

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07 Location: Meigs Trial Year: 2018
 Protocol ID: Anthem Fit Investigator: Dr. Bill Johnson
 Project ID: Study Director: Taylor Campbell
 Sponsor Contact: FMC - Nick Hustedde

General Trial Information

Study Director: Taylor Campbell
Investigator: Dr. Bill Johnson

Discipline: H herbicide
Trial Status: E established

Trial Location

City: Lafayette **Country:** USA United States
State/Prov.: Indiana
Postal Code: 47909

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Taylor Campbell
Organization: Purdue University
Address: 915 W State Street
City+State/Prov: West Lafayette, IN
Postal Code: 47907
Country: USA United States

Investigator: Dr. Bill Johnson
Organization: Purdue University
Address: 915 W State Street
City+State/Prov: West Lafayette, IN
Postal Code: 47907
Country: USA United States

Cooperator/Landowner

Cooperator: Jay Young **Role:** Superintendent
Organization: Purdue University
Address 1: 8343 US 231 S
City: Lafayette **Phone No.:** 765-538-3422
State/Prov: IN **Fax No.:** 765-538-3423
Postal Code: 47909
Country: USA United States **E-mail:** jayyoung@purdue.edu

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG30X6
Description: Xtend Roundup Ready

Planting Rate, Unit: 140000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Planting Date: 5/7/2018
Planting Method: PLANTD planted
Planting Equipment: PP plot planter
Emergence Date: 5/12/2018

Harvested Width, Unit: 5 FT
Harvested Length, Unit: 22.5 FT
% Standard Moisture: 13

Soil Temperature, Unit: 69 F
Soil Moisture: SLIDRY slightly dry

Pest Description

Pest 1 Type: W **Code:** AMATA *Amaranthus tamariscinus*
Common Name: Common waterhemp

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 25 FT
Treated Plot Area: 166.75 FT² **Treatments:** 15
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: NOTILL no-till
Study Design: RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: MGS-S3
% Sand: 40.7 **% OM:** 2.3 **Texture:** L loam
% Silt: 38.6 **pH:** 6.5 **Soil Name:** Starks-Fincastle complex
% Clay: 20.7 **CEC:** 14.3 **Fert. Level:** G good

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07 Location: Meigs Trial Year: 2018
 Protocol ID: Anthem Fit Investigator: Dr. Bill Johnson
 Project ID: Study Director: Taylor Campbell
 Sponsor Contact: FMC - Nick Hustedde

Application Description

	A	B	C
Application Date:	5/8/2018	6/4/2018	6/4/2018
Appl. Start Time:	10:28 AM	9:56 AM	9:56 AM
Appl. Stop Time:	10:58 AM	10:27 AM	10:27 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PREMCR	POEMCR	POEMCR
Application Placement:	BROADC	BROADC	BROADC
Applied By:	M. Zimmer	M. Zimmer	M. Zimmer
Air Temperature, Unit:	74 F	68 F	68 F
% Relative Humidity:	40	60	60
Wind Velocity, Unit:	1 MPH	3 MPH	3 MPH
Wind Direction:	NE	SW	SW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	62 F	65 F	65 F
Soil Moisture:	SLIDRY	SLIWET	SLIWET
% Cloud Cover:	30	30	30

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	BBCH	BBCH	BBCH
Stage Majority, Percent:	00	13 90	13 90
Stage Minimum, Percent:		12 10	12 10
Stage Maximum, Percent:		13 90	13 90
Average Diameter, Unit:		5 IN	5 IN
Height, Unit:		9 IN	9 IN
Height Minimum, Maximum:		8 10	8 10

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMATA W	AMATA W	AMATA W
Stage Majority, Percent:	00	18 80	18 80
Stage Minimum, Percent:		15 10	15 10
Stage Maximum, Percent:		19 10	19 10
Diameter, Unit:		3 IN	3 IN
Height, Unit:		2 in	2 in
Height Minimum, Maximum:		2 3	2 3
Density, Unit:		1 FT2	1 FT2

