

# The Ohio State University

## Parallax Efficacy and Crop Safety in Corn

Trial ID: 20HELMHPPD Location: Western Branch G-6 Trial Year: 2020  
 Protocol ID: 2020-H-US17 Investigator: Dr. Mark M. Loux  
 Project ID: Study Director:  
 Sponsor Contact: James Whitehead, HELM AGRO

### General Trial Information

Investigator: Dr. Mark M. Loux

Trial Status: E established

ARM Trial Created On: Apr-9-2020

Initiation Date: May-7-2020

### Trial Location

Address (Location): 7721 South Charleston Pike

City: South Charleston Country: USA United States

State/Prov.: Ohio

Postal Code: 45368

Latitude of LL Corner °: 39.85957 N  
 Longitude of LL Corner °: -83.67616 W  
 Altitude of LL Corner: 1094.00 FT

Conducted Under GLP: No

Conducted Under GEP: No

Keywords: PHYTOTOX EFFICACY

Investigator: Dr. Mark M. Loux

### Crop Description

Crop 1: C ZEAMD Zea mays indentata Dent corn **BBCH Scale:** BCOR  
**Entry Date:** May-8-2020 **Stage Scale:** BBCH  
**Variety:** Dekalb DKC59-81RIB  
**Attributes:** Glyphosate and Glufosinate Tolerance  
**Planting Date:** May-7-2020 **Planting Rate:** 32097 S/A  
**Depth:** 2 IN  
**Rows per Plot:** 4 **Planting Method:** PLANTD planted  
**Row Spacing:** 30 IN **Planting Equipment:** FPP finger pickup planter  
**Seed Bed:** MEDIUM medium  
**Soil Moisture:** NORMAL normal, adequate  
**Soil Temperature:** 52 F  
**Emergence Date:** May-25-2020

### Pest Description

**Pest 1 Type:** W **Code:** SETFA *Setaria faberi*  
**Common Name:** Giant foxtail **Entry Date:** May-8-2020

**Pest 2 Type:** W **Code:** AMBTR *Ambrosia trifida*  
**Common Name:** Giant ragweed **Entry Date:** Jun-9-2020

**Pest 3 Type:** W **Code:** CHEAL *Chenopodium album*  
**Common Name:** lambsquarters, common **Entry Date:** Jun-9-2020

**Pest 4 Type:** W **Code:** ABUTH *Abutilon theophrasti*  
**Common Name:** velvetleaf **Entry Date:** Jun-9-2020

**Pest 5 Type:** W **Code:** IPOSS *Ipomoea sp.*  
**Common Name:** Morning glory **Entry Date:** Jun-9-2020

**Pest 6 Type:** W **Code:** ECHCG *Echinochloa crus-galli*  
**Common Name:** barnyardgrass **Entry Date:** Jun-22-2020

### 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 FT<sup>2</sup> **Treatments:** 10 **Tillage Type:** CONTIL conventional-till  
**Replications:** 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

### Previous

No. Crop Year  
 1. SOYBEAN 2019

### Soil Description

**Description Name:** G-6 **Texture:** SICL silty clay loam  
**% Sand:** 32 **% OM:** 2.2 **Soil Name:** Kokomo  
**% Silt:** 53 **pH:** 5.9 **Fert. Level:** G good  
**% Clay:** 15 **CEC:** 14.8  
**Soil Drainage:** G good

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### Application Description

	A	B
Application Date	May-7-2020	Jun-9-2020
Appl. Start Time	8:00 PM	8:00 AM
Appl. Stop Time	9:00 PM	8:30 AM
Interval to Prev. Appl.		33 DAYS
Application Method	SPRAY	SPRAY
Application Timing	PREPRE	POSPOS
Application Placement	BROSOL	BROSOL
Applied By	Ackley	Kimmet
Appl. Entry Date	May-8-2020	Jun-9-2020
Air Temperature Start, Stop	60 56 F	69 69 F
% Relative Humidity Start, Stop	48 53	64 64
Wind Velocity+Dir. Start	7 MPH WSW	5 MPH ESE
Wind Velocity+Dir. Stop	5 MPH WSW	5 MPH ESE
Wind Velocity+Dir. Max	8 MPH WSW	5 MPH ESE
Wet Leaves (Y/N)	N no	N no
Soil Temperature	61 F	68 F
Soil Moisture	NORMAL	DRY
Soil Surface Condition	MEDIUM	MEDIUM
% Cloud Cover	30	20
Next Moisture Occurred On	May-8-2020	Jun-9-2020
Time to Next Moisture	14 HR	10 HR
Moisture 6 Hours after Appl.	0 IN	0 mm
Moisture 1 Week after Appl.	2.52 IN	0.37 IN

