

# Purdue Weed Science

## Evaluating Authority Supreme/Edge and Anthem Maxx for Residual Weed Control in Soybeans

Trial ID: 21S-MGS-SOY-09      Location: MEIGS      Trial Year: 2021  
 Protocol ID: 21S-MGS-SOY-09      Investigator (Creator): Dr. Bill Johnson  
 Project ID:      Study Director: Brent Mansfield  
 Sponsor Contact: Nicholas Hustedde - FMC

### General Trial Information

**Study Director:** Brent Mansfield      **Title:** Research Associate  
**Investigator:** Dr. Bill Johnson      **Title:** Professor

**Discipline:** H herbicide  
**Trial Status:** E established      **Trial Reliability:** 1 usable data

**ARM Trial Created On:** 5/24/2021  
**Initiation Date:** 5/23/2021

### Trial Location

**City:** Lafayette      **Country:** USA United States  
**State/Prov.:** Indiana  
**Postal Code:** 47907

**Conducted Under GLP:** No  
**Conducted Under GEP:** No

### Contacts

**Study Director:** Brent Mansfield      **Title:** Research Associate  
**Organization:** Purdue University  
**Address 1:** 915 W. State Street  
**Country:** USA United States      **E-mail:** brentmansfield@purdue.edu  
**City:** West Lafayette      **State/Prov:** IN      **Postal Code:** 47907

**Investigator:** Dr. Bill Johnson      **Title:** Professor  
**Organization:** Purdue University  
**Address 1:** 915 W. State Street  
**Country:** USA United States      **E-mail:** wj@purdue.edu  
**City:** West Lafayette      **State/Prov:** IN      **Postal Code:** 47907

**Sponsor:** Nicholas Hustedde - FMC  
**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      **Postal Code:** 47909

### Crop Description

**Crop 1:** C GLXMA Glycine max      Soybean      **Stage Scale:** BBCH

**Variety:** AG29XF1  
**Attributes:** XtendFlex: Gly-R, Glu-R, dicamba-R  
**Planting Date:** 5/23/2021      **Planting Rate:** 140000 S/A  
**Depth:** 1.75 IN  
**Rows per Plot:** 4      **Planting Method:** PLANTD planted  
**Row Spacing:** 30 IN      **Planting Equipment:** PP plot planter  
**Soil Temperature:** 65 F      **Soil Moisture:** NORMAL normal, adequate  
**Emergence Date:** 6/1/2021  
**Harvest Date:** 11/16/2021

**% Standard Moisture:** 13      **Harvested Width:** 5 FT  
**Harvested Length:** 22 FT

### Pest Description

**Pest 1 Type:** W      **Code:** AMATA Amaranthus x tamariscinus  
**Common Name:** common water hemp      **Stage Scale:** BBCH  
**Attributes:** GLY-R

**Pest 2 Type:** W      **Code:** SETFA Setaria faberi  
**Common Name:** Giant foxtail      **Stage Scale:** BBCH

### Site and Design

**Treated Plot Width:** 6.67 FT      **Site Type:** FIELD field  
**Treated Plot Length:** 25 FT      **Experimental Unit:** 1 PLOT plot  
**Treated Plot Area:** 166.75 FT<sup>2</sup>      **Treatments:** 10  
**Replications:** 4      **Tillage Type:** NOTILL no-till  
**Study Design:** RAOBL Randomized Complete Block (RCB)

### Soil Description

**Description Name:** MEIGS-S3  
**% Sand:** 21      **% OM:** 2.2      **Texture:** SIL silt loam  
**% Silt:** 54      **pH:** 6.8      **Soil Name:** Starks-Fincastle complex  
**% Clay:** 25      **CEC:** 8.3

No.	Date	Moisture Total	Unit	Min Temp	Max Temp	Temp Unit
1.	5/1/2021	0	IN	40	63	F
2.	5/2/2021	0	IN	49	74	F
3.	5/3/2021	0.26	IN	56	78	F