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07 Location: Meigs Trial Year: 2018
 Protocol ID: Anthem Fit Investigator: Dr. Bill Johnson
 Project ID: Study Director: Taylor Campbell
 Sponsor Contact: FMC - Nick Hustedde

Application Equipment

	A	B	C
Appl. Equipment:	CO2 BACKPACK	CO2 BACKPACK	CO2 BACKPACK
Equipment Type:	BACCAI	BACCAI	BACCAI
Operation Pressure, Unit:	28 PSI	43 PSI	43 PSI
Nozzle Type:	XR	AIXR	AIXR
Nozzle Size:	8002	11015	11015
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Nozzles/Row:	4	4	4
Boom Length, Unit:	6.7 FT	6.7 FT	6.7 FT
Boom Height, Unit:	18 IN	25 IN	25 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	WATER		
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	945 mL	945 mL	945 mL
Propellant:	COMCO2	COMCO2	COMCO2

Date By Notes

4/24/2018 T. Campbell Burndown 32 oz of Roundup Power Max, 1 pt of 2,4-D Shredder (ester formulation), and 2.5% v/v N-Pak AMS @ 10 gpa, 30 psi, 5 mph, and 1102 AIXR nozzle on a 4 wheeler with a 20 ft boom with 20 inch spacings
 5/7/2018 T. Campbell Gramoxone sprayed morning of planting at 2 pt/a plus 1% v/v of COC @ 10 gpa, 30 psi, 5 mph, and 1102 AIXR nozzle on a 4 wheeler with a 20 ft boom with 20 inch spacings
 6/7/2018 T. Campbell Evening storm brought hail and slight damage occurred at Meigs field site.

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07	Location: Meigs	Trial Year: 2018
Protocol ID: Anthem Fit	Investigator: Dr. Bill Johnson	
Project ID:	Study Director: Taylor Campbell	
	Sponsor Contact: FMC - Nick Hustedde	

Reps: 4 Appl Code: A Plots: 6.67 by 25 feet
 Spray vol: 15 GAL/AC Mix Size: 945 mL (total for 4 plots; minimum=869.4 mL)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Appl Code	Amt to Measure	Product	Rep 1	Rep 2	Rep 3	Rep 4
2	ANTHEM MAXX	4.3	LBA/GAL	SC	3.25	fl oz/a	A	1.6	mL/mx	102	207	407	506
3	ANTHEM MAXX	4.3	LBA/GAL	SC	4	fl oz/a	A	1.969	mL/mx	103	305	404	607
4	ANTHEM MAXX TRICOR	4.3 75 %	LBA/GAL	SC DF	3.25	fl oz/a	A	1.6	mL/mx 2.831 g/mx	104	303	408	603
5	ANTHEM MAXX TRICOR	4.3 75 %	LBA/GAL	SC DF	4	fl oz/a	A	1.969	mL/mx 2.831 g/mx	105	307	504	510
6	ANTHEM MAXX	4.3	LBA/GAL	SC	3.2	fl oz/a	A	1.575	mL/mx	106	208	503	508
7	BOUNDARY	6.5	LB/GAL	EC	29	fl oz/a	A	14.27	mL/mx	107	210	501	608
8	ZIDUA PRO	4.09	LB/GAL	SC	6	fl oz/a	A	2.953	mL/mx	108	302	403	609
9	PREFIX	5.29	LB/GAL	EC	32	fl oz/a	A	15.75	mL/mx	109	308	502	601
10	OUTLOOK	6	LB/GAL	EC	14	fl oz/a	A	6.891	mL/mx	110	209	405	605
11	WARRANT	3	LB/GAL	EC	48	fl oz/a	A	23.62	mL/mx	201	310	409	602
12	TRICOR	75 %		DF	6	oz/a	A	2.831	g/mx	202	309	406	509
13	AUTHORITY FIRST	70 %		DF	6.4	oz/a	A	3.02	g/mx	203	206	410	604
14	ANTHEM MAXX	4.3	LBA/GAL	SC	3.2	fl oz/a	A	1.575	mL/mx	204	301	402	507
15	ANTHEM MAXX TRICOR	4.3 75 %	LBA/GAL	SC DF	3.2	fl oz/a	A	1.575	mL/mx 2.831 g/mx	205	306	505	606

