

Purdue Weed Science

Anthem Maxx Programs for Residual Weed Control in Corn

Trial ID: 23-TPAC-Corn-01
 Protocol ID: 23-TPAC-Corn-01 Location: TPAC Trial Year: 2023
 Study Director: Dr. Bill Johnson Sponsor Contact: Nick Hustedde
 Investigator: Dr. Bill Johnson

General Trial Information

Study Director: Dr. Bill Johnson **Title:** Professor
Investigator: Dr. Bill Johnson **Title:** Professor
Discipline: H herbicide
Status: E established
ARM Trial Created On: Apr-28-2023 **Meets All Objectives:** Y **Reliability:** HIGH high quality
Initiation Date: May-17-2023 **Planned Completion Date:** Oct-15-2023
Completion Date: Jul-12-2023

Trial Location

City: Lafayette **Country:** USA United States
State/Prov.: Indiana **County:** Tippecanoe
Postal Code: 47907
Latitude of LL Corner °: 40.2919556 N
Longitude of LL Corner °: -86.9082972 W

Regulations

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Role: STYDIR study director
Study Director: Dr. Bill Johnson **Title:** Professor
Organization: Purdue University
Address 1: 915 W. State Street
Country: USA United States **E-mail:** wgj@purdue.edu
City: West Lafayette **State/Prov:** IN
Role: INVEST investigator
Investigator: Dr. Bill Johnson **Title:** Professor
Organization: Purdue University
Address 1: 915 W. State Street
Country: USA United States **E-mail:** wgj@purdue.edu
City: West Lafayette **State/Prov:** IN
Role: SPONSR sponsor
Sponsor: Nick Hustedde
Organization: FMC
Role: COOPER cooperater
Cooperator: Jay Young **Title:** Superintendent
Organization: Purdue University
Address 1: 8343 US 231 S **Phone No.:** 765-538-3422
Country: USA United States **E-mail:** jayyoung@purdue.edu
City: Lafayette **State/Prov:** IN

Crop Description

Crop 1: C ZEAMD Zea mays indentata Dent corn **BBCH Scale:** BCOR
Entry Date: Jun-12-2023 **Stage Scale:** BBCH
Variety: DKC 50-87 RIB
Attributes: Glyphosate-R and Glufosinate-R
Planting Date: May-17-2023 **Planting Rate:** 35000 S/A
Depth: 1.5 IN
Rows per Plot: 4 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** PP plot planter
Soil Temperature: 76 F **Soil Moisture:** NORMAL normal, adequate
Emergence Date: May-26-2023

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida **Entry Date:** Jun-12-2023
Common Name: Giant ragweed **Stage Scale:** BBCH
Attributes: ALS-R
Pest 2 Type: W **Code:** SETPU Setaria pumila **Entry Date:** Jun-12-2023
Common Name: yellow foxtail **Stage Scale:** BBCH
Pest 3 Type: W **Code:** ECHCG Echinochloa crus-galli **Entry Date:** Jun-12-2023
Common Name: common barnyardgrass **Stage Scale:** BBCH

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Site and Design

Treated Plot Width: 10 FT
 Treated Plot Length: 30 FT
 Treated Plot Area: 300.0 FT²
 Replications: 4 Treatments: 6 Plots: 24

Site Type: FIELD field
 Experimental Unit: 1 PLOT plot
 Tillage Type: CONTIL conventional-till
 Study Design: RACOBL Randomized Complete Block (RCB)

Field Prep./Maintenance:

180 lbs of N applied as 28% UAN on 5/5/23.