### Protocol Application Directions:

Experimental Field Trials must be clearly and continuously marked to avoid unauthorized entry or accidental harvest. Any harvestable portion of the crop treated with non-registered compounds or registered products experimentally tested off-label must be destroyed. Crop destruction date and method shall be reported to Bayer.

### Objective:

The objectives of this study will be to evaluate residual weed control and crop safety and to increase internal and external exposure of Bayer's new 3-way corn PREMIX (BCS-720) vs. key competitors. Various rate structures will be evaluated to help researchers gain experience with this new PREMIX. This project supports the Corvus lifecycle management process.

### Agronomics and Trial Setup:

Plant a corn hybrid which contains Roundup Ready® 2 Technology. Typical agronomic inputs for commercially grown corn, following best local agronomic practices.

Start clean with tillage or a blanket burndown herbicide application across entire trial prior to planting. Use burndown products that are effective on weeds present and DO NOT have residual activity.

### APPLICATION:

- A= PREPRE = apply pre emergence at time of planting

### TREATMENTS:

Please evaluate all treatments in the protocol. All treatments are core. **Please DO NOT alter rates or change treatment order of the core set of treatments (1-17).** Thiencazabone (TCM) and isoxaflutole (IFT) levels in Corvus herbicide rates closely resemble rate structures in BCS-720 throughout protocol so please do not alter. This will help determine benefits of flufenacet (FFA) in the formulation. If you decide to add treatments they must be added at the end of protocol.

For LOCAL STANDARD treatments (6, 11, and 17) in the protocol, please choose a local standard to evaluate and consider the "general" rate suggestion listed below for that standard of your choice. **Use the SAME STANDARD for these treatments as the only thing that will change is the rate.** Treatments 6, 11 and 17 are still a part of the core treatment list so please do not delete them out

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of the protocol.

Treatment 6: Low rate

Treatment 11: Medium rate

Treatment 17: High rate

### CROP DESTRUCT REQUIREMENTS:

**No Yield Data required for this study.**

Trial must be conducted in accordance with "10 Acre Rule" regulations; USC-OPS-007 NON-REGISTERED CROP PROTECTION PRODUCT (CPP) FIELD TRIAL REQUIREMENTS FOR THE U.S. with an MRL exception, ER#2020-015 from the requirements in Section, IV.REQUIREMENTS, E. Trial Demarcation and Physical/Visible Separation, and H. Harvest and Destruct. **Therefore, you do NOT have to stake or label your trial, nor are you required to provide separation from other material (no fallow or buffer required); AND grain/commodity MAY enter commerce.**

### ASSESSMENT:

Photos would be appreciated throughout the season.

**Crop tolerance - PE12AD1- percent crop injury on 0-100% scale of all inclusive crop injury vs. the baseline in the untreated control plots. This needs to be just a general crop injury evaluation. Do not separate into various types (chlorosis, necrosis, etc).**

#### Target evaluations (CI):

14 days after "A" (A3- range 11-18 days)

21 days after "A" (A4- range 19-25 days)

Note if injury persists

**Weed Control - EE22AD3 - percent weed control on 0-100% scale. Please rate % weed control for each individual species. Record percent ground cover of each weed in UTC.**

#### Target evaluations (WC):

14 days after "A" ( A3- range 11-18 days)

21 days after "A" (A4- range 19-25 days)

35 days after "A" (A5-range 26-44 days)

56 days after "A" (A6-range 45-59 days)

### Reporting Dates:

Final reports due: **September 15, 2020**

### Sample Orders:

All herbicides for this protocol should be ordered by the crop protection TDR for internal and external locations that have been assigned in SCOUT.

