

# The Ohio State University

Quizalofop + fenoxaprop.

Trial ID: 21QUIZ Location: Trial Year: 2020  
 Protocol ID: 21C01H080 Investigator (Creator): Dr. Mark M. Loux  
 Project ID: 080 Study Director: Rich Zollinger  
 Sponsor Contact: AMVAC PD rep for region

## General Trial Information

Study Director: Rich Zollinger

Trial Status: E established

ARM Trial Created On: Mar-31-2021

Initiation Date: May-21-2021

## Trial Location

City: South Charleston Country: USA United States

State/Prov.: Ohio

Postal Code: 45368

Latitude of LL Corner °: 39.85971 N  
 Longitude of LL Corner °: -83.67731 W  
 Altitude of LL Corner: 1036.00 FT

Conducted Under GLP: No

Conducted Under GEP: No

## Contacts

Role: STYDIR study director

Study Director: Rich Zollinger

Role: SPONSR sponsor

Sponsor: AMVAC PD rep for region

## Crop Description

Crop 1: C HORVW Hordeum vulgare Winter barley  
 Entry Date: May-25-2021 Stage Scale: BBCH  
 Planting Date: May-21-2021 Planting Rate: 90 LB/A  
 Depth: 1 IN  
 Rows per Plot: 15 Planting Method: PLANT  
 Row Spacing: 7.5 IN Planting Equipment: DD disc drill  
 Soil Temperature: 75 F Soil Moisture: DRY dry  
 Emergence Date: Jun-4-2021

## Pest Description

Pest 1 Type: W Code: SETFA Setaria faberi Entry Date: Jun-14-2021  
 Common Name: Giant foxtail Stage Scale: BBCH

Pest 2 Type: W Code: ECHCG Echinochloa crus-galli Entry Date: Jun-14-2021  
 Common Name: Common barnyard grass Stage Scale: BBCH  
 Artificial Population: Y

Pest 3 Type: W Code: AMBTR Ambrosia trifida Entry Date: Jun-14-2021  
 Common Name: Giant ragweed Stage Scale: BBCH

Pest 4 Type: W Code: CHEAL Chenopodium album Entry Date: Jun-14-2021  
 Common Name: common lambsquarters Stage Scale: BBCH

Pest 5 Type: W Code: AMARE Amaranthus retroflexus Entry Date: Jun-14-2021  
 Common Name: Redroot pigweed Stage Scale: BBCH

## 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: 12 Tillage Type: CONTIL conventional-till  
 Replications: 3 Study Design: RACOBL Randomized Complete Block (RCB)

## Previous

No. Crop Year  
 1. CORN 2020

## Soil Description

Description Name: G-6  
 % Sand: 32 % OM: 2.2 Texture: SICL silty clay loam  
 % Silt: 53 pH: 5.9 Soil Name: Kokomo  
 % Clay: 15 CEC: 14 Fert. Level: G good  
 g o o d

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## Application Description

	A
Application Date	Jun-14-2021
Appl. Start Time	9:30 AM
Appl. Stop Time	10:00 AM
Application Method	BROADC
Application Timing	POSPOS
Application Placement	BROFOL
Applied By	Essman
Appl. Entry Date	Jun-14-2021
Air Temperature Start, Stop	78 79 F
% Relative Humidity Start, Stop	55 55
Wind Velocity+Dir. Start	1 MPH WSW
Wind Velocity+Dir. Stop	3 MPH WSW
Wind Velocity+Dir. Max	4 MPH WSW
Wet Leaves (Y/N)	N no
Soil Temperature	71 F
Soil Moisture	dry
Soil Surface Condition	MEDIUM
% Cloud Cover	45
Next Moisture Occurred On	Jun-18-2021
Time to Next Moisture	4.0 DAY
Moisture 6 Hours after Appl.	0 IN
Moisture 1 Week after Appl.	0.61 IN

## Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale	HORVW BCER
Days after Emergence	10
Stage Majority, Percent	13 100
Height Average	5 IN
Height Minimum, Maximum	4 6

## Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale	SETFA W BBCH
Stage Majority, Percent	12 90
Stage Minimum, Percent	12 90
Stage Maximum, Percent	13 10
Height Average	7 IN
Height Minimum, Maximum	5 12
Density Average	646.66 PLA/m2
Density Minimum, Maximum	568 748
Pest 2 Code, Type, Scale	ECHCG W BBCH
Stage Majority, Percent	13 90
Stage Minimum, Percent	12 10
Stage Maximum, Percent	13 90
Height Average	5 IN
Height Minimum, Maximum	5 7
Density Average	74.66 PLA/m2
Density Minimum, Maximum	48 104
Pest 3 Code, Type, Scale	AMBTR W BBCH
Stage Majority, Percent	19 100
Height Average	8 IN
Height Minimum, Maximum	5 10
Density Average	73 PLA/m2
Density Minimum, Maximum	16 168
Pest 4 Code, Type, Scale	CHEAL W BBCH
Stage Majority, Percent	19 100
Height Average	4 IN
Height Minimum, Maximum	4 6
Density Average	103 PLA/m2
Density Minimum, Maximum	8 188
Pest 5 Code, Type, Scale	AMARE W BBCH
Stage Majority, Percent	16 90
Stage Minimum, Percent	14 10
Stage Maximum, Percent	16 90
Height Average	3 IN
Height Minimum, Maximum	2 3
Density Average	16 PLA/m2
Density Minimum, Maximum	4 24

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**Application Equipment**

**A**

**Appl. Equipment**      6' AIXR  
**Equipment Type**      BACCAI  
**Operation Pressure**      44      PSI  
**Nozzle Model**      110015  
**Nozzle Type**      AIXR  
**Nozzle TradeName**      TeeJet  
**Nozzle Tip Size, Color**      015      green  
**Nozzle Spacing**      18      IN  
**Boom Length**      6.67      FT  
**Boom Height**      20      IN  
**Ground Speed**      3      MPH  
**Carrier**      WATER  
**Water Hardness (ppm CaCO3)**      280  
**Application Amount**      15      GAL/AC  
**Mix Size**      1      L  
**Spray pH**      7.8  
**Propellant**      COMCO2

**Notes**

Context	Date	By	Notes
STATUS	Mar-31-2021	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	May-25-2021	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'E' when Initiation Date entered.

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	HORSS	SETFA	AMBTR	CHEAL	AMARE	HORSS				
Pest Scientific Name	Hordeum sp.	Setaria faberi	Ambrosia trifida	Chenopodium alb>	Amaranthus retr>	Hordeum sp.				
Pest Name	Barley	Giant foxtail	Giant ragweed	common lambsqua>	Redroot pigweed	Barley				
Rating Date	Jun-28-2021	Jun-28-2021	Jun-28-2021	Jun-28-2021	Jun-28-2021	Jul-12-2021				
SE Group No.	2	10	12	13	14	16				
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit/Min/Max	% 0	% 0 %	0 100	% 0 100	% 0 100 %	0 100				
Number of Subsamples	100	100								
Data Entry Date	Jun-30-2021	Jun-30-2021	Jun-30-2021	Jun-30-2021	Jun-30-2021	Jul-13-2021				
Days After First/Last Applic.	14 14	14 14	14 14	14 14	14 14	28 28				
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	28 DA-A				
Plant-Eval Interval	38 DP-1	38 DP-1	38 DP-1	38 DP-1	38 DP-1	52 DP-1				
Days After Emergence	24 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1	38 DE-1				
Number of Decimals	0	0	0	0	0	0				
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	1*	2*	3* dAS	4* dAL	5*	6*

1	Assure II	0.0413 lb ai/a	A	68 -	53 ab	0 b	0 b	0 b	100 -
	COC		A						
2	Assure II	0.0413 lb ai/a	A	80 -	68 ab	0 b	0 b	0 b	100 -
	Fenoxaprop 0.0206 lb ai/a		A						
	COC		A						
3	Assure II	0.0413 lb ai/a	A	68 -	63 ab	0 b	0 b	0 b	100 -
	Fenoxaprop 0.0258 lb ai/a		A						
	COC		A						
4	Assure II	0.0413 lb ai/a	A	68 -	68 ab	0 b	0 b	0 b	100 -
	Fenoxaprop 0.0317 lb ai/a		A						
	COC		A						
5	Assure II	0.055 lb ai/a	A	78 -	67 ab	0 b	0 b	0 b	100 -
	COC		A						
6	Assure II	0.055 lb ai/a	A	72 -	78 a	0 b	0 b	0 b	100 -
	Fenoxaprop 0.0275 lb ai/a		A						
	COC		A						
7	Assure II	0.055 lb ai/a	A	82 -	67 ab	0 b	0 b	0 b	100 -
	Fenoxaprop 0.0344 lb ai/a		A						
	COC		A						
8	Assure II	0.055 lb ai/a	A	67 -	72 ab	0 b	0 b	0 b	100 -
	Fenoxaprop 0.0423 lb ai/a		A						
	COC		A						
9	Assure II	0.055 lb ai/a	A	73 -	50 b	10 a	7 ab	87 a	100 -
	Classic	0.0078 lb ai/a	A						
	COC		A						