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07	Location: Meigs	Trial Year: 2018
Protocol ID: Anthem Fit	Investigator: Dr. Bill Johnson	
Project ID:	Study Director: Taylor Campbell	
	Sponsor Contact: FMC - Nick Hustedde	

Reps: 4 Appl Code: B Plots: 6.67 by 25 feet
 Spray vol: 15 GAL/AC Mix Size: 945 mL (total for 4 plots; minimum=869.4 mL)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Appl Unit	Appl Code	Amt Product to Measure	Rep			
									1	2	3	4
6	ANTHEM MAXX	4.3	LBA/GAL	SC	2.5	fl oz/a	B	1.23 mL/mx	106	208	503	508
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	32	fl oz/a	B	15.75 mL/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	B	23.62 mL/mx				
14	PREFIX	5.29	LB/GAL	EC	32	fl oz/a	B	15.75 mL/mx	204	301	402	507
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	32	fl oz/a	B	15.75 mL/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	B	23.62 mL/mx				
15	PREFIX	5.29	LB/GAL	EC	32	fl oz/a	B	15.75 mL/mx	205	306	505	606
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	32	fl oz/a	B	15.75 mL/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	B	23.62 mL/mx				

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07	Location: Meigs	Trial Year: 2018
Protocol ID: Anthem Fit	Investigator: Dr. Bill Johnson	
Project ID:	Study Director: Taylor Campbell	
	Sponsor Contact: FMC - Nick Hustedde	

Reps: 4 Appl Code: C Plots: 6.67 by 25 feet
 Spray vol: 15 GAL/AC Mix Size: 945 mL (total for 4 plots; minimum=869.4 mL)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Appl Code	Amt to Measure	Product	Rep 1	Rep 2	Rep 3	Rep 4
2	ROUNDUP POWERMAX N-PAK	4.5 LBAE/GAL	3.4 LBA/GAL	SL L	32 fl oz/a	2.5 % v/v	C	15.75 mL/mx	23.62 mL/mx	102	207	407	506
3	ROUNDUP POWERMAX N-PAK	4.5 LBAE/GAL	3.4 LBA/GAL	SL L	32 fl oz/a	2.5 % v/v	C	15.75 mL/mx	23.62 mL/mx	103	305	404	607
4	ROUNDUP POWERMAX N-PAK	4.5 LBAE/GAL	3.4 LBA/GAL	SL L	32 fl oz/a	2.5 % v/v	C	15.75 mL/mx	23.62 mL/mx	104	303	408	603
5	ROUNDUP POWERMAX N-PAK	4.5 LBAE/GAL	3.4 LBA/GAL	SL L	32 fl oz/a	2.5 % v/v	C	15.75 mL/mx	23.62 mL/mx	105	307	504	510
7	ROUNDUP POWERMAX N-PAK	4.5 LBAE/GAL	3.4 LBA/GAL	SL L	32 fl oz/a	2.5 % v/v	C	15.75 mL/mx	23.62 mL/mx	107	210	501	608
8	ROUNDUP POWERMAX N-PAK	4.5 LBAE/GAL	3.4 LBA/GAL	SL L	32 fl oz/a	2.5 % v/v	C	15.75 mL/mx	23.62 mL/mx	108	302	403	609
9	ROUNDUP POWERMAX N-PAK	4.5 LBAE/GAL	3.4 LBA/GAL	SL L	32 fl oz/a	2.5 % v/v	C	15.75 mL/mx	23.62 mL/mx	109	308	502	601
10	ROUNDUP POWERMAX N-PAK	4.5 LBAE/GAL	3.4 LBA/GAL	SL L	32 fl oz/a	2.5 % v/v	C	15.75 mL/mx	23.62 mL/mx	110	209	405	605
11	ROUNDUP POWERMAX N-PAK	4.5 LBAE/GAL	3.4 LBA/GAL	SL L	32 fl oz/a	2.5 % v/v	C	15.75 mL/mx	23.62 mL/mx	201	310	409	602
12	ROUNDUP POWERMAX N-PAK	4.5 LBAE/GAL	3.4 LBA/GAL	SL L	32 fl oz/a	2.5 % v/v	C	15.75 mL/mx	23.62 mL/mx	202	309	406	509
13	ROUNDUP POWERMAX N-PAK	4.5 LBAE/GAL	3.4 LBA/GAL	SL L	32 fl oz/a	2.5 % v/v	C	15.75 mL/mx	23.62 mL/mx	203	206	410	604