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### Crop Stage At Each Application

	A		B	
	ZEAMD	BCOR	ZEAMD	BCOR
Crop 1 Code, BBCH Scale				
Days after Emergence	-18		15	
Stage Scale Used	BBCH		BBCH	
Stage Majority, Percent	00	100	15	100
Stage Minimum, Percent			15	100
Stage Maximum, Percent			15	100
Height Average			15	IN
Height Minimum, Maximum			15	15

### Pest Stage At Each Application

	A		B	
	SETFA	W	SETFA	W
Pest 1 Code, Type, Scale	00		12	80
Stage Majority, Percent			11	15
Stage Minimum, Percent			13	5
Stage Maximum, Percent			1	in
Height Average			1	4
Height Minimum, Maximum			186	PLA/m2
Density Average			152	208
Density Min, Max				
Pest 2 Code, Type, Scale	AMBTR	W	AMBTR	W
Stage Majority, Percent			21	80
Stage Minimum, Percent			19	15
Stage Maximum, Percent			22	5
Height Average			8	IN
Height Minimum, Maximum			2	20
Density Average			20	PLA/m2
Density Min, Max			4	56
Pest 3 Code, Type, Scale	CHEAL	W	CHEAL	W
Stage Majority, Percent			14	100
Height Average			2	IN
Density Average			2	PLA/m2
Density Min, Max			0	4
Pest 4 Code, Type, Scale	ABUTH	W	ABUTH	W
Stage Majority, Percent			16	100
Height Average			4	IN
Pest 5 Code, Type, Scale	IPOSS	W	IPOSS	W
Stage Majority, Percent			11	90
Stage Minimum, Percent			10	5
Stage Maximum, Percent			12	5
Height Average			1.5	IN
Height Minimum, Maximum			1	2
Density Average			1	PLA/m2
Density Min, Max			0	4
Pest 6 Code, Type, Scale	ECHCG	W	ECHCG	W
Density Average			51	PLA/m2
Density Min, Max			32	68

### Application Equipment

	A		B	
Appl. Equipment	6 Foot	TTI	10'	AIXR
Equipment Type	BACCAI		BACCAI	
Operation Pressure	44	PSI	44	PSI
Nozzle Type	TTI		AIXR	
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	GAL/AC	15	GAL/AC
Mix Size	2	L	2	L
Propellant	COMCO2		COMCO2	

Context	Date	By	Notes
STATUS	Apr-9-2020	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	Mar-26-2020	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	May-8-2020	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'E' when Initiation Date entered.
STATUS	May-28-2020	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'E' when Emergence Date entered.