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	HORSS	SETFA	AMBTR	CHEAL	AMARE	HORSS				
Pest Scientific Name	Hordeum sp.	Setaria faberi	Ambrosia trifida	Chenopodium alb>	Amaranthus retr>	Hordeum sp.				
Pest Name	Barley	Giant foxtail	Giant ragweed	common lambsqua>	Redroot pigweed	Barley				
Rating Date	Jun-28-2021	Jun-28-2021	Jun-28-2021	Jun-28-2021	Jun-28-2021	Jul-12-2021				
SE Group No.	2	10	12	13	14	16				
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit/Min/Max	% 0	% 0	% 0	% 100	% 0	% 100				
Number of Subsamples	100	100								
Data Entry Date	Jun-30-2021	Jun-30-2021	Jun-30-2021	Jun-30-2021	Jun-30-2021	Jul-13-2021				
Days After First/Last Applic.	14 14	14 14	14 14	14 14	14 14	28 28				
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	28 DA-A				
Plant-Eval Interval	38 DP-1	38 DP-1	38 DP-1	38 DP-1	38 DP-1	52 DP-1				
Days After Emergence	24 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1	38 DE-1				
Number of Decimals	0	0	0	0	0	0				
Trt No. Name	Treatment	Other Rate	Other Rate	Appl Unit Code	1*	2*	3* dAS	4* dAL	5*	6*
10	Assure II	0.055 lb ai/a		A	70 -	53 ab	20 a	7 ab	97 a	100 -
	Fenoxaprop	0.0275 lb ai/a		A						
	Classic	0.0078 lb ai/a		A						
	COC			A						
11	Assure II	0.055 lb ai/a		A	80 -	57 ab	20 a	20 a	93 a	100 -
	Fenoxaprop	0.0344 lb ai/a		A						
	Classic	0.0078 lb ai/a		A						
	COC			A						
12	Assure II	0.055 lb ai/a		A	70 -	63 ab	20 a	20 a	97 a	100 -
	Fenoxaprop	0.0423 lb ai/a		A						
	Classic	0.0078 lb ai/a		A						
	COC			A						
	LSD P=.05				14.3	15.8	8.2 - 8.6	14.9 - 18.8	8.2	.
	Standard Deviation				8.4	9.3	0.6t	0.3t	4.8	0.0
	CV				11.53	14.74	33.97t	86.76t	15.49	0.0
	Levene's F^				0.44	0.742	0.758	0.948	0.557	.
	Levene's Prob(F)				0.922	0.69	0.676	0.515	0.844	.
	Skewness^				-0.195	-0.0529	-2.2258*	-1.6732*	0.0468	.
	Kurtosis^				-0.5515	0.0621	14.1948*	6.3759*	2.0755*	.
	Replicate F				2.623	1.817	1.000	0.478	3.348	0.000
	Replicate Prob(F)				0.0951	0.1860	0.3840	0.6262	0.0538	1.0000
	Treatment F				1.256	2.470	22.818	9.217	273.478	0.000
	Treatment Prob(F)				0.3108	0.0342	0.0001	0.0001	0.0001	1.0000