**Application Description**

	<b>A</b>	<b>B</b>
<b>Application Date</b>	5/24/2021	6/29/2021
<b>Appl. Start Time</b>	10:35 AM	3:15 PM
<b>Appl. Stop Time</b>	10:56 AM	3:35 PM
<b>Application Method</b>	SPRAY	SPRAY
<b>Application Timing</b>	PREPRE	POSPOS
<b>Application Placement</b>	BROSOI	BROFOL
<b>Applied By</b>	J. HAARMANN	J. HAARMANN
<b>Air Temperature Start, Stop</b>	83, 83 F	86, 86 F
<b>% Relative Humidity Start, Stop</b>	48, 48	75, 75
<b>Wind Velocity+Dir. Start</b>	1.5 MPH, W	1 MPH, W
<b>Wet Leaves (Y/N)</b>	N, no	N, no
<b>Soil Temperature</b>	74 F	92 F
<b>Soil Moisture</b>	NORMAL	WET
<b>% Cloud Cover</b>	20	50

**Crop Stage At Each Application**

	<b>A</b>	<b>B</b>
<b>Crop 1 Code, BBCH Scale</b>	GLXMA, BSOY	GLXMA, BSOY
<b>Days after Emergence</b>	-8	28
<b>Stage Majority, Percent</b>	00, -	14, -
<b>Stage Minimum, Percent</b>	00, -	13, -
<b>Stage Maximum, Percent</b>	00, -	14, -
<b>Height Average</b>	0 IN	10 IN
<b>Height Minimum, Maximum</b>		9, 11

**Pest Stage At Each Application**

	<b>A</b>	<b>B</b>
<b>Pest 1 Code, Type, Scale</b>	AMATA, W, BBCH	AMATA, W, BBCH
<b>Stage Majority, Percent</b>	00, -	16, -
<b>Stage Minimum, Percent</b>	00, -	14, -
<b>Stage Maximum, Percent</b>	00, -	18, -
<b>Height Average</b>	0 IN	3 IN
<b>Height Minimum, Maximum</b>		1, 6
<b>Density Average</b>	0 FT2	1 FT2
<b>Pest 2 Code, Type, Scale</b>	SETFA, W, BBCH	SETFA, W, BBCH
<b>Stage Majority, Percent</b>	00, -	11, -
<b>Stage Minimum, Percent</b>	00, -	11, -
<b>Stage Maximum, Percent</b>	00, -	11, -
<b>Height Average</b>	0 IN	1 IN
<b>Height Minimum, Maximum</b>		0.25, 1
<b>Density Average</b>	0 FT2	5 FT2

<b>Application Equipment</b>		
	<b>A</b>	<b>B</b>
<b>Appl. Equipment</b>	CO2 BACKPACK	CO2 BACKPACK
<b>Equipment Type</b>	BACSPR	BACSPR
<b>Operation Pressure</b>	25 PSI	44 PSI
<b>Nozzle Model</b>	XR	TTI
<b>Nozzle Type</b>	FLAFXR	TEEJAI
<b>Nozzle TradeName</b>	TEEJET	TEEJET
<b>Nozzle Tip Size, Color</b>	8002, YELLOW	11002, YELLOW
<b>Nozzle Spacing</b>	20 IN	20 IN
<b>Nozzles/Row</b>	4	4
<b>Boom Length</b>	6.67 FT	6.67 FT
<b>Boom Height</b>	17 IN	27.0 IN
<b>Ground Speed</b>	3 MPH	3 MPH
<b>Carrier</b>	WATER	WATER
<b>Application Amount</b>	15 GAL/AC	15 GAL/AC
<b>Mix Size</b>	945.0 mL	945.0 mL
<b>Propellant</b>	COMCO2	COMCO2

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Project ID:	Study Director: Brent Mansfield	
	Sponsor Contact: Nicholas Hustedde - FMC	