Soil Description

Description Name: TPAC - Field 4BW
 % Sand: 15 % OM: 5 Texture: SIC silty clay
 % Silt: 44 Soil Name: Drummer
 % Clay: 41 Fert. Level: G good
 pH: 7 CEC: 19.3

No.	Date	Moisture Total	Unit	Precipitation	Unit	Min Temp	Max Temp	Avg Temp	Temp Unit	Max Wind	Avg Wind	Unit	Avg Soil Temp	Unit
1.	May-15-2023	0.04	IN	0.04	IN	55	75.6	63.1	F	15	3.6	MPH	64.2	F
2.	May-16-2023	0.01	IN	0.01	IN	55.8	73.8	62.8	F	16.8	3.1	MPH	64.2	F
3.	May-17-2023	0	IN	0	IN	50.7	72.7	61.3	F	17.9	5.4	MPH	63.9	F
4.	May-18-2023	0	IN	0	IN	45.3	77.4	61.9	F	15	2.9	MPH	63.1	F
5.	May-19-2023	0.59	IN	0.59	IN	55.8	83.1	65.8	F	30.4	7.6	MPH	63.3	F
6.	May-20-2023	0	IN	0	IN	48.7	67.1	58.1	F	19	3.8	MPH	63.7	F
7.	May-21-2023	0	IN	0	IN	45.9	81.1	64.2	F	14.3	1.1	MPH	63.9	F
8.	May-22-2023	0	IN	0	IN	52.3	84	69.6	F	11.9	0.9	MPH	65.7	F
9.	May-23-2023	0	IN	0	IN	55.8	86.2	72.3	F	15.4	1.3	MPH	67.1	F
10.	May-24-2023	0	IN	0	IN	55.4	86.2	72.9	F	22.6	5.4	MPH	67.6	F
11.	May-25-2023	0	IN	0	IN	48.9	71.6	59.7	F	23.3	9.2	MPH	65.1	F
12.	May-26-2023	0	IN	0	IN	46.4	77	62.4	F	22.6	4.5	MPH	64.4	F
13.	May-27-2023	0	IN	0	IN	48	78.4	65.8	F	7.2	0	MPH	64.2	F
14.	May-28-2023	0	IN	0	IN	57.4	83.1	71.1	F	4.3	0	MPH	66.4	F
15.	Aug-29-2023	0	IN	0	IN	57.7	88.7	74.8	F	6.5	0	MPH	69.1	F
16.	May-30-2023	0	IN	0	IN	60.6	91	77.2	F	15.4	0.7	MPH	69.8	F
17.	May-31-2023	0	IN	0	IN	66.4	90.7	78.3	F	20.4	3.6	MPH	71.6	F
18.	Jun-1-2023	0	IN	0	IN	63.5	92.1	78.8	F	17.2	2.5	MPH	73.6	F
19.	Jun-2-2023	0	IN	0	IN	61.9	92.3	79.3	F	13.2	0.7	MPH	74.5	F
20.	Jun-3-2023	0	IN	0	IN	65.3	93.7	80.2	F	16.1	1.8	MPH	75.4	F
21.	Jun-4-2023	0	IN	0	IN	64	84.4	74.3	F	17.9	6.5	MPH	75.4	F
22.	Jun-5-2023	0	IN	0	IN	54.5	83.1	69.6	F	13.2	0	MPH	71.8	F
23.	Jun-6-2023	0	IN	0	IN	54.3	88.3	71.1	F	7.2	0	MPH	71.6	F
24.	Jun-7-2023	0	IN	0	IN	54.3	80.1	68.5	F	16.1	1.3	MPH	73.4	F
25.	Jun-8-2023	0	IN	0	IN	46.9	80.2	64.9	F	1.8	0	MPH	72	F
26.	Jun-9-2023	0	IN	0	IN	46.9	82	67.1	F	7.2	0	MPH	72.1	F
27.	Jun-10-2023	0	IN	0	IN	55.2	86.5	72.7	F	13.2	0	MPH	74.1	F
28.	Jun-11-2023	0.38	IN	0.38	IN	55.2	69.4	63.5	F	22.6	4	MPH	70.3	F
29.	Jun-12-2023	0	IN	0	IN	54	69.1	62.8	F	25.1	5.6	MPH	70.5	F
30.	Jun-13-2023	0.05	IN	0.05	IN	55.6	70.7	62.4	F	18.8	7.8	MPH	65.3	F
31.	Jun-14-2023	0	IN	0	IN	59.4	78.8	68.4	F	14.1	2.9	MPH	68.9	F
32.	Jun-15-2023	0	IN	0	IN	57.7	87.1	71.4	F	19.9	7.2	MPH	70.9	F
33.	Jun-16-2023	0	IN	0	IN	51.3	75.6	62.6	F	14.1	4.3	MPH	69.3	F
34.	Jun-17-2023	0	IN	0	IN	51.4	84.2	68.7	F	12.1	2.5	MPH	70.9	F
35.	Jun-18-2023	0	IN	0	IN	57.9	86.4	72.7	F	18.1	4.5	MPH	73.4	F
36.	Jun-19-2023	0	IN	0	IN	69.1	86.5	79.9	F	22.4	6.9	MPH	76.8	F
37.	Jun-20-2023	0	IN	0	IN	65.5	89.4	76.1	F	27.1	8.9	MPH	76.8	F
38.	Jun-21-2023	0	IN	0	IN	64.8	88.7	76.6	F	23.9	7.4	MPH	78.1	F

