ha	32 oz/a		A						
12	N Pak AMS	2.5 % v/v	2.5 % v/v		A						
12	NIS	0.25 % v/v	0.25 % v/v		A						
LSD P=.05						1.9	1.2 - 2.5	.	6.8	6.3	.
Standard Deviation						1.3	0.2t	0.0	4.7	4.4	0.0
CV						33.41	77.08t	0.0	5.42	5.52	0.0
Levene's F						0.893	1.58	0.00	5.521	0.813	0.00
Levene's Prob(F)						0.549	0.147	.	0.001*	0.627	.
Skewness						-0.1475	0.7554*	.	-2.813*	-2.8922*	-3.1133*
Kurtosis						1.3988	-0.9755	.	6.8036*	7.2239*	8.0253*
Replicate F						0.271	1.962	0.000	1.176	3.473	0.000
Replicate Prob(F)						0.8455	0.1389	1.0000	0.3338	0.0269	1.0000
Treatment F						7.112	8.790	0.000	139.836	131.274	0.000
Treatment Prob(F)						0.0001	0.0001	1.0000	0.0001	0.0001	1.0000

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMARE	POLPY	ABUTH	SETFA
Pest Name	Redroot pigweed	annual smartwe>	velvetleaf	Giant foxtail
Crop Type, Code	C -	C -	C - C	ZEAMX C -
Crop Name				Corn
Rating Date	Jun-3-2019	Jun-3-2019	Jun-3-2019	Jun-11-2019
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Data Entry Date	Jun-3-2019	Jun-3-2019	Jun-3-2019	Jun-13-2019
Days After First/Last Applic.	20 20	20 20	20 20	28 28
Trt-Eval Interval	20 DA-A	20 DA-A	20 DA-A	28 DA-A
Days After Emergence	38 DE-1	38 DE-1	38 DE-1	46 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	7*	8*	9*	10*	11*
1	UTC					0 -	0 -	0 b	0 -	0
2	Capreno	119.9 g ai/ha	3 oz/a		A	100 -	100 -	100 a	0 -	100 a
	2 Degree Xtra	3403 g ai/ha	3 qt/a		A					
	2 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	2 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	2 Superb HC	0.5 % v/v	0.3 qt/a		A					
3	Capreno	119.9 g ai/ha	3 oz/a		A	100 -	100 -	100 a	0 -	96 a
	3 Degree Xtra	2550 g ai/ha	2.25 qt/a		A					
	3 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	3 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	3 Superb HC	0.5 % v/v	0.3 qt/a		A					
4	Capreno	119.9 g ai/ha	3 oz/a		A	100 -	100 -	97 a	0 -	95 ab
	4 Degree Xtra	1700 g ai/ha	1.5 qt/a		A					
	4 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	4 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	4 Superb HC	0.5 % v/v	0.3 qt/a		A					
5	Capreno	119.9 g ai/ha	3 oz/a		A	100 -	100 -	100 a	0 -	84 bc
	5 Harness Max	1350 g ai/ha	40 oz/a		A					
	5 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	5 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	5 Superb HC	0.5 % v/v	0.3 qt/a		A					
6	Harness Max	1840 g ai/ha	55 oz/a		A	100 -	100 -	100 a	0 -	83 bc
	6 Atrazine	1122 g ai/ha	32 oz/a		A					
	6 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	6 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	6 Superb HC	0.5 % v/v	0.3 qt/a		A					
7	Diflexx Duo	453.6 g ai/ha	32 oz/a		A	100 -	100 -	100 a	0 -	90 ab
	7 Degree Xtra	2550 g ai/ha	2.25 qt/a		A					
	7 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	7 N Pak AMS	2.5 % v/v	2.5 % v/v		A					
	7 Superb HC	0.5 % v/v	0.5 % v/v		A					
8	Capreno	119.9 g ai/ha	3 oz/a		A	100 -	100 -	99 a	0 -	63 d
	8 Atrazine	1120 g ai/ha	32 oz/a		A					
	8 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	8 N Pak AMS	2.5 % v/v	2.5 % v/v		A					
	8 Superb HC	0.5 % v/v	0.5 % v/v		A					
9	Degree Xtra	3400 g ai/ha	3 qt/a		A	100 -	100 -	99 a	0 -	92 ab
	9 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	9 N Pak AMS	2.5 % v/v	2.5 % v/v		A					