Pest Type	W, Weed AMATA	W, Weed SETFA	W, Weed AMATA	W, Weed SETFA					
Pest Code	common water he>	Giant foxtail	common water he>	Giant foxtail					
Pest Name									
Crop Type, Code	C, GLXMA Soybean	C, GLXMA Soybean							
Crop Name	Soybean	Soybean							
Rating Date	6/8/2021	6/14/2021	6/8/2021	6/8/2021					
Rating Type	PHYNEC	PHYNEC	CONTRO	CONTRO					
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100					
Number of Subsamples	1	1	1	1					
Data Entry Date	12/13/2021	12/13/2021	12/13/2021	12/13/2021					
Rating Timing	7 DAE	13 DAE	15 DAA	15 DAA					
Days After First/Last Applic.	15, 15	21, 21	15, 15	15, 15					
Days After Emergence	7 DE-1	13 DE-1	7 DE-1	7 DE-1					
ARM Action Codes									
Number of Decimals									
Trt No.	Treatment Name	Rate	Appl Code	1	2	3	4	5	6
		Rate Unit							
1	NONTREATED			0.0	0.0	0.0	0.0	0.0	0.0
2	AUTHORITY SUPREME	8 FL OZ/A A		50.0 b	17.5 bc	100.0 -	100.0 -	100.0 -	96.3 -
	XTENDIMAX	22 FL OZ/A B							
	ROUNDUP POWERMAX	32 FL OZ/A B							
	VOLIMINATE	20 FL OZ/A B							
	INTACT	0.5 % V/V B							
	CLASS ACT RIDION	1 % V/V B							
3	AUTHORITY EDGE	8 FL OZ/A A		67.5 a	22.5 b	100.0 -	100.0 -	100.0 -	97.5 -
	XTENDIMAX	22 FL OZ/A B							
	ROUNDUP POWERMAX	32 FL OZ/A B							
	VOLIMINATE	20 FL OZ/A B							
	INTACT	0.5 % V/V B							
	CLASS ACT RIDION	1 % V/V B							
4	AUTHORITY FIRST	6.4 OZ/A A		75.0 a	35.0 a	100.0 -	100.0 -	100.0 -	93.8 -
	XTENDIMAX	22 FL OZ/A B							
	ROUNDUP POWERMAX	32 FL OZ/A B							
	VOLIMINATE	20 FL OZ/A B							
	INTACT	0.5 % V/V B							
	CLASS ACT RIDION	1 % V/V B							
5	AUTHORITY SUPREME	7 FL OZ/A A		35.0 c	10.0 cd	100.0 -	100.0 -	100.0 -	98.8 -
	TRICOR DF	5 OZ/A A							
	XTENDIMAX	22 FL OZ/A B							
	ROUNDUP POWERMAX	32 FL OZ/A B							
	VOLIMINATE	20 FL OZ/A B							
	INTACT	0.5 % V/V B							
	CLASS ACT RIDION	1 % V/V B							
6	AUTHORITY EDGE	7 FL OZ/A A		47.5 b	18.8 bc	100.0 -	100.0 -	100.0 -	91.3 -
	TRICOR DF	5 OZ/A A							
	XTENDIMAX	22 FL OZ/A B							
	ROUNDUP POWERMAX	32 FL OZ/A B							
	VOLIMINATE	20 FL OZ/A B							
	INTACT	0.5 % V/V B							
	CLASS ACT RIDION	1 % V/V B							
7	AUTHORITY SUPREME	6.5 FL OZ/A A		35.0 c	10.0 cd	100.0 -	100.0 -	100.0 -	93.8 -
	ANTHEM MAXX	2.5 FL OZ/A B							
	XTENDIMAX	22 FL OZ/A B							
	ROUNDUP POWERMAX	32 FL OZ/A B							
	VOLIMINATE	20 FL OZ/A B							
	INTACT	0.5 % V/V B							
	CLASS ACT RIDION	1 % V/V B							

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.  
 Untreated treatment(s) 1 excluded from analysis.  
 Could not calculate LSD (% mean diff) for columns 3,4,5,7,9,10 because error mean square = 0.  
 ^Calculated from residual.