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39.	Jun-22-2023	0	IN	0	IN	63.5	83.7	73	F	21.5	5.4	MPH	77.9	F
40.	Jun-23-2023	0	IN	0	IN	66.6	85.8	74.3	F	11.2	2.5	MPH	77.2	F
41.	Jun-24-2023	0	IN	0	IN	60.6	91.6	77.5	F	15	3.6	MPH	77.7	F
42.	Jun-25-2023	0.93	IN	0.93	IN	67.8	88.9	77.9	F	36	10.1	MPH	76.8	F
43.	Jun-26-2023	0	IN	0	IN	66	77	71.1	F	26.6	8.9	MPH	72.9	F
44.	Jun-27-2023	0	IN	0	IN	60.4	76.8	67.5	F	14.5	4	MPH	70.9	F
45.	Jun-28-2023	0	IN	0	IN	53.8	82.8	68.5	F	17	2.5	MPH	70.9	F
46.	Jun-29-2023	0.38	IN	0.38	IN	64.9	84.9	70.9	F	44.7	7.4	MPH	71.8	F
47.	Jun-30-2023	0	IN	0	IN	62.8	86	75	F	21	3.6	MPH	73.4	F
48.	Jul-1-2023	0.45	IN	0.45	IN	69.4	87.6	75.7	F	31.3	5.1	MPH	76.1	F
49.	Jul-2-2023	0.65	IN	0.65	IN	66	83.3	73.6	F	28.6	6.9	MPH	75.7	F
50.	Jul-3-2023	0	IN	0	IN	65.8	87.8	75	F	14.5	4.7	MPH	76.3	F
51.	Jul-4-2023	0	IN	0	IN	65.1	90.9	77.9	F	14.1	2.9	MPH	78.1	F
52.	Jul-5-2023	0.01	IN	0.01	IN	68.4	89.6	78.6	F	25.1	5.1	MPH	79.3	F
53.	Jul-6-2023	0.01	IN	0.01	IN	68.4	84.2	74.8	F	16.6	3.8	MPH	78.6	F
54.	Jul-7-2023	0	IN	0	IN	60.6	84	73.4	F	11.4	2.7	MPH	77.7	F
55.	Jul-8-2023	0.75	IN	0.75	IN	61.5	76.3	68.5	F	17.7	3.1	MPH	75.6	F
56.	Jul-9-2023	0	IN	0	IN	57	82.2	69.4	F	11.6	2.2	MPH	74.5	F
57.	Jul-10-2023	0	IN	0	IN	58.8	82.2	71.6	F	12.5	4	MPH	75.4	F
58.	Jul-11-2023	0	IN	0	IN	62.6	85.1	74.5	F	21.3	7.2	MPH	75.6	F
59.	Jul-12-2023	0	IN	0	IN	69.1	86.4	76.8	F	23	6.3	MPH	76.3	F