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMARE	POLPY	ABUTH	SETFA
Pest Name	Redroot pigweed	annual smartwe>	velvetleaf	Giant foxtail
Crop Type, Code	C -	C -	C -	C -
Crop Name			C ZEAMX	Corn
Rating Date	Jun-3-2019	Jun-3-2019	Jun-3-2019	Jun-11-2019
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Data Entry Date	Jun-3-2019	Jun-3-2019	Jun-3-2019	Jun-13-2019
Days After First/Last Applic.	20 20	20 20	20 20	28 28
Trt-Eval Interval	20 DA-A	20 DA-A	20 DA-A	28 DA-A
Days After Emergence	38 DE-1	38 DE-1	38 DE-1	46 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	7*	8*	9*	10*	11*
10	Acuron	1500 g ai/ha	50 oz/a		A	100 -	100 -	100 a	0 -	83 bc
10	Roundup Powermax	1263 g ai/ha	32 oz/a		A					
10	N Pak AMS	2.5 % v/v	2.5 % v/v		A					
10	NIS	0.25 % v/v	0.25 % v/v		A					
11	Resicore	1150 g ai/ha	40 oz/a		A	100 -	100 -	100 a	0 -	76 c
11	Atrazine	1120 g ai/ha	32 oz/a		A					
11	Roundup Powermax	1263 g ai/ha	32 oz/a		A					
11	N Pak AMS	2.5 % v/v	2.5 % v/v		A					
11	NIS	0.25 % v/v	0.25 % v/v		A					
12	Halex GT	2200 g ai/ha	1.8 qt/a		A	100 -	100 -	100 a	0 -	84 bc
12	Atrazine	1120 g ai/ha	32 oz/a		A					
12	N Pak AMS	2.5 % v/v	2.5 % v/v		A					
12	NIS	0.25 % v/v	0.25 % v/v		A					
LSD P=.05						.	.	2.5	.	7.8
Standard Deviation						0.0	0.0	1.7	0.0	5.4
CV						0.0	0.0	1.89	0.0	6.32
Levene's F						0.00	0.00	1.232	0.00	1.134
Levene's Prob(F)						.	.	0.302	.	0.368
Skewness						-3.1133*	-3.1133*	-3.0927*	.	-0.7108
Kurtosis						8.0253*	8.0253*	7.9399*	.	0.0139
Replicate F						0.000	0.000	1.056	0.000	0.883
Replicate Prob(F)						1.0000	1.0000	0.3809	1.0000	0.4608
Treatment F						0.000	0.000	1113.434	0.000	14.729
Treatment Prob(F)						1.0000	1.0000	0.0001	1.0000	0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	AMBTR	CHEAL	AMARE	POLPY	ABUTH					
Pest Name	Giant ragweed	common lambsqu>	Redroot pigweed	annual smartwe>	velvetleaf					
Crop Type, Code	C -	C -	C -	C -	C -					
Crop Name										
Rating Date	Jun-11-2019	Jun-11-2019	Jun-11-2019	Jun-11-2019	Jun-11-2019					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1					
Data Entry Date	Jun-13-2019	Jun-13-2019	Jun-13-2019	Jun-13-2019	Jun-13-2019					
Days After First/Last Applic.	28 28	28 28	28 28	28 28	28 28					
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A					
Days After Emergence	46 DE-1	46 DE-1	46 DE-1	46 DE-1	46 DE-1					
Number of Decimals	0	0	0	0	0					
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	12*	13*	14*	15*	16*
1	UTC					0 b	0 -	0 b	0 -	0 b
2	Capreno	119.9 g ai/ha	3 oz/a		A	80 a	100 -	100 a	100 -	100 a
	2 Degree Xtra	3403 g ai/ha	3 qt/a		A					
	2 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	2 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	2 Superb HC	0.5 % v/v	0.3 qt/a		A					
3	Capreno	119.9 g ai/ha	3 oz/a		A	82 a	100 -	100 a	100 -	100 a
	3 Degree Xtra	2550 g ai/ha	2.25 qt/a		A					
	3 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	3 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	3 Superb HC	0.5 % v/v	0.3 qt/a		A					
4	Capreno	119.9 g ai/ha	3 oz/a		A	74 a	100 -	100 a	100 -	99 a
	4 Degree Xtra	1700 g ai/ha	1.5 qt/a		A					
	4 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	4 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	4 Superb HC	0.5 % v/v	0.3 qt/a		A					
5	Capreno	119.9 g ai/ha	3 oz/a		A	81 a	100 -	100 a	100 -	100 a
	5 Harness Max	1350 g ai/ha	40 oz/a		A					
	5 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	5 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	5 Superb HC	0.5 % v/v	0.3 qt/a		A					
6	Harness Max	1840 g ai/ha	55 oz/a		A	76 a	100 -	100 a	100 -	100 a
	6 Atrazine	1122 g ai/ha	32 oz/a		A					
	6 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	6 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	6 Superb HC	0.5 % v/v	0.3 qt/a		A					
7	Diflexx Duo	453.6 g ai/ha	32 oz/a		A	80 a	100 -	100 a	100 -	97 a
	7 Degree Xtra	2550 g ai/ha	2.25 qt/a		A					
	7 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	7 N Pak AMS	2.5 % v/v	2.5 % v/v		A					
	7 Superb HC	0.5 % v/v	0.5 % v/v		A					
8	Capreno	119.9 g ai/ha	3 oz/a		A	73 a	100 -	100 a	100 -	93 a
	8 Atrazine	1120 g ai/ha	32 oz/a		A					
	8 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	8 N Pak AMS	2.5 % v/v	2.5 % v/v		A					
	8 Superb HC	0.5 % v/v	0.5 % v/v		A					
9	Degree Xtra	3400 g ai/ha	3 qt/a		A	83 a	100 -	100 a	100 -	91 a
	9 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	9 N Pak AMS	2.5 % v/v	2.5 % v/v		A					