Pest Type			W, Weed AMATA	W, Weed SETFA	W, Weed AMATA	W, Weed SETFA			
Pest Code			common water he>	Giant foxtail	common water he>	Giant foxtail			
Pest Name									
Crop Type, Code	C, GLXMA	C, GLXMA							
Crop Name	Soybean	Soybean							
Rating Date	6/8/2021	6/14/2021	6/8/2021	6/8/2021	6/21/2021	6/21/2021			
Rating Type	PHYNEC	PHYNEC	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit/Min/Max	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100	%, 0, 100			
Number of Subsamples	1	1	1	1	1	1			
Data Entry Date	12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021			
Rating Timing	7 DAE	13 DAE	15 DAA	15 DAA	28 DAA	28 DAA			
Days After First/Last Applic.	15, 15	21, 21	15, 15	15, 15	28, 28	28, 28			
Days After Emergence	7 DE-1	13 DE-1	7 DE-1	7 DE-1	20 DE-1	20 DE-1			
ARM Action Codes									
Number of Decimals									
Trt No.	Treatment Name	Rate	Appl Code	1	2	3	4	5	6
		Rate Unit							
8	AUTHORITY EDGE	7 FL OZ/A A		55.0 b	20.0 b	100.0 -	100.0 -	100.0 -	98.8 -
	ANTHEM MAXX	3.1 FL OZ/A B							
	XTENDIMAX	22 FL OZ/A B							
	ROUNDUP POWERMAX	32 FL OZ/A B							
	VOLIMINATE	20 FL OZ/A B							
	INTACT	0.5 % V/V B							
	CLASS ACT RIDION	1 % V/V B							
9	ZIDUA PRO	6 FL OZ/A A		5.0 d	2.5 de	100.0 -	100.0 -	100.0 -	100.0 -
	XTENDIMAX	22 FL OZ/A B							
	ROUNDUP POWERMAX	32 FL OZ/A B							
	VOLIMINATE	20 FL OZ/A B							
	INTACT	0.5 % V/V B							
	CLASS ACT RIDION	1 % V/V B							
10	KYBER	16 FL OZ/A A		0.0 d	0.0 e	100.0 -	100.0 -	100.0 -	95.0 -
	XTENDIMAX	22 FL OZ/A B							
	ROUNDUP POWERMAX	32 FL OZ/A B							
	VOLIMINATE	20 FL OZ/A B							
	INTACT	0.5 % V/V B							
	CLASS ACT RIDION	1 % V/V B							
LSD P=.05				10.25	9.92	.	.	.	8.27
Standard Deviation				7.02	6.80	0.00	0.00	0.00	5.67
CV				17.08	44.89	0.0	0.0	0.0	5.9
Grand Mean				41.11	15.14	100.00	100.00	100.00	96.11
Levene's F^				1.707	0.954	.	.	.	1.661
Levene's Prob(F)				0.142	0.491	.	.	.	0.154
Rank X2				.	.	.	.	.	.
P(Rank X2)				.	.	.	.	.	.
Skewness^				0.0356	0.4832	.	.	.	-0.3513
Kurtosis^				0.1779	0.3758	.	.	.	-0.2113
Replicate F				0.113	0.617	0.000	0.000	0.000	2.249
Replicate Prob(F)				0.9518	0.6110	1.0000	1.0000	1.0000	0.1085
Treatment F				53.000	10.098	0.000	0.000	0.000	1.043
Treatment Prob(F)				0.0001	0.0001	1.0000	1.0000	1.0000	0.4327