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### SE Definitions

	1.	2.	3.	4.	5.	6.
<b>Rating Timing</b>	A3	A3	A4	A4	A5	A6
<b>SE Name</b>	PE12AD1	EE22AD3	PE12AD1	EE22AD3	EE22AD3	EE22AD3
<b>SE Description</b>	Estimation % phytotoxicity (PHYGEN) (symptoms describe in co	1 weed, % efficacy, in untreated % coverage	Estimation % (PHYGEN) (symptoms describe in co	1 weed, % efficacy, in untreated % coverage	1 weed, % efficacy, in untreated % coverage	1 weed, % efficacy, in untreated % coverage
<b>Pest Type</b>			W Weed	W Weed	W Weed	W Weed
<b>Pest Code</b>			SETFA	AMBTR	CHEAL	SETFA
<b>Pest Scientific Name</b>			Setaria faberi	Ambrosia trifi>	Chenopodium al>	Setaria faberi
<b>Pest Name</b>			Giant foxtail	Giant ragweed	common lambsqu>	Giant foxtail
<b>Crop Type, Code</b>						C ZEAMX
<b>BBCH Scale</b>						BCOR
<b>Crop Scientific Name</b>						Zea mays
<b>Crop Name</b>						Corn
<b>Rating Date</b>		Jun-8-2020	Jun-8-2020	Jun-8-2020	Jun-16-2020	Jun-24-2020
<b>Rating Type</b>		CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO
<b>Rating Unit</b>		%	%	%	%	%
<b>Number of Subsamples</b>		1	1	1	1	1
<b>Data Entry Date</b>		Jun-8-2020	Jun-8-2020	Jun-8-2020	Jun-22-2020	Jun-26-2020
<b>Days After First/Last Applic.</b>		32 32	32 32	32 32	40 7	48 15
<b>Trt-Eval Interval</b>		32 DA-A	32 DA-A	32 DA-A	7 DA-B	15 DA-B
<b>Plant-Eval Interval</b>		32 DP-1	32 DP-1	32 DP-1	40 DP-1	48 DP-1
<b>Days After Emergence</b>		14 DE-1	14 DE-1	14 DE-1	22 DE-1	30 DE-1
<b>Number of Decimals</b>		0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	1*	2*	3*	4*	5*	6*
1	UTC				0 c	0 g	0 c	0 -	0 c	0 d
2	Fearless Xtra	1.5 qt/a	A		100 a	58 b	100 a	0 -	99 a	91 ab
	2 Parallax	3.2 oz/a	B							
	2 MSO	1 % v/v	B							
	2 AMSOL	2.5 % v/v	B							
3	Fearless Xtra	1.5 qt/a	A		100 a	45 cd	100 a	0 -	100 a	90 ab
	3 Parallax	3.2 oz/a	B							
	3 ATX	1.5 pt/a	B							
	3 MSO	1 % v/v	B							
	3 AMSOL	2.5 % v/v	B							
4	Helmet	1.5 pt/a	A		99 ab	0 g	8 b	0 -	100 a	85 b
	4 Parallax	3.2 oz/a	B							
	4 MSO	1 % v/v	B							
	4 AMSOL	2.5 % v/v	B							
5	Helmet	1.5 pt/a	A		100 a	15 f	0 c	0 -	99 a	93 a
	5 Parallax	3.2 oz/a	B							
	5 ATX	1.5 pt/a	B							
	5 MSO	1 % v/v	B							
	5 AMSOL	2.5 % v/v	B							
6	Fearless Xtra	1.5 qt/a	A		100 a	35 de	100 a	0 -	92 b	33 c
7	Helmet	1.5 pt/a	A		100 a	25 ef	0 c	0 -	97 ab	0 d
8	Harness Xtra 5.6	1.5 qt/a	A		96 b	33 e	100 a	0 -	98 a	92 a
	8 Parallax	3.2 oz/a	B							
	8 ATX	1.5 pt/a	B							
	8 MSO	1 % v/v	B							
	8 AMSOL	2.5 % v/v	B							