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	CHEAL	AMARE	POLPY	ABUTH
Pest Name	Giant ragweed	common lambsqu	Redroot pigweed	annual smartwe>	velvetleaf
Crop Type, Code	C -	C -	C -	C -	C -
Crop Name					
Rating Date	Jun-11-2019	Jun-11-2019	Jun-11-2019	Jun-11-2019	Jun-11-2019
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Data Entry Date	Jun-13-2019	Jun-13-2019	Jun-13-2019	Jun-13-2019	Jun-13-2019
Days After First/Last Applic.	28 28	28 28	28 28	28 28	28 28
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A
Days After Emergence	46 DE-1	46 DE-1	46 DE-1	46 DE-1	46 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate	Unit Code	12*	13*	14*	15*	16*
10	Acuron	1500 g ai/ha		50 oz/a		A	76 a	100 -	100 a	100 -	99 a
10	Roundup Powermax	1263 g ai/ha		32 oz/a		A					
10	N Pak AMS	2.5 % v/v		2.5 % v/v		A					
10	NIS	0.25 % v/v		0.25 % v/v		A					
11	Resicore	1150 g ai/ha		40 oz/a		A	78 a	100 -	99 a	100 -	100 a
11	Atrazine	1120 g ai/ha		32 oz/a		A					
11	Roundup Powermax	1263 g ai/ha		32 oz/a		A					
11	N Pak AMS	2.5 % v/v		2.5 % v/v		A					
11	NIS	0.25 % v/v		0.25 % v/v		A					
12	Halex GT	2200 g ai/ha		1.8 qt/a		A	78 a	100 -	100 a	100 -	95 a
12	Atrazine	1120 g ai/ha		32 oz/a		A					
12	N Pak AMS	2.5 % v/v		2.5 % v/v		A					
12	NIS	0.25 % v/v		0.25 % v/v		A					
	LSD P=.05						8.1	.	1.0	.	7.1
	Standard Deviation						5.6	0.0	0.7	0.0	5.0
	CV						7.85	0.0	0.79	0.0	5.55
	Levene's F						1.246	0.00	0.965	0.00	6.017
	Levene's Prob(F)						0.294	.	0.494	.	0.001*
	Skewness						-2.77*	-3.1133*	-3.1095*	-3.1133*	-2.9028*
	Kurtosis						6.698*	8.0253*	8.0101*	8.0253*	7.0594*
	Replicate F						0.633	0.000	1.435	0.000	0.086
	Replicate Prob(F)						0.5991	1.0000	0.2503	1.0000	0.9672
	Treatment F						65.522	0.000	6360.421	0.000	130.781
	Treatment Prob(F)						0.0001	1.0000	0.0001	1.0000	0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	SETFA	ECHCG	AMBTR	CHEAL	AMARE					
Pest Name	Giant foxtail	Common barnyar>	Giant ragweed	common lambsqu>	Redroot pigweed					
Crop Type, Code	C -	C -	C -	C -	C -					
Crop Name										
Rating Date	Jun-25-2019	Jun-25-2019	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	Jun-25-2019	Jun-25-2019	Jun-25-2019	Jun-25-2019	Jun-25-2019					
Days After First/Last Applic.	42 42	42 42	42 42	42 42	42 42					
Trt-Eval Interval	42 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A					
Days After Emergence	60 DE-1	60 DE-1	60 DE-1	60 DE-1	60 DE-1					
Number of Decimals	0	0	0	0	0					
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	17*	18*	19*	20*	21*
1	UTC					0	0	0	0 -	0 -
2	Capreno	119.9 g ai/ha	3 oz/a		A	93 ab	93 a	80 -	100 -	100 -
	2 Degree Xtra	3403 g ai/ha	3 qt/a		A					
	2 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	2 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	2 Superb HC	0.5 % v/v	0.3 qt/a		A					
3	Capreno	119.9 g ai/ha	3 oz/a		A	95 a	95 a	74 -	100 -	100 -
	3 Degree Xtra	2550 g ai/ha	2.25 qt/a		A					
	3 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	3 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	3 Superb HC	0.5 % v/v	0.3 qt/a		A					
4	Capreno	119.9 g ai/ha	3 oz/a		A	86 abc	86 ab	68 -	100 -	100 -
	4 Degree Xtra	1700 g ai/ha	1.5 qt/a		A					
	4 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	4 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	4 Superb HC	0.5 % v/v	0.3 qt/a		A					
5	Capreno	119.9 g ai/ha	3 oz/a		A	76 cd	73 bc	73 -	100 -	100 -
	5 Harness Max	1350 g ai/ha	40 oz/a		A					
	5 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	5 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	5 Superb HC	0.5 % v/v	0.3 qt/a		A					
6	Harness Max	1840 g ai/ha	55 oz/a		A	78 bcd	77 bc	68 -	100 -	100 -
	6 Atrazine	1122 g ai/ha	32 oz/a		A					
	6 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	6 N Pak AMS	2.5 % v/v	1.5 qt/a		A					
	6 Superb HC	0.5 % v/v	0.3 qt/a		A					
7	Diflexx Duo	453.6 g ai/ha	32 oz/a		A	90 abc	86 ab	75 -	100 -	100 -
	7 Degree Xtra	2550 g ai/ha	2.25 qt/a		A					
	7 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	7 N Pak AMS	2.5 % v/v	2.5 % v/v		A					
	7 Superb HC	0.5 % v/v	0.5 % v/v		A					
8	Capreno	119.9 g ai/ha	3 oz/a		A	60 e	60 d	73 -	100 -	100 -
	8 Atrazine	1120 g ai/ha	32 oz/a		A					
	8 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	8 N Pak AMS	2.5 % v/v	2.5 % v/v		A					
	8 Superb HC	0.5 % v/v	0.5 % v/v		A					
9	Degree Xtra	3400 g ai/ha	3 qt/a		A	94 a	94 a	83 -	100 -	100 -
	9 Roundup Powermax	1263 g ai/ha	32 oz/a		A					
	9 N Pak AMS	2.5 % v/v	2.5 % v/v		A					