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Trt No.	Treatment Name	Rate	Unit	Appl Code	7	8	9	10	11	12
	1 NONTREATED				0.0	0.0	0.0	0.0	4.583	15.188
	2 AUTHORITY SUPREME	8 FL OZ/A	A		0.0 -	4.8 -	100.0 -	100.0 -	6.685 abc	16.303 -
	XTENDIMAX	22 FL OZ/A	B							
	ROUNDUP POWERMAX	32 FL OZ/A	B							
	VOLIMINATE	20 FL OZ/A	B							
	INTACT	0.5 % V/V	B							
	CLASS ACT RIDION	1 % V/V	B							
	3 AUTHORITY EDGE	8 FL OZ/A	A		0.0 -	3.3 -	100.0 -	100.0 -	5.770 bc	16.445 -
	XTENDIMAX	22 FL OZ/A	B							
	ROUNDUP POWERMAX	32 FL OZ/A	B							
	VOLIMINATE	20 FL OZ/A	B							
	INTACT	0.5 % V/V	B							
	CLASS ACT RIDION	1 % V/V	B							
	4 AUTHORITY FIRST	6.4 OZ/A	A		0.0 -	7.0 -	100.0 -	100.0 -	4.478 d	14.833 -
	XTENDIMAX	22 FL OZ/A	B							
	ROUNDUP POWERMAX	32 FL OZ/A	B							
	VOLIMINATE	20 FL OZ/A	B							
	INTACT	0.5 % V/V	B							
	CLASS ACT RIDION	1 % V/V	B							
	5 AUTHORITY SUPREME	7 FL OZ/A	A		0.0 -	1.3 -	100.0 -	100.0 -	6.190 bc	16.200 -
	TRICOR DF	5 OZ/A	A							
	XTENDIMAX	22 FL OZ/A	B							
	ROUNDUP POWERMAX	32 FL OZ/A	B							
	VOLIMINATE	20 FL OZ/A	B							
	INTACT	0.5 % V/V	B							
	CLASS ACT RIDION	1 % V/V	B							
	6 AUTHORITY EDGE	7 FL OZ/A	A		0.0 -	6.0 -	100.0 -	100.0 -	5.598 c	16.225 -
	TRICOR DF	5 OZ/A	A							
	XTENDIMAX	22 FL OZ/A	B							
	ROUNDUP POWERMAX	32 FL OZ/A	B							
	VOLIMINATE	20 FL OZ/A	B							
	INTACT	0.5 % V/V	B							
	CLASS ACT RIDION	1 % V/V	B							
	7 AUTHORITY SUPREME	6.5 FL OZ/A	A		0.0 -	9.5 -	100.0 -	100.0 -	6.780 ab	16.145 -
	ANTHEM MAXX	2.5 FL OZ/A	B							
	XTENDIMAX	22 FL OZ/A	B							
	ROUNDUP POWERMAX	32 FL OZ/A	B							
	VOLIMINATE	20 FL OZ/A	B							
	INTACT	0.5 % V/V	B							
	CLASS ACT RIDION	1 % V/V	B							

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Untreated treatment(s) 1 excluded from analysis.  
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^Calculated from residual.

Pest Type		W, Weed	W, Weed	W, Weed	W, Weed			
Pest Code		AMATA	SETFA	AMATA	SETFA			
Pest Name		common water he>	Giant foxtail	common water he>	Giant foxtail			
Crop Type, Code						C, GLXMA	C, GLXMA	
Crop Name						Soybean	Soybean	
Rating Date		6/21/2021	6/21/2021	7/27/2021	7/27/2021	11/16/2021	11/16/2021	
Rating Type		COUNT	COUNT	CONTRO	CONTRO	WEIGHT	MOICON	
Rating Unit/Min/Max		/m2, -, -	/m2, -, -	%, 0, 100	%, 0, 100	LB, -, -	%, 0, 100	
Number of Subsamples		1	1	1	1	1	1	
Data Entry Date		12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	
Rating Timing		28 DAA	28 DAA	28 DAB	28 DAB	HARVEST	HARVEST	
Days After First/Last Applic.		28, 28	28, 28	64, 28	64, 28	176, 140	176, 140	
Days After Emergence		20 DE-1	20 DE-1	56 DE-1	56 DE-1	168 DE-1	168 DE-1	
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl	7	8	9	10	11	12
No. Name	Rate Unit	Code						
8 AUTHORITY EDGE	7 FL OZ/A	A	0.0 -	1.5 -	100.0 -	100.0 -	5.703 bc	16.265 -
ANTHEM MAXX	3.1 FL OZ/A	B						
XTENDIMAX	22 FL OZ/A	B						
ROUNDUP POWERMAX	32 FL OZ/A	B						
VOLIMINATE	20 FL OZ/A	B						
INTACT	0.5 % V/V	B						
CLASS ACT RIDION	1 % V/V	B						
9 ZIDUA PRO	6 FL OZ/A	A	0.0 -	0.0 -	100.0 -	100.0 -	6.658 abc	15.958 -
XTENDIMAX	22 FL OZ/A	B						
ROUNDUP POWERMAX	32 FL OZ/A	B						
VOLIMINATE	20 FL OZ/A	B						
INTACT	0.5 % V/V	B						
CLASS ACT RIDION	1 % V/V	B						
10 KYBER	16 FL OZ/A	A	0.0 -	3.8 -	100.0 -	100.0 -	7.725 a	15.963 -
XTENDIMAX	22 FL OZ/A	B						
ROUNDUP POWERMAX	32 FL OZ/A	B						
VOLIMINATE	20 FL OZ/A	B						
INTACT	0.5 % V/V	B						
CLASS ACT RIDION	1 % V/V	B						
LSD P=.05				9.69			1.1117	0.9542
Standard Deviation			0.00	6.64	0.00	0.00	0.7617	0.6538
CV			0.0	161.53	0.0	0.0	12.33	4.08
Grand Mean			0.00	4.11	100.00	100.00	6.1761	16.0372
Levene's F^				1.117			1.154	4.558
Levene's Prob(F)				0.383			0.362	0.001*
Rank X2								
P(Rank X2)								
Skewness^				0.816*			0.1842	-0.9743*
Kurtosis^				2.3469*			-0.0251	6.3658*
Replicate F			0.000	2.726	0.000	0.000	7.299	0.327
Replicate Prob(F)			1.0000	0.0664	1.0000	1.0000	0.0012	0.8058
Treatment F			0.000	0.841	0.000	0.000	5.915	2.135
Treatment Prob(F)			1.0000	0.5769	1.0000	1.0000	0.0003	0.0722