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07	Location: Meigs	Trial Year: 2018
Protocol ID: Anthem Fit	Investigator: Dr. Bill Johnson	
Project ID:	Study Director: Taylor Campbell	
	Sponsor Contact: FMC - Nick Hustedde	

Reps: 4 Appl Code: _ Plots: 6.67 by 25 feet
 Spray vol: 15 GAL/AC Mix Size: 945 mL (total for 4 plots; minimum=869.4 mL)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Appl Unit	Code	Amt Product to Measure	Rep						
									1	2	3	4			
1	UNTREATED							101	304	401	610				

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Unit	Form Type	Lot Code
16.365	mL	ANTHEM MAXX	4.3	LBA/GAL	SC	
275.625	mL	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	
413.393	mL	N-PAK	3.4	LBA/GAL	L	
14.154	g	TRICOR	75	%	DF	
17.842	mL	BOUNDARY	6.5	LB/GAL	EC	
3.691	mL	ZIDUA PRO	4.09	LB/GAL	SC	
59.062	mL	PREFIX	5.29	LB/GAL	EC	
8.613	mL	OUTLOOK	6	LB/GAL	EC	
29.531	mL	WARRANT	3	LB/GAL	EC	
3.775	g	AUTHORITY FIRST	70	%	DF	

* 'Per area' calculations based on spray volume= 15 GAL/AC, mix size= 945 mL (mix size basis).

* Product amount calculations increased 25 % for overage adjustment.

* 'Per volume' calculations use spray volume= 15 GAL/AC, mix size= 945 mL.

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07 Location: Meigs Trial Year: 2018
 Protocol ID: Anthem Fit Investigator: Dr. Bill Johnson
 Project ID: Study Director: Taylor Campbell
 Sponsor Contact: FMC - Nick Hustedde