The Ohio State University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	ECHCG	AMBTR	CHEAL	AMARE
Pest Name	Giant foxtail	Common barnyar>	Giant ragweed	common lambsqu>	Redroot pigweed
Crop Type, Code	C -	C -	C -	C -	C -
Crop Name					
Rating Date	Jun-25-2019	Jun-25-2019	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	Jun-25-2019	Jun-25-2019	Jun-25-2019	Jun-25-2019	Jun-25-2019
Days After First/Last Applic.	42 42	42 42	42 42	42 42	42 42
Trt-Eval Interval	42 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A
Days After Emergence	60 DE-1	60 DE-1	60 DE-1	60 DE-1	60 DE-1
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	17*	18*	19*	20*	21*
10	Acuron	1500 g ai/ha		50 oz/a		A	80 abc	80 ab	74 -	100 -	100 -
10	Roundup Powermax	1263 g ai/ha		32 oz/a		A					
10	N Pak AMS	2.5 % v/v		2.5 % v/v		A					
10	NIS	0.25 % v/v		0.25 % v/v		A					
11	Resicore	1150 g ai/ha		40 oz/a		A	65 de	65 cd	71 -	100 -	100 -
11	Atrazine	1120 g ai/ha		32 oz/a		A					
11	Roundup Powermax	1263 g ai/ha		32 oz/a		A					
11	N Pak AMS	2.5 % v/v		2.5 % v/v		A					
11	NIS	0.25 % v/v		0.25 % v/v		A					
12	Halex GT	2200 g ai/ha		1.8 qt/a		A	78 bcd	78 bc	71 -	100 -	100 -
12	Atrazine	1120 g ai/ha		32 oz/a		A					
12	N Pak AMS	2.5 % v/v		2.5 % v/v		A					
12	NIS	0.25 % v/v		0.25 % v/v		A					
	LSD P=.05						10.1	9.9	10.4	.	.
	Standard Deviation						7.0	6.8	7.2	0.0	0.0
	CV						8.62	8.5	9.78	0.0	0.0
	Levene's F						0.443	0.517	0.905	0.00	0.00
	Levene's Prob(F)						0.914	0.865	0.54	.	.
	Skewness						-0.6351	-0.5524	-0.3465	-3.1133*	-3.1133*
	Kurtosis						-0.2729	-0.4042	-0.5333	8.0253*	8.0253*
	Replicate F						0.886	0.315	0.906	0.000	0.000
	Replicate Prob(F)						0.4594	0.8144	0.4498	1.0000	1.0000
	Treatment F						10.762	11.272	1.581	0.000	0.000
	Treatment Prob(F)						0.0001	0.0001	0.1605	1.0000	1.0000