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^Calculated from residual.

Pest Type			
Pest Code			
Pest Name			
Crop Type, Code			C, GLXMA
Crop Name			Soybean
Rating Date			11/16/2021
Rating Type			YIELD
Rating Unit/Min/Max			BU, -, -
Number of Subsamples			1
Data Entry Date			
Rating Timing			HARVEST
Days After First/Last Applic.			176, 140
Days After Emergence			168 DE-1
ARM Action Codes			TY1
Number of Decimals			1
Trt No.	Treatment Name	Rate Rate Unit	Appl Code
			13
1	NONTREATED		29.4
2	AUTHORITY SUPREME	8 FL OZ/A A	42.5 abc
	XTENDIMAX	22 FL OZ/A B	
	ROUNDUP POWERMAX	32 FL OZ/A B	
	VOLIMINATE	20 FL OZ/A B	
	INTACT	0.5 % V/V B	
	CLASS ACT RIDION	1 % V/V B	
3	AUTHORITY EDGE	8 FL OZ/A A	36.6 bc
	XTENDIMAX	22 FL OZ/A B	
	ROUNDUP POWERMAX	32 FL OZ/A B	
	VOLIMINATE	20 FL OZ/A B	
	INTACT	0.5 % V/V B	
	CLASS ACT RIDION	1 % V/V B	
4	AUTHORITY FIRST	6.4 OZ/A A	28.8 d
	XTENDIMAX	22 FL OZ/A B	
	ROUNDUP POWERMAX	32 FL OZ/A B	
	VOLIMINATE	20 FL OZ/A B	
	INTACT	0.5 % V/V B	
	CLASS ACT RIDION	1 % V/V B	
5	AUTHORITY SUPREME	7 FL OZ/A A	39.4 bc
	TRICOR DF	5 OZ/A A	
	XTENDIMAX	22 FL OZ/A B	
	ROUNDUP POWERMAX	32 FL OZ/A B	
	VOLIMINATE	20 FL OZ/A B	
	INTACT	0.5 % V/V B	
	CLASS ACT RIDION	1 % V/V B	
6	AUTHORITY EDGE	7 FL OZ/A A	35.6 cd
	TRICOR DF	5 OZ/A A	
	XTENDIMAX	22 FL OZ/A B	
	ROUNDUP POWERMAX	32 FL OZ/A B	
	VOLIMINATE	20 FL OZ/A B	
	INTACT	0.5 % V/V B	
	CLASS ACT RIDION	1 % V/V B	
7	AUTHORITY SUPREME	6.5 FL OZ/A A	43.1 ab
	ANTHEM MAXX	2.5 FL OZ/A B	
	XTENDIMAX	22 FL OZ/A B	
	ROUNDUP POWERMAX	32 FL OZ/A B	
	VOLIMINATE	20 FL OZ/A B	
	INTACT	0.5 % V/V B	
	CLASS ACT RIDION	1 % V/V B	