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL	AMARE
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Chenopodium alb>	Amaranthus retr>
Pest Name	Giant foxtail	Giant ragweed	common lambsqua>	Redroot pigweed
Rating Date	Jul-12-2021	Jul-12-2021	Jul-12-2021	Jul-12-2021
SE Group No.	17	18	19	20
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit/Min/Max	% 0 %	0 100	% 0 100	% 0 100
Number of Subsamples	100	1	1	1
Data Entry Date	Jul-13-2021	Jul-13-2021	Jul-13-2021	Jul-13-2021
Days After First/Last Applic.	28 28	28 28	28 28	28 28
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A
Plant-Eval Interval	52 DP-1	52 DP-1	52 DP-1	52 DP-1
Days After Emergence	38 DE-1	38 DE-1	38 DE-1	38 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	7*	8* dAS	9* dAL	10*
1	Assure II	0.0413 lb ai/a		A	43 bc	0 b	0 b	0 c
	COC			A				
2	Assure II	0.0413 lb ai/a		A	50 abc	0 b	0 b	0 c
	Fenoxaprop 0.0206 lb ai/a			A				
	COC			A				
3	Assure II	0.0413 lb ai/a		A	47 bc	0 b	0 b	0 c
	Fenoxaprop 0.0258 lb ai/a			A				
	COC			A				
4	Assure II	0.0413 lb ai/a		A	53 abc	0 b	0 b	0 c
	Fenoxaprop 0.0317 lb ai/a			A				
	COC			A				
5	Assure II	0.055 lb ai/a		A	53 abc	0 b	0 b	0 c
	COC			A				
6	Assure II	0.055 lb ai/a		A	63 a	0 b	0 b	0 c
	Fenoxaprop 0.0275 lb ai/a			A				
	COC			A				
7	Assure II	0.055 lb ai/a		A	57 ab	0 b	0 b	0 c
	Fenoxaprop 0.0344 lb ai/a			A				
	COC			A				
8	Assure II	0.055 lb ai/a		A	57 ab	0 b	0 b	0 c
	Fenoxaprop 0.0423 lb ai/a			A				
	COC			A				
9	Assure II	0.055 lb ai/a		A	40 c	10 a	7 ab	85 b
	Classic	0.0078 lb ai/a		A				
	COC			A				

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Pest Type	W Weed	W Weed	W Weed	W Weed				
Pest Code	SETFA	AMBTR	CHEAL	AMARE				
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Chenopodium alb>	Amaranthus retr>				
Pest Name	Giant foxtail	Giant ragweed	common lambsqua>	Redroot pigweed				
Rating Date	Jul-12-2021	Jul-12-2021	Jul-12-2021	Jul-12-2021				
SE Group No.	17	18	19	20				
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit/Min/Max	% 0 %	0 100	% 0 100	% 0 100				
Number of Subsamples	1	1	1	1				
Data Entry Date	Jul-13-2021	Jul-13-2021	Jul-13-2021	Jul-13-2021				
Days After First/Last Applic.	28 28	28 28	28 28	28 28				
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A				
Plant-Eval Interval	52 DP-1	52 DP-1	52 DP-1	52 DP-1				
Days After Emergence	38 DE-1	38 DE-1	38 DE-1	38 DE-1				
Number of Decimals	0	0	0	0				
Trt No. Name	Treatment	Other Rate	Other Rate	Appl Unit Code	7*	8* dAS	9* dAL	10*
10	Assure II	0.055 lb ai/a		A	40 c	20 a	7 ab	90 ab
	Fenoxaprop	0.0275 lb ai/a		A				
	Classic	0.0078 lb ai/a		A				
	COC			A				
11	Assure II	0.055 lb ai/a		A	43 bc	20 a	20 a	93 ab
	Fenoxaprop	0.0344 lb ai/a		A				
	Classic	0.0078 lb ai/a		A				
	COC			A				
12	Assure II	0.055 lb ai/a		A	43 bc	20 a	20 a	98 a
	Fenoxaprop	0.0423 lb ai/a		A				
	Classic	0.0078 lb ai/a		A				
	COC			A				
LSD P=.05					9.4	8.2 - 8.6	14.9 - 18.8	7.5
Standard Deviation					5.6	0.6t	0.3t	4.4
CV					11.34	33.97t	86.76t	14.43
Levene's F^					0.409	0.758	0.948	0.774
Levene's Prob(F)					0.938	0.676	0.515	0.662
Skewness^					0.0877	-2.2258*	-1.6732*	-0.7298
Kurtosis^					-0.7078	14.1948*	6.3759*	2.7366*
Replicate F					1.878	1.000	0.478	2.714
Replicate Prob(F)					0.1766	0.3840	0.6262	0.0884
Treatment F					5.488	22.818	9.217	315.610
Treatment Prob(F)					0.0003	0.0001	0.0001	0.0001

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Pest Type

W, Weed = Weed or volunteer crop

Pest Code

HORSS, Hordeum sp., Barley = US

SETFA, Setaria faberi, Giant foxtail = US

AMBTR, Ambrosia trifida, Giant ragweed = US

CHEAL, Chenopodium album, common lambsquarters = US

AMARE, Amaranthus retroflexus, Redroot pigweed = US

Part Rated

PLANT = plant

P = Pest is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit/Min/Max

%, 0, 100 = percent

Plant-Eval Interval

38 DP-1 = 1 HORVW May-21-2021

52 DP-1 = 1 HORVW May-21-2021