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Trial Year: 2020

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL		SETFA	AMBTR
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>		Setaria faberi	Ambrosia trifi>
Pest Name	Giant foxtail	Giant ragweed	common lambsqu>		Giant foxtail	Giant ragweed
Crop Type, Code				C ZEAMX		
BBCH Scale				BCOR		
Crop Scientific Name				Zea mays		
Crop Name				Corn		
Rating Date	Jun-8-2020	Jun-8-2020	Jun-8-2020	Jun-16-2020	Jun-24-2020	Jun-24-2020
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Data Entry Date	Jun-8-2020	Jun-8-2020	Jun-8-2020	Jun-22-2020	Jun-26-2020	Jun-26-2020
Days After First/Last Applic.	32 32	32 32	32 32	40 7	48 15	48 15
Trt-Eval Interval	32 DA-A	32 DA-A	32 DA-A	7 DA-B	15 DA-B	15 DA-B
Plant-Eval Interval	32 DP-1	32 DP-1	32 DP-1	40 DP-1	48 DP-1	48 DP-1
Days After Emergence	14 DE-1	14 DE-1	14 DE-1	22 DE-1	30 DE-1	30 DE-1
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	1*	2*	3*	4*	5*	6*
9	Harness Xtra 5.6	1.5 qt/a		A	100 a	48 bc	100 a	0 -	97 a	93 a
9	Laudis	3 oz/a		B						
9	ATX	1.5 pt/a		B						
9	MSO	1 % v/v		B						
9	AMSOL	2.5 % v/v		B						
10	Verdict	14 oz/a		A	99 ab	74 a	100 a	0 -	99 a	96 a
10	Armezon Pro	14 oz/a		B						
10	MSO	1 % v/v		B						
10	AMSOL	2.5 % v/v		B						
LSD P=.05					2.9	12.0	6.9	.	5.3	6.7
Standard Deviation					2.0	8.3	4.7	0.0	3.6	4.6
CV					2.2	24.97	7.81	0.0	4.12	6.87
Grand Mean					89.3	33.1	60.8	0.0	88.0	67.2
Levene's F					2.899	6.991	1.00	0.00	2.512	1.671
Levene's Prob(F)					0.014*	0.001*	0.461	.	0.028*	0.14
Rank X2					.	.	.	.	.	.
P(Rank X2)					.	.	.	.	.	.
Skewness					-2.7496*	0.0598	-0.4479	.	-2.6894*	-1.0052*
Kurtosis					5.8993*	-0.9268	-1.8747*	.	5.6706*	-0.8003
Replicate F					0.402	1.934	1.000	0.000	1.232	0.952
Replicate Prob(F)					0.7525	0.1479	0.4079	1.0000	0.3172	0.4294
Treatment F					1018.739	33.690	457.296	0.000	292.633	300.330
Treatment Prob(F)					0.0001	0.0001	0.0001	1.0000	0.0001	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	CHEAL	SETFA	AMBTR	CHEAL	SETFA	AMBTR
Pest Scientific Name	Chenopodium al>	Setaria faberi	Ambrosia trifi>	Chenopodium al>	Setaria faberi	Ambrosia trifi>
Pest Name	common lambsqu>	foxtail, giant ragweed, giant	lambsquarters,>	foxtail, giant ragweed, giant		
Crop Type, Code						
BBCH Scale						
Crop Scientific Name						
Crop Name						
Rating Date	Jun-24-2020	Jul-8-2020	Jul-8-2020	Jul-8-2020	Jul-20-2020	Jul-20-2020
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Data Entry Date	Jun-26-2020	Jul-9-2020	Jul-9-2020	Jul-9-2020	Jul-20-2020	Jul-20-2020
Days After First/Last Applic.	48 15	62 29	62 29	62 29	74 41	74 41
Trt-Eval Interval	15 DA-B	15 DA-B	15 DA-B	15 DA-B		
Plant-Eval Interval	48 DP-1	62 DP-1	62 DP-1	62 DP-1	74 DP-1	74 DP-1
Days After Emergence	30 DE-1	44 DE-1	44 DE-1	44 DE-1	56 DE-1	56 DE-1
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	7*	8*	9*	10*	11*	12*
1	UTC				0 c	0 c	0 c	0 c	0 f	0 d
2	Fearless Xtra	1.5 qt/a		A	100 a	89 ab	89 a	100 a	88 cde	96 a
	2 Parallax	3.2 oz/a		B						
	2 MSO	1 % v/v		B						
	2 AMSOL	2.5 % v/v		B						
3	Fearless Xtra	1.5 qt/a		A	100 a	93 a	86 a	100 a	92 a-d	88 ab
	3 Parallax	3.2 oz/a		B						
	3 ATX	1.5 pt/a		B						
	3 MSO	1 % v/v		B						
	3 AMSOL	2.5 % v/v		B						
4	Helmet	1.5 pt/a		A	98 a	93 a	89 a	100 a	86 de	85 b
	4 Parallax	3.2 oz/a		B						
	4 MSO	1 % v/v		B						
	4 AMSOL	2.5 % v/v		B						
5	Helmet	1.5 pt/a		A	100 a	91 a	92 a	99 a	90 b-e	94 ab
	5 Parallax	3.2 oz/a		B						
	5 ATX	1.5 pt/a		B						
	5 MSO	1 % v/v		B						
	5 AMSOL	2.5 % v/v		B						
6	Fearless Xtra	1.5 qt/a		A	100 a	81 b	23 b	100 a	96 ab	0 d
7	Helmet	1.5 pt/a		A	10 b	86 ab	15 b	58 b	98 a	13 c
8	Harness Xtra 5.6	1.5 qt/a		A	100 a	90 ab	90 a	100 a	84 e	91 ab
	8 Parallax	3.2 oz/a		B						
	8 ATX	1.5 pt/a		B						
	8 MSO	1 % v/v		B						
	8 AMSOL	2.5 % v/v		B						