Pest Type		W Weed		W Weed	
Pest Code		AMATA		AMATA	
Pest Name		Common waterhe>		Common waterhe>	
Crop Code	GLXMA		GLXMA		GLXMA
Crop Name	Soybean		Soybean		Soybean
Part Rated	PLOT C	PLOT P	PLOT C	PLOT P	PLOT C
Rating Date	5/22/2018	5/22/2018	6/4/2018	6/4/2018	6/19/2018
Rating Type	PHYGEN	CONTRO	PHYGEN	CONTRO	PHYGEN
Rating Unit	%	%	%	%	%
Number of Subsamples Assessed By	1 T. Campbell	1 T. Campbell	1 T. Campbell	1 T. Campbell	1 T. Campbell
Days After First/Last Applic.	14 14	14 14	27 27	27 27	42 15
Trt-Eval Interval	14 DA-A	14 DA-A	27 DA-A	27 DA-A	15 DA-C
Days After Emergence	10 DE-1	10 DE-1	23 DE-1	23 DE-1	38 DE-1
ARM Action Codes					
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
1 UNTREATED			0	0	0
2 ANTHEM MAXX	3.25 fl oz/a A		0 -	100 a	0 -
ROUNDUP POWERMAX	32 fl oz/a C				88 de
N-PAK	2.5 % v/v C				0 -
3 ANTHEM MAXX	4 fl oz/a A		0 -	100 a	0 -
ROUNDUP POWERMAX	32 fl oz/a C				95 abc
N-PAK	2.5 % v/v C				0 -
4 ANTHEM MAXX	3.25 fl oz/a A		0 -	100 a	0 -
TRICOR	6 oz/a A				98 ab
ROUNDUP POWERMAX	32 fl oz/a C				0 -
N-PAK	2.5 % v/v C				
5 ANTHEM MAXX	4 fl oz/a A		0 -	100 a	0 -
TRICOR	6 oz/a A				99 ab
ROUNDUP POWERMAX	32 fl oz/a C				0 -
N-PAK	2.5 % v/v C				
6 ANTHEM MAXX	3.2 fl oz/a A		0 -	100 a	0 -
ANTHEM MAXX	2.5 fl oz/a B				84 e
ROUNDUP POWERMAX	32 fl oz/a B				0 -
N-PAK	2.5 % v/v B				
7 BOUNDARY	29 fl oz/a A		0 -	100 a	0 -
ROUNDUP POWERMAX	32 fl oz/a C				100 a
N-PAK	2.5 % v/v C				0 -
8 ZIDUA PRO	6 fl oz/a A		0 -	100 a	0 -
ROUNDUP POWERMAX	32 fl oz/a C				96 abc
N-PAK	2.5 % v/v C				0 -
9 PREFIX	32 fl oz/a A		0 -	100 a	0 -
ROUNDUP POWERMAX	32 fl oz/a C				94 a-d
N-PAK	2.5 % v/v C				0 -
10 OUTLOOK	14 fl oz/a A		0 -	100 a	0 -
ROUNDUP POWERMAX	32 fl oz/a C				95 a-d
N-PAK	2.5 % v/v C				0 -
11 WARRANT	48 fl oz/a A		0 -	100 a	0 -
ROUNDUP POWERMAX	32 fl oz/a C				99 ab
N-PAK	2.5 % v/v C				0 -
12 TRICOR	6 oz/a A		0 -	100 a	0 -
ROUNDUP POWERMAX	32 fl oz/a C				92 bcd
N-PAK	2.5 % v/v C				0 -
13 AUTHORITY FIRST	6.4 oz/a A		0 -	100 a	0 -
ROUNDUP POWERMAX	32 fl oz/a C				97 ab
N-PAK	2.5 % v/v C				0 -

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 1,3,5 because error mean square = 0.

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07 Location: Meigs Trial Year: 2018
 Protocol ID: Anthem Fit Investigator: Dr. Bill Johnson
 Project ID: Study Director: Taylor Campbell
 Sponsor Contact: FMC - Nick Hustedde

Pest Type		W Weed		W Weed	
Pest Code		AMATA		AMATA	
Pest Name		Common waterhe>		Common waterhe>	
Crop Code	GLXMA		GLXMA		GLXMA
Crop Name	Soybean		Soybean		Soybean
Part Rated	PLOT C	PLOT P	PLOT C	PLOT P	PLOT C
Rating Date	5/22/2018	5/22/2018	6/4/2018	6/4/2018	6/19/2018
Rating Type	PHYGEN	CONTRO	PHYGEN	CONTRO	PHYGEN
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Assessed By	T. Campbell	T. Campbell	T. Campbell	T. Campbell	T. Campbell
Days After First/Last Applic.	14 14	14 14	27 27	27 27	42 15
Trt-Eval Interval	14 DA-A	14 DA-A	27 DA-A	27 DA-A	15 DA-C
Days After Emergence	10 DE-1	10 DE-1	23 DE-1	23 DE-1	38 DE-1
ARM Action Codes					
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
14 ANTHEM MAXX	3.2 fl oz/a A		0 -	99 b	0 -
PREFIX	32 fl oz/a B				90 cde
ROUNDUP POWERMAX	32 fl oz/a B				
N-PAK	2.5 % v/v B				0 -
15 ANTHEM MAXX	3.2 fl oz/a A		0 -	100 a	0 -
TRICOR	6 oz/a A				96 abc
PREFIX	32 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
N-PAK	2.5 % v/v B				0 -
LSD P=.05	.		0.4	.	6.7
Standard Deviation	0.0		0.3	0.0	4.7
CV	0.0		0.29	0.0	4.93
Levene's F	0.00		4.769	0.00	0.809
Levene's Prob(F)	0.00*		0.001*	0.00*	0.647
Skewness	.		-4.9294*	.	-1.5828*
Kurtosis	.		25.6132*	.	2.6937*
Replicate F	0.000		1.156	0.000	0.481
Replicate Prob(F)	1.0000		0.3390	1.0000	0.6976
Treatment F	0.000		2.067	0.000	3.780
Treatment Prob(F)	1.0000		0.0403	1.0000	0.0006

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 1,3,5 because error mean square = 0.