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.  
Untreated treatment(s) 1 excluded from analysis.  
Could not calculate LSD (% mean diff) for columns 3,4,5,7,9,10 because error mean square = 0.  
^Calculated from residual.



Pest Type			
Pest Code			
Pest Name			
Crop Type, Code			C, GLXMA
Crop Name			Soybean
Rating Date			11/16/2021
Rating Type			YIELD
Rating Unit/Min/Max			BU, -, -
Number of Subsamples			1
Data Entry Date			
Rating Timing			HARVEST
Days After First/Last Applic.			176, 140
Days After Emergence			168 DE-1
ARM Action Codes			TY1
Number of Decimals			1
Trt No.	Treatment Name	Rate Unit	Appl Code
			13
8	AUTHORITY EDGE	7 FL OZ/A A	36.2 bc
	ANTHEM MAXX	3.1 FL OZ/A B	
	XTENDIMAX	22 FL OZ/A B	
	ROUNDUP POWERMAX	32 FL OZ/A B	
	VOLIMINATE	20 FL OZ/A B	
	INTACT	0.5 % V/V B	
	CLASS ACT RIDION	1 % V/V B	
9	ZIDUA PRO	6 FL OZ/A A	42.5 abc
	XTENDIMAX	22 FL OZ/A B	
	ROUNDUP POWERMAX	32 FL OZ/A B	
	VOLIMINATE	20 FL OZ/A B	
	INTACT	0.5 % V/V B	
	CLASS ACT RIDION	1 % V/V B	
10	KYBER	16 FL OZ/A A	49.3 a
	XTENDIMAX	22 FL OZ/A B	
	ROUNDUP POWERMAX	32 FL OZ/A B	
	VOLIMINATE	20 FL OZ/A B	
	INTACT	0.5 % V/V B	
	CLASS ACT RIDION	1 % V/V B	
LSD P=.05			7.13
Standard Deviation			4.88
CV			12.42
Grand Mean			39.33
Levene's F^			1.137
Levene's Prob(F)			0.372
Rank X2			.
P(Rank X2)			.
Skewness^			0.2083
Kurtosis^			0.0772
Replicate F			7.411
Replicate Prob(F)			0.0011
Treatment F			5.749
Treatment Prob(F)			0.0004

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.  
Untreated treatment(s) 1 excluded from analysis.  
Could not calculate LSD (% mean diff) for columns 3,4,5,7,9,10 because error mean square = 0.  
^Calculated from residual.

# Purdue Weed Science

## Evaluating Authority Supreme/Edge and Anthem Maxx for Residual Weed Control in Soybeans

Trial ID: 21S-MGS-SOY-09	Location: MEIGS	Trial Year: 2021
Protocol ID: 21S-MGS-SOY-09	Investigator (Creator): Dr. Bill Johnson	
Project ID:	Study Director: Brent Mansfield	
	Sponsor Contact: Nicholas Hustedde - FMC	

### Pest Type

W, Weed = Weed or volunteer crop

### Pest Code

AMATA, Amaranthus x tamariscinus, common water hemp = US

SETFA, Setaria faberi, Giant foxtail = US

### Crop Type Code

C = EPP0 species (Bayer) codes

GLXMA, BSOY, Glycine max, Soybean = US

### Rating Type

PHYNEC = phytotoxicity - necrosis /burn

CONTRO = control / burndown or knockdown

COUNT = count

WEIGHT = weight

MOICON = moisture content

YIELD = yield

### Rating Unit/Min/Max

%, 0, 100 = percent

/m2, , = per square meter

LB, , = pound

BU, , = bushel

### ARM Action Codes

TY1 = 6.6\*[11]\*(100-[12])/87