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	CHEAL	SETFA	AMBTR	CHEAL	SETFA	AMBTR			
Pest Scientific Name	Chenopodium al>		Setaria faberi	Ambrosia trifi>	Chenopodium al>				
Pest Name	common lambsqu>		foxtail, giant ragweed, giant	lambsquarters,>	foxtail, giant ragweed, giant				
Crop Type, Code									
BBCH Scale									
Crop Scientific Name									
Crop Name									
Rating Date	Jun-24-2020	Jul-8-2020	Jul-8-2020	Jul-8-2020	Jul-20-2020	Jul-20-2020			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1			
Data Entry Date	Jun-26-2020	Jul-9-2020	Jul-9-2020	Jul-9-2020	Jul-20-2020	Jul-20-2020			
Days After First/Last Applic.	48 15	62 29	62 29	62 29	74 41	74 41			
Trt-Eval Interval	15 DA-B	15 DA-B	15 DA-B	15 DA-B					
Plant-Eval Interval	48 DP-1	62 DP-1	62 DP-1	62 DP-1	74 DP-1	74 DP-1			
Days After Emergence	30 DE-1	44 DE-1	44 DE-1	44 DE-1	56 DE-1	56 DE-1			
Number of Decimals	0	0	0	0	0	0			
Trt Treatment No. Name	Other Rate	Other Rate Unit	Appl Code	7*	8*	9*	10*	11*	12*
9 Harness Xtra 5.6	1.5 qt/a		A	100 a	86 ab	86 a	100 a	86 de	91 ab
9 Laudis	3 oz/a		B						
9 ATX	1.5 pt/a		B						
9 MSO	1 % v/v		B						
9 AMSOL	2.5 % v/v		B						
10 Verdict	14 oz/a		A	100 a	93 a	91 a	100 a	94 abc	91 ab
10 Armezon Pro	14 oz/a		B						
10 MSO	1 % v/v		B						
10 AMSOL	2.5 % v/v		B						
LSD P=.05	9.4	8.9	13.2	4.6	6.3	11.2			
Standard Deviation	6.5	6.2	9.1	3.1	4.4	7.7			
CV	8.0	7.69	13.75	3.67	5.37	11.93			
Grand Mean	80.8	80.1	66.1	85.6	81.3	64.9			
Levene's F	0.948	0.672	2.023	7.133	1.741	7.886			
Levene's Prob(F)	0.50	0.727	0.072	0.001*	0.123	0.001*			
Rank X2	.	.	.	.	.	.			
P(Rank X2)	.	.	.	.	.	.			
Skewness	-1.625*	-2.5117*	-0.9711*	-2.1374*	-2.5119*	-0.8767*			
Kurtosis	0.7524	5.0805*	-0.764	3.2495*	5.1374*	-1.1226			
Replicate F	1.177	0.104	2.587	0.906	5.008	1.401			
Replicate Prob(F)	0.3367	0.9573	0.0737	0.4510	0.0069	0.2639			
Treatment F	153.266	84.998	67.796	438.021	175.444	118.466			
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001			



# The Ohio State University

## Parallax Efficacy and Crop Safety in Corn

Trial ID: 20HELMHPPD  
 Protocol ID: 2020-H-US17  
 Project ID:

Location: Western Branch G-6  
 Investigator: Dr. Mark M. Loux  
 Study Director:  
 Sponsor Contact: James Whitehead, HELM AGRO  
 Trial Year: 2020