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07 Location: Meigs Trial Year: 2018
 Protocol ID: Anthem Fit Investigator: Dr. Bill Johnson
 Project ID: Study Director: Taylor Campbell
 Sponsor Contact: FMC - Nick Hustedde

Pest Type	W Weed	W Weed	W Weed		
Pest Code	AMATA	AMATA	AMATA		
Pest Name	Common waterhe>	Common waterhe>	Common waterhe>		
Crop Code				GLXMA	GLXMA
Crop Name				Soybean	Soybean
Part Rated				PLOT C	PLOT C
Rating Date	PLOT P	PLOT P	PLOT P	10/18/2018	10/18/2018
Rating Type	6/19/2018	7/2/2018	8/2/2018	YIELD	MOICON
Rating Unit	CONTRO	CONTRO	CONTRO	lb/plot	%
Number of Subsamples	%	%	%	1	1
Assessed By	1	1	1	T. Campbell	T. Campbell
Days After First/Last Applic.	T. Campbell	T. Campbell	T. Campbell	T. Campbell	T. Campbell
Trt-Eval Interval	42 15	55 28	86 59	163 136	163 136
Days After Emergence	15 DA-C	28 DA-C	59 DA-C	159 DE-1	159 DE-1
ARM Action Codes	38 DE-1	51 DE-1	82 DE-1		
Number of Decimals	0	0	0	1	1
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	6	7	8
1 UNTREATED			0	0	0
2 ANTHEM MAXX	3.25 fl oz/a A		76 bc	71 cd	71 cd
ROUNDUP POWERMAX	32 fl oz/a C				
N-PAK	2.5 % v/v C				
3 ANTHEM MAXX	4 fl oz/a A		82 abc	71 cd	70 cd
ROUNDUP POWERMAX	32 fl oz/a C				
N-PAK	2.5 % v/v C				
4 ANTHEM MAXX	3.25 fl oz/a A		85 ab	79 bcd	76 bcd
TRICOR	6 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a C				
N-PAK	2.5 % v/v C				
5 ANTHEM MAXX	4 fl oz/a A		89 ab	84 abc	84 abc
TRICOR	6 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a C				
N-PAK	2.5 % v/v C				
6 ANTHEM MAXX	3.2 fl oz/a A		86 ab	85 abc	84 abc
ANTHEM MAXX	2.5 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
N-PAK	2.5 % v/v B				
7 BOUNDARY	29 fl oz/a A		68 cd	65 d	65 de
ROUNDUP POWERMAX	32 fl oz/a C				
N-PAK	2.5 % v/v C				
8 ZIDUA PRO	6 fl oz/a A		86 ab	85 abc	84 abc
ROUNDUP POWERMAX	32 fl oz/a C				
N-PAK	2.5 % v/v C				
9 PREFIX	32 fl oz/a A		95 a	93 ab	92 ab
ROUNDUP POWERMAX	32 fl oz/a C				
N-PAK	2.5 % v/v C				
10 OUTLOOK	14 fl oz/a A		58 de	50 e	51 ef
ROUNDUP POWERMAX	32 fl oz/a C				
N-PAK	2.5 % v/v C				
11 WARRANT	48 fl oz/a A		96 a	93 ab	91 ab
ROUNDUP POWERMAX	32 fl oz/a C				
N-PAK	2.5 % v/v C				
12 TRICOR	6 oz/a A		49 e	39 e	39 f
ROUNDUP POWERMAX	32 fl oz/a C				
N-PAK	2.5 % v/v C				
13 AUTHORITY FIRST	6.4 oz/a A		92 a	91 ab	88 ab
ROUNDUP POWERMAX	32 fl oz/a C				
N-PAK	2.5 % v/v C				

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 1,3,5 because error mean square = 0.