Application Description

	A	B	C
Date	May-17-2023	May-28-2023	Jun-8-2023
Start Time	1:45 PM	10:30 AM	10:02 AM
Stop Time	1:55 PM	10:32 AM	10:05 AM
Method	SPRAY	SPRAY	SPRAY
Timing	PRE	VE/V1 CORN	V3/V4 CORN
Placement	BROSOI	BROFOL	BROFOL
Applied By	C. BLAND	M. ZIMMER	L. MAIA
Entry Date	Jun-12-2023	Jun-12-2023	Jun-12-2023
Air Temperature Start, Stop	71.5, 71.5 F	69, 69 F	75, 75 F
% Relative Humidity Start, Stop	40, 40	45, 45	33, 33
Wind Velocity+Dir. Start	5 MPH, W	2.5 MPH, E	2 MPH, SE
Wind Velocity+Dir. Stop	8 MPH, W	2.5 MPH, E	2 MPH, SE
Wind Velocity+Dir. Max	9 MPH, W	3 MPH, E	2 MPH, SE
Wet Leaves (Y/N)	N, no	N, no	N, no
Soil Temperature	76 F	78 F	79 F
Soil Moisture	ADEQUATE	ADEQUATE	ADEQUATE
% Cloud Cover	0	30	0
Time to First Moisture	2.0 DAY		
Amount of First Moisture	0.59 IN		

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale	ZEAMD, BCOR	ZEAMD, BCOR	ZEAMD, BCOR
Days after Emergence	-9	2	13
Stage Majority, Percent	0, -	V1, -	V4, -
Stage Minimum, Percent	0, -	VE, -	V3, -
Stage Maximum, Percent	0, -	11, -	V4, -
Height Average	0 IN	2 IN	9 IN
Height Minimum, Maximum	0, 0	2, 3	6, 10

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Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale	AMBTR, W, BBCH	AMBTR, W, BBCH	AMBTR, W, BBCH
Height Average	0 IN	2 IN	2 IN
Height Minimum, Maximum	0, 0	2, 4	1, 3
Density Average	0 FT2	4 FT2	2 FT2
Density Minimum, Maximum	0, 0	0, 6	0, 6
Pest 2 Code, Type, Scale	SETPU, W, BBCH	SETPU, W, BBCH	SETPU, W, BBCH
Height Average	0 IN	0.75 IN	2 IN
Height Minimum, Maximum	0, 0	0.5, 1.5	0.5, 3
Density Average	0 FT2	3 FT2	2 FT2
Density Minimum, Maximum	0, 0	0, 7	0, 4
Pest 3 Code, Type, Scale	ECHCG, W, BBCH	ECHCG, W, BBCH	ECHCG, W, BBCH
Height Average	0 IN	0.5 IN	2 IN
Height Minimum, Maximum	0, 0	0.5, 1	1, 4
Density Average	0 FT2	2 FT2	2 FT2
Density Minimum, Maximum	0, 0	0, 6	0, 4

Application Equipment

	A	B	C
Equipment Name	CO2 BACKPACK	CO2 BACKPACK	CO2 BACKPACK
Equipment Type	BACSPR	BACSPR	BACSPR
Operation Pressure	27 PSI	19 PSI	19 PSI
Nozzle Model	AIXR	XR	XR
Nozzle Type	FLAFAI	FLAFXR	FLAFXR
Nozzle TradeName	TEEJET	TEEJET	TEEJET
Nozzle Tip Size, Color	110015, GREEN	11002, YELLOW	11002, YELLOW
Nozzle Spacing	15.0 IN	15.0 IN	15.0 IN
Boom Length	10.0 FT	10.0 FT	10.0 FT
Ground Speed	3 MPH	3 MPH	3 MPH
Carrier	WATER	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Overage	236.0 mL	236.0 mL	236.0 mL
Mix Size	1800.0 mL	1800.0 mL	1800.0 mL
Propellant	COMCO2	COMCO2	COMCO2

Notes

Context	Date	By	Notes
STATUS	Mar-12-2023	Dr. Bill Johnson	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	May-25-2023	Dr. Bryan Young	Automatically added by ARM: Status changed to: E: changed by (EINYOB).
STATUS	May-25-2023	Dr. Bryan Young	Automatically added by ARM: Trial Status updated to 'E' when entered.

Deviations

No. 1: Date: May-24-2023 By: Claudia Bland

Deviations:

No crop injury rating taken at seven days after A, crop was not fully emerged.