Pest Type W Weed
 Pest Code POLPY
 Pest Name annual
 smartwe>
 Crop Type, Code C -
 Crop Name
 Rating Date Jun-25-2019
 Rating Type CONTRO
 Rating Unit %
 Number of Subsamples 1
 Data Entry Date Jun-25-2019
 Days After First/Last Applic. 42 42
 Trt-Eval Interval 42 DA-A
 Days After Emergence 60 DE-1
 Number of Decimals 0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit Code	22*
1	UTC				A	0 -
2	Capreno	119.9 g ai/ha	3 oz/a		A	100 -
2	Degree Xtra	3403 g ai/ha	3 qt/a		A	
2	Roundup Powermax	1263 g ai/ha	32 oz/a		A	
2	N Pak AMS	2.5 % v/v	1.5 qt/a		A	
2	Superb HC	0.5 % v/v	0.3 qt/a		A	
3	Capreno	119.9 g ai/ha	3 oz/a		A	100 -
3	Degree Xtra	2550 g ai/ha	2.25 qt/a		A	
3	Roundup Powermax	1263 g ai/ha	32 oz/a		A	
3	N Pak AMS	2.5 % v/v	1.5 qt/a		A	
3	Superb HC	0.5 % v/v	0.3 qt/a		A	
4	Capreno	119.9 g ai/ha	3 oz/a		A	100 -
4	Degree Xtra	1700 g ai/ha	1.5 qt/a		A	
4	Roundup Powermax	1263 g ai/ha	32 oz/a		A	
4	N Pak AMS	2.5 % v/v	1.5 qt/a		A	
4	Superb HC	0.5 % v/v	0.3 qt/a		A	
5	Capreno	119.9 g ai/ha	3 oz/a		A	100 -
5	Harness Max	1350 g ai/ha	40 oz/a		A	
5	Roundup Powermax	1263 g ai/ha	32 oz/a		A	
5	N Pak AMS	2.5 % v/v	1.5 qt/a		A	
5	Superb HC	0.5 % v/v	0.3 qt/a		A	
6	Harness Max	1840 g ai/ha	55 oz/a		A	100 -
6	Atrazine	1122 g ai/ha	32 oz/a		A	
6	Roundup Powermax	1263 g ai/ha	32 oz/a		A	
6	N Pak AMS	2.5 % v/v	1.5 qt/a		A	
6	Superb HC	0.5 % v/v	0.3 qt/a		A	
7	Diflexx Duo	453.6 g ai/ha	32 oz/a		A	100 -
7	Degree Xtra	2550 g ai/ha	2.25 qt/a		A	
7	Roundup Powermax	1263 g ai/ha	32 oz/a		A	
7	N Pak AMS	2.5 % v/v	2.5 % v/v		A	
7	Superb HC	0.5 % v/v	0.5 % v/v		A	
8	Capreno	119.9 g ai/ha	3 oz/a		A	100 -
8	Atrazine	1120 g ai/ha	32 oz/a		A	
8	Roundup Powermax	1263 g ai/ha	32 oz/a		A	
8	N Pak AMS	2.5 % v/v	2.5 % v/v		A	
8	Superb HC	0.5 % v/v	0.5 % v/v		A	
9	Degree Xtra	3400 g ai/ha	3 qt/a		A	100 -
9	Roundup Powermax	1263 g ai/ha	32 oz/a		A	
9	N Pak AMS	2.5 % v/v	2.5 % v/v		A	