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07 Location: Meigs Trial Year: 2018
 Protocol ID: Anthem Fit Investigator: Dr. Bill Johnson
 Project ID: Study Director: Taylor Campbell
 Sponsor Contact: FMC - Nick Hustedde

Pest Type	W Weed	W Weed	W Weed		
Pest Code	AMATA	AMATA	AMATA		
Pest Name	Common waterhe>	Common waterhe>	Common waterhe>		
Crop Code				GLXMA	GLXMA
Crop Name				Soybean	Soybean
Part Rated				PLOT C	PLOT C
Rating Date	PLOT P	PLOT P	PLOT P	10/18/2018	10/18/2018
Rating Type	6/19/2018	7/2/2018	8/2/2018	YIELD	MOICON
Rating Unit	CONTRO	CONTRO	CONTRO	lb/plot	%
Number of Subsamples	%	%	%	1	1
Assessed By	1	1	1	T. Campbell	T. Campbell
Days After First/Last Applic.	T. Campbell	T. Campbell	T. Campbell	T. Campbell	T. Campbell
Trt-Eval Interval	42 15	55 28	86 59	163 136	163 136
Days After Emergence	15 DA-C	28 DA-C	59 DA-C	159 DE-1	159 DE-1
ARM Action Codes	38 DE-1	51 DE-1	82 DE-1		
Number of Decimals	0	0	0	1	1
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	6	7	8
14 ANTHEM MAXX	3.2 fl oz/a A		92 a	91 ab	89 ab
PREFIX	32 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
N-PAK	2.5 % v/v B				
15 ANTHEM MAXX	3.2 fl oz/a A		97 a	94 a	92 a
TRICOR	6 oz/a A				
PREFIX	32 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
N-PAK	2.5 % v/v B				
LSD P=.05	14.8	14.9	15.4	1.32	0.77
Standard Deviation	10.4	10.4	10.8	0.93	0.54
CV	12.65	13.38	14.07	23.53	3.9
Levene's F	2.199	4.148	4.42	1.042	0.695
Levene's Prob(F)	0.027*	0.001*	0.001*	0.432	0.757
Skewness	-1.2303*	-1.3701*	-1.3886*	0.4155	-0.2777
Kurtosis	0.9071	1.3468*	1.4589*	-0.5739	6.6544*
Replicate F	1.607	0.607	0.669	34.238	5.470
Replicate Prob(F)	0.2034	0.6144	0.5762	0.0001	0.0031
Treatment F	8.006	10.604	8.899	0.928	2.309
Treatment Prob(F)	0.0001	0.0001	0.0001	0.5343	0.0220

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 1,3,5 because error mean square = 0.

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07	Location: Meigs	Trial Year: 2018
Protocol ID: Anthem Fit	Investigator: Dr. Bill Johnson	
Project ID:	Study Director: Taylor Campbell	
	Sponsor Contact: FMC - Nick Hustedde	