Pest Type W Weed  
 Pest Code CHEAL  
 Pest Scientific Name Chenopodium al>  
 Pest Name lambsquarters,>  
 Crop Type, Code  
 BBCH Scale  
 Crop Scientific Name  
 Crop Name  
 Rating Date Jul-20-2020  
 Rating Type CONTRO  
 Rating Unit %  
 Number of Subsamples 1  
 Data Entry Date Jul-20-2020  
 Days After First/Last Applic. 74 41  
 Trt-Eval Interval  
 Plant-Eval Interval 74 DP-1  
 Days After Emergence 56 DE-1  
 Number of Decimals 0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	
					13*
1	UTC				0 c
2	Fearless Xtra	1.5 qt/a		A	100 a
2	Parallax	3.2 oz/a		B	
2	MSO	1 % v/v		B	
2	AMSOL	2.5 % v/v		B	
3	Fearless Xtra	1.5 qt/a		A	100 a
3	Parallax	3.2 oz/a		B	
3	ATX	1.5 pt/a		B	
3	MSO	1 % v/v		B	
3	AMSOL	2.5 % v/v		B	
4	Helmet	1.5 pt/a		A	100 a
4	Parallax	3.2 oz/a		B	
4	MSO	1 % v/v		B	
4	AMSOL	2.5 % v/v		B	
5	Helmet	1.5 pt/a		A	100 a
5	Parallax	3.2 oz/a		B	
5	ATX	1.5 pt/a		B	
5	MSO	1 % v/v		B	
5	AMSOL	2.5 % v/v		B	
6	Fearless Xtra	1.5 qt/a		A	100 a
7	Helmet	1.5 pt/a		A	40 b
8	Harness Xtra 5.6	1.5 qt/a		A	100 a
8	Parallax	3.2 oz/a		B	
8	ATX	1.5 pt/a		B	
8	MSO	1 % v/v		B	
8	AMSOL	2.5 % v/v		B	

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 Days After First/Last Applic. 74 41  
 Trt-Eval Interval  
 Plant-Eval Interval 74 DP-1  
 Days After Emergence 56 DE-1  
 Number of Decimals 0

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	13*
9	Harness Xtra 5.6	1.5 qt/a		A	100 a
9	Laudis	3 oz/a		B	
9	ATX	1.5 pt/a		B	
9	MSO	1 % v/v		B	
9	AMSOL	2.5 % v/v		B	
10	Verdict	14 oz/a		A	100 a
10	Armezon Pro	14 oz/a		B	
10	MSO	1 % v/v		B	
10	AMSOL	2.5 % v/v		B	

LSD P=.05 5.3  
 Standard Deviation 3.7  
 CV 4.35  
 Grand Mean 84.0  
 Levene's F 0.00  
 Levene's Prob(F) .  
 Rank X2 .  
 P(Rank X2) .  
 Skewness -1.8403\*  
 Kurtosis 1.8161\*

Replicate F 1.000  
 Replicate Prob(F) 0.4079  
 Treatment F 368.000  
 Treatment Prob(F) 0.0001

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Trial Year: 2020

### Pest Type

W, Weed = Weed or volunteer crop

### Pest Code

SETFA, Setaria faberi, Giant foxtail = US  
AMBTR, Ambrosia trifida, Giant ragweed = US  
CHEAL, Chenopodium album, common lambsquarters = US  
SETFA, Setaria faberi, foxtail, giant = US  
AMBTR, Ambrosia trifida, ragweed, giant = US  
CHEAL, Chenopodium album, lambsquarters, common = US

### Crop Type Code

C = EPPPO species (Bayer) codes  
ZEAMX, BCOR, Zea mays, Corn = US

### Rating Type

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

### Rating Unit

% = percent

### Plant-Eval Interval

32 DP-1 = 1 ZEAMD May-7-2020  
40 DP-1 = 1 ZEAMD May-7-2020  
48 DP-1 = 1 ZEAMD May-7-2020  
62 DP-1 = 1 ZEAMD May-7-2020  
74 DP-1 = 1 ZEAMD May-7-2020