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Assessed By	Claudia Bland		Claudia Bland	Lucas Maia	Claudia Bland	Claudia Bland		
Rating Date	May-24-2023		May-31-2023	Jun-8-2023	Jun-14-2023	Jun-21-2023		
Rating Type	CONTRO		CONTRO	COUNT	CONTRO	CONTRO		
Rating Unit/Min/Max	% , 0, 100		% , 0, 100	NUMBER, -, -	% , 0, 100	% , 0, 100		
Crop Type, Code	C, ZEAMX		C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX		
Crop Scientific Name	Zea mays		Zea mays	Zea mays	Zea mays	Zea mays		
Crop Name	Corn		Corn	Corn	Corn	Corn		
Pest Code	AMBTR		AMBTR	AMBTR	AMBTR	AMBTR		
Pest Scientific Name	Ambrosia trifida		Ambrosia trifida	Ambrosia trifida	Ambrosia trifida	Ambrosia trifida		
Pest Name	Giant ragweed		Giant ragweed	Giant ragweed	Giant ragweed	Giant ragweed		
Rating Timing	7 DA-A		14 DA-A	Prior to C	28 DA-A	35 DA-A		
ARM Action Codes	EC		EC		EC	EC		
Trt No.	Treatment Name	Rate	Appl Code	1*	2*	5*	10*	14*
		Rate Unit						
1	NONTREATED			0.0	0.0	11.0 a	0.0	0.0
2	ANTHEM MAXX	4 fl oz/a	A	91.3 a	90.0 a	6.3 a	87.8 ab	83.8 b
	CALLISTO	6 fl oz/a	A					
	AATREX	2 qt/a	A					
3	ANTHEM MAXX	4 fl oz/a	B	0.0 c	67.5 b	2.0 a	93.3 a	91.5 a
	CALLISTO	3 fl oz/a	B					
	AATREX	2 qt/a	B					
	ROUNDUP POWERMAX 3	20.5 fl oz/a	B					
	AMSOL	8.5 lb ai/100 gal	B					
	INDUCE	0.25 % v/v	B					
4	ANTHEM MAXX	3 fl oz/a	A	88.8 a	85.0 a	5.3 a	95.0 a	98.3 a
	CALLISTO	3 fl oz/a	A					
	AATREX	1.5 qt/a	A					
	ANTHEM MAXX	2.5 fl oz/a	C					
	CALLISTO	3 fl oz/a	C					
	AATREX	1 pt/a	C					
	ROUNDUP POWERMAX 3	20.5 fl oz/a	C					
	AMSOL	8.5 lb ai/100 gal	C					
	INDUCE	0.25 % v/v	C					
5	TRIVOLT	12 fl oz/a	A	78.8 b	83.8 a	6.3 a	82.5 b	80.0 b
6	MAVERICK	18 fl oz/a	A	81.3 b	83.8 a	3.5 a	83.8 b	82.5 b
	LSD P=.05			6.21	7.86	5.99	7.36	7.37
	Standard Deviation			4.03	5.10	3.97	4.78	4.78
	CV			5.93	6.22	69.6	5.4	5.49
	Levene's Prob(F)			0.913	0.637	0.235	0.817	0.599
	P(Shapiro-Wilk)^			0.0636	0.2706	0.3655	0.0205*	0.2431
	P(Skewness)^			0.1827	0.4999	0.1143	0.0196*	0.1765
	P(Kurtosis)^			0.7135	0.4355	0.1966	0.0086*	0.6112
	Replicate F			2.667	1.280	0.770	1.159	0.711
	Replicate Prob(F)			0.0951	0.3256	0.5286	0.3657	0.5641
	Treatment F			362.231	11.112	2.403	5.429	9.891
	Treatment Prob(F)			0.0001	0.0005	0.0863	0.0099	0.0009

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 * Adjusted means
 Could not calculate LSD (% mean diff) for columns 4,8,9,13 because error mean square = 0.
 ^Calculated from residual.