Pest Type W Weed
 Pest Code POLPY
 Pest Name annual
 smartwe>
 Crop Type, Code C -
 Crop Name
 Rating Date Jun-25-2019
 Rating Type CONTRO
 Rating Unit %
 Number of Subsamples 1
 Data Entry Date Jun-25-2019
 Days After First/Last Applic. 42 42
 Trt-Eval Interval 42 DA-A
 Days After Emergence 60 DE-1
 Number of Decimals 0

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate	Unit	Code	Appl	22*
10	Acuron	1500 g ai/ha		50 oz/a			A		100 -
10	Roundup Powermax	1263 g ai/ha		32 oz/a			A		
10	N Pak AMS	2.5 % v/v		2.5 % v/v			A		
10	NIS	0.25 % v/v		0.25 % v/v			A		
11	Resicore	1150 g ai/ha		40 oz/a			A		100 -
11	Atrazine	1120 g ai/ha		32 oz/a			A		
11	Roundup Powermax	1263 g ai/ha		32 oz/a			A		
11	N Pak AMS	2.5 % v/v		2.5 % v/v			A		
11	NIS	0.25 % v/v		0.25 % v/v			A		
12	Halex GT	2200 g ai/ha		1.8 qt/a			A		100 -
12	Atrazine	1120 g ai/ha		32 oz/a			A		
12	N Pak AMS	2.5 % v/v		2.5 % v/v			A		
12	NIS	0.25 % v/v		0.25 % v/v			A		

LSD P=.05 .
 Standard Deviation 0.0
 CV 0.0
 Levene's F 0.00
 Levene's Prob(F) .
 Skewness -3.1133*
 Kurtosis 8.0253*
 Replicate F 0.000
 Replicate Prob(F) 1.0000
 Treatment F 0.000
 Treatment Prob(F) 1.0000

Capreno/Aceto chlor Rate Titration

Trial ID: 19CAPRENO Location: Trial Year: 2019
Protocol ID: 19CAPRENO Investigator: Dr. Mark M. Loux
Project ID: HP19USAWMJ 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
POLPY, Persicaria pensylvanica, annual smartweed = 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

PHYCHL = phytotoxicity - chlorosis
PHYNEC = phytotoxicity - necrosis /burn
PHYGEN = phytotoxicity - general / injury
CONTRO = control / burndown or knockdown

Rating Unit

% = percent