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Assessed By	Claudia Bland		Claudia Bland	Lucas Maia	Claudia Bland	Claudia Bland		
Rating Date	Jul-12-2023		May-31-2023	Jun-8-2023	Jun-14-2023	Jun-21-2023		
Rating Type	CONTRO		CONTRO	COUNT	CONTRO	CONTRO		
Rating Unit/Min/Max	% , 0, 100		% , 0, 100	NUMBER, -, -	% , 0, 100	% , 0, 100		
Crop Type, Code	C, ZEAMX		C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX		
Crop Scientific Name	Zea mays		Zea mays	Zea mays	Zea mays	Zea mays		
Crop Name	Corn		Corn	Corn	Corn	Corn		
Pest Code	AMBTR		SETPU	SETPU	SETPU	SETPU		
Pest Scientific Name	Ambrosia trifida		Setaria pumila	Setaria pumila	Setaria pumila	Setaria pumila		
Pest Name	Giant ragweed		yellow foxtail	yellow foxtail	yellow foxtail	yellow foxtail		
Rating Timing	56 DA-A		14 DA-A	Prior to C	28 DA-A	35 DA-A		
ARM Action Codes	EC		EC		EC	EC		
Trt No.	Treatment Name	Rate	Appl Code	17*	3*	7*	11*	15*
		Rate Unit						
1	NONTREATED			0.0	0.0	23.0 a	0.0	0.0
2	ANTHEM MAXX	4 fl oz/a	A	60.0 c	96.5 a	1.5 b	80.0 b	75.0 b
	CALLISTO	6 fl oz/a	A					
	AATREX	2 qt/a	A					
3	ANTHEM MAXX	4 fl oz/a	B	82.5 b	98.3 a	0.3 b	90.0 a	87.5 a
	CALLISTO	3 fl oz/a	B					
	AATREX	2 qt/a	B					
	ROUNDUP POWERMAX 3	20.5 fl oz/a	B					
	AMSOL	8.5 lb ai/100 gal	B					
	INDUCE	0.25 % v/v	B					
4	ANTHEM MAXX	3 fl oz/a	A	97.3 a	93.3 a	3.3 b	66.3 c	97.5 a
	CALLISTO	3 fl oz/a	A					
	AATREX	1.5 qt/a	A					
	ANTHEM MAXX	2.5 fl oz/a	C					
	CALLISTO	3 fl oz/a	C					
	AATREX	1 pt/a	C					
	ROUNDUP POWERMAX 3	20.5 fl oz/a	C					
	AMSOL	8.5 lb ai/100 gal	C					
	INDUCE	0.25 % v/v	C					
5	TRIVOLT	12 fl oz/a	A	60.0 c	93.8 a	8.8 b	68.8 c	55.0 c
6	MAVERICK	18 fl oz/a	A	65.0 c	86.3 a	8.0 b	70.0 c	65.0 bc
	LSD P=.05			14.30	8.22	12.26	9.62	12.42
	Standard Deviation			9.28	5.33	8.14	6.24	8.06
	CV			12.73	5.7	109.08	8.32	10.61
	Levene's Prob(F)			0.107	0.475	0.00*	0.689	0.863
	P(Shapiro-Wilk)^			0.5605	0.8513	0.8183	0.1272	0.4182
	P(Skewness)^			0.3084	0.7278	0.9187	0.0871	0.447
	P(Kurtosis)^			0.4282	0.4998	0.2568	0.0865	0.5513
	Replicate F			0.763	3.151	1.261	5.733	2.410
	Replicate Prob(F)			0.5362	0.0647	0.3231	0.0114	0.1177
	Treatment F			12.532	2.961	4.215	10.027	17.808
	Treatment Prob(F)			0.0003	0.0647	0.0136	0.0008	0.0001

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 * Adjusted means
 Could not calculate LSD (% mean diff) for columns 4,8,9,13 because error mean square = 0.
 ^Calculated from residual.

Purdue Weed Science

Anthem Maxx Programs for Residual Weed Control in Corn

Trial ID: 23-TPAC-Corn-01
 Protocol ID: 23-TPAC-Corn-01 Location: TPAC Trial Year: 2023
 Study Director: Dr. Bill Johnson Sponsor Contact: Nick Hustedde

Investigator: Dr. Bill Johnson

Assessed By	Claudia Bland		Lucas Maia	Claudia Bland	Claudia Bland		
Rating Date	Jul-12-2023		Jun-8-2023	Jun-14-2023	Jun-21-2023		
Rating Type	CONTRO		COUNT	CONTRO	CONTRO		
Rating Unit/Min/Max	% , 0, 100		NUMBER, -, -	% , 0, 100	% , 0, 100		
Crop Type, Code	C, ZEAMX		C, ZEAMX	C, ZEAMX	C, ZEAMX		
Crop Scientific Name	Zea mays		Zea mays	Zea mays	Zea mays		
Crop Name	Corn		Corn	Corn	Corn		
Pest Code	SETPU		ECHCG	ECHCG	ECHCG		
Pest Scientific Name	Setaria pumila		Echinochloa cru>	Echinochloa cru>	Echinochloa cru>		
Pest Name	yellow foxtail		common barnyard>	common barnyard>	common barnyard>		
Rating Timing	56 DA-A		Prior to C	28 DA-A	35 DA-A		
ARM Action Codes	EC			EC	EC		
Trt No.	Treatment Name	Rate	Appl Code	18*	6*	12*	16*
		Rate Unit					
1	NONTREATED			0.0	19.3 a	0.0	0.0
2	ANTHEM MAXX	4 fl oz/a	A	45.0 c	3.0 b	86.3 a	75.0 b
	CALLISTO	6 fl oz/a	A				
	AATREX	2 qt/a	A				
3	ANTHEM MAXX	4 fl oz/a	B	77.5 b	0.5 b	95.0 a	87.5 a
	CALLISTO	3 fl oz/a	B				
	AATREX	2 qt/a	B				
	ROUNDUP POWERMAX 3	20.5 fl oz/a	B				
	AMSOL	8.5 lb ai/100 gal	B				
	INDUCE	0.25 % v/v	B				
4	ANTHEM MAXX	3 fl oz/a	A	90.8 a	6.0 b	67.5 b	97.5 a
	CALLISTO	3 fl oz/a	A				
	AATREX	1.5 qt/a	A				
	ANTHEM MAXX	2.5 fl oz/a	C				
	CALLISTO	3 fl oz/a	C				
	AATREX	1 pt/a	C				
	ROUNDUP POWERMAX 3	20.5 fl oz/a	C				
	AMSOL	8.5 lb ai/100 gal	C				
	INDUCE	0.25 % v/v	C				
5	TRIVOLT	12 fl oz/a	A	20.0 d	3.0 b	68.8 b	55.0 c
6	MAVERICK	18 fl oz/a	A	10.0 d	3.5 b	71.3 b	65.0 bc
	LSD P=.05			11.87	8.08	10.87	12.42
	Standard Deviation			7.70	5.36	7.06	8.06
	CV			15.84	91.31	9.08	10.61
	Levene's Prob(F)			0.935	0.001*	0.397	0.863
	P(Shapiro-Wilk)^			0.2903	0.6515	0.3072	0.4182
	P(Skewness)^			0.4382	0.4555	0.1208	0.447
	P(Kurtosis)^			0.6229	0.2762	0.1141	0.5513
	Replicate F			8.699	0.337	5.916	2.410
	Replicate Prob(F)			0.0024	0.7986	0.0102	0.1177
	Treatment F			83.089	6.394	12.013	17.808
	Treatment Prob(F)			0.0001	0.0023	0.0004	0.0001

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 * Adjusted means
 Could not calculate LSD (% mean diff) for columns 4,8,9,13 because error mean square = 0.
 ^Calculated from residual.

Purdue Weed Science

Anthem Maxx Programs for Residual Weed Control in Corn

Trial ID: 23-TPAC-Corn-01
 Protocol ID: 23-TPAC-Corn-01 Location: TPAC Trial Year: 2023
 Study Director: Dr. Bill Johnson Sponsor Contact: Nick Hustedde

Investigator: Dr. Bill Johnson

Assessed By	Claudia Bland							
Rating Date	Jul-12-2023	Jun-4-2023	Jun-12-2023	Jun-14-2023	Jun-21-2023			
Rating Type	CONTRO	PHYGEN	PHYGEN	PHYGEN	PHYGEN			
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100			
Crop Type, Code	C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX	C, ZEAMX			
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays			
Crop Name	Corn	Corn	Corn	Corn	Corn			
Pest Code	ECHCG							
Pest Scientific Name	Echinochloa cru>							
Pest Name	common barnyard>							
Rating Timing	56 DA-A	7 DA-B	14 DA-B	7 DA-C	14 DA-C			
ARM Action Codes	EC							
Trt No.	Treatment Name	Rate	Appl Code	19*	4*	8*	9*	13*
		Rate Unit						
1	NONTREATED		A	0.0	0.0 b	0.0 b	0.0 b	0.0 b
2	ANTHEM MAXX	4 fl oz/a	A	45.0 b	0.0 b	0.0 b	0.0 b	0.0 b
	CALLISTO	6 fl oz/a	A					
	AATREX	2 qt/a	A					
3	ANTHEM MAXX	4 fl oz/a	B	77.5 a	3.0 a	3.0 a	0.0 b	0.0 b
	CALLISTO	3 fl oz/a	B					
	AATREX	2 qt/a	B					
	ROUNDUP POWERMAX 3	20.5 fl oz/a	B					
	AMSOL	8.5 lb ai/100 gal	B					
	INDUCE	0.25 % v/v	B					
4	ANTHEM MAXX	3 fl oz/a	A	89.5 a	0.0 b	0.0 b	3.0 a	3.0 a
	CALLISTO	3 fl oz/a	A					
	AATREX	1.5 qt/a	A					
	ANTHEM MAXX	2.5 fl oz/a	C					
	CALLISTO	3 fl oz/a	C					
	AATREX	1 pt/a	C					
	ROUNDUP POWERMAX 3	20.5 fl oz/a	C					
	AMSOL	8.5 lb ai/100 gal	C					
	INDUCE	0.25 % v/v	C					
5	TRIVOLT	12 fl oz/a	A	20.0 c	0.0 b	0.0 b	0.0 b	0.0 b
6	MAVERICK	18 fl oz/a	A	10.0 c	0.0 b	0.0 b	0.0 b	0.0 b
	LSD P=.05			12.17	.	.	.	.
	Standard Deviation			7.90	0.00	0.00	0.00	0.00
	CV			16.32	0.0	0.0	0.0	0.0
	Levene's Prob(F)			0.981	.	.	.	.
	P(Shapiro-Wilk)^			0.4869	.	.	.	.
	P(Skewness)^			0.556	.	.	.	.
	P(Kurtosis)^			0.5297	.	.	.	.
	Replicate F			8.229	0.000	0.000	0.000	0.000
	Replicate Prob(F)			0.0030	1.0000	1.0000	1.0000	1.0000
	Treatment F			77.424	0.000	0.000	0.000	0.000
	Treatment Prob(F)			0.0001	1.0000	1.0000	1.0000	1.0000

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 * Adjusted means
 Could not calculate LSD (% mean diff) for columns 4,8,9,13 because error mean square = 0.
 ^Calculated from residual.

Purdue Weed Science

Anthem Maxx Programs for Residual Weed Control in Corn

Trial ID: 23-TPAC-Corn-01
 Protocol ID: 23-TPAC-Corn-01 Location: TPAC Trial Year: 2023
 Study Director: Dr. Bill Johnson Sponsor Contact: Nick Hustedde

Investigator: Dr. Bill Johnson

Rating Type

CONTRO = control / burndown or knockdown

COUNT = count

PHYGEN = phytotoxicity - general / injury

Rating Unit/Min/Max

%, 0, 100 = percent

NUMBER, , = number

Crop Type Code

C = EPPO species (Bayer) codes

ZEAMX, BCOR, Zea mays, Corn = US

Pest Code

AMBTR, Ambrosia trifida, Giant ragweed = US

SETPU, Setaria pumila, yellow foxtail = US

ECHCG, Echinochloa crus-galli, common barnyardgrass = US

ARM Action Codes

EC = Do not analyze untreated check, while still reporting treatment mean on AOV Means Table