Pest Type			
Pest Code			
Pest Name			
Crop Code		GLXMA	
Crop Name		Soybean	
Part Rated		PLOT C	
Rating Date		10/18/2018	
Rating Type		YIELD	
Rating Unit		BU	
Number of Subsamples		1	
Assessed By		T. Campbell	
Days After First/Last Applic.		163 136	
Trt-Eval Interval			
Days After Emergence		159 DE-1	
ARM Action Codes		TY1	
Number of Decimals		1	
Trt Treatment No. Name	Rate	Appl Code	
	Rate Unit		11
1 UNTREATED			21.9
2 ANTHEM MAXX	3.25 fl oz/a A		19.6 -
ROUNDUP POWERMAX	32 fl oz/a C		
N-PAK	2.5 % v/v C		
3 ANTHEM MAXX	4 fl oz/a A		26.8 -
ROUNDUP POWERMAX	32 fl oz/a C		
N-PAK	2.5 % v/v C		
4 ANTHEM MAXX	3.25 fl oz/a A		29.5 -
TRICOR	6 oz/a A		
ROUNDUP POWERMAX	32 fl oz/a C		
N-PAK	2.5 % v/v C		
5 ANTHEM MAXX	4 fl oz/a A		26.2 -
TRICOR	6 oz/a A		
ROUNDUP POWERMAX	32 fl oz/a C		
N-PAK	2.5 % v/v C		
6 ANTHEM MAXX	3.2 fl oz/a A		29.5 -
ANTHEM MAXX	2.5 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
N-PAK	2.5 % v/v B		
7 BOUNDARY	29 fl oz/a A		22.2 -
ROUNDUP POWERMAX	32 fl oz/a C		
N-PAK	2.5 % v/v C		
8 ZIDUA PRO	6 fl oz/a A		24.7 -
ROUNDUP POWERMAX	32 fl oz/a C		
N-PAK	2.5 % v/v C		
9 PREFIX	32 fl oz/a A		25.8 -
ROUNDUP POWERMAX	32 fl oz/a C		
N-PAK	2.5 % v/v C		
10 OUTLOOK	14 fl oz/a A		24.8 -
ROUNDUP POWERMAX	32 fl oz/a C		
N-PAK	2.5 % v/v C		
11 WARRANT	48 fl oz/a A		27.5 -
ROUNDUP POWERMAX	32 fl oz/a C		
N-PAK	2.5 % v/v C		
12 TRICOR	6 oz/a A		24.1 -
ROUNDUP POWERMAX	32 fl oz/a C		
N-PAK	2.5 % v/v C		
13 AUTHORITY FIRST	6.4 oz/a A		24.4 -
ROUNDUP POWERMAX	32 fl oz/a C		
N-PAK	2.5 % v/v C		

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 1,3,5 because error mean square = 0.

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07	Location: Meigs	Trial Year: 2018
Protocol ID: Anthem Fit	Investigator: Dr. Bill Johnson	
Project ID:	Study Director: Taylor Campbell	
	Sponsor Contact: FMC - Nick Hustedde	

Pest Type			
Pest Code			
Pest Name			
Crop Code		GLXMA	
Crop Name		Soybean	
Part Rated		PLOT C	
Rating Date		10/18/2018	
Rating Type		YIELD	
Rating Unit		BU	
Number of Subsamples		1	
Assessed By		T. Campbell	
Days After First/Last Applic.		163	136
Trt-Eval Interval			
Days After Emergence		159	DE-1
ARM Action Codes			TY1
Number of Decimals			1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	11
14 ANTHEM MAXX	3.2 fl oz/a A		21.7 -
PREFIX	32 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
N-PAK	2.5 % v/v B		
15 ANTHEM MAXX	3.2 fl oz/a A		24.9 -
TRICOR	6 oz/a A		
PREFIX	32 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
N-PAK	2.5 % v/v B		
LSD P=.05			8.44
Standard Deviation			5.90
CV			23.47
Levene's F			1.058
Levene's Prob(F)			0.419
Skewness			0.4015
Kurtosis			-0.5629
Replicate F			33.910
Replicate Prob(F)			0.0001
Treatment F			0.887
Treatment Prob(F)			0.5724

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 1,3,5 because error mean square = 0.

Purdue Weed Science

Anthem Maxx Efficacy vs. Competitive Treatments

Trial ID: 18S-MGS-Soy-07	Location: Meigs	Trial Year: 2018
Protocol ID: Anthem Fit	Investigator: Dr. Bill Johnson	
Project ID:	Study Director: Taylor Campbell	
	Sponsor Contact: FMC - Nick Hustedde	

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

AMATA, Amaranthus tamariscinus, Common waterhemp = US

Crop Code

GLXMA, BSOY, Glycine max, Soybean = US

Part Rated

PLOT = plot

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

YIELD = yield

MOICON = moisture content

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = $6.453333^{*}[9]^{*}(100-[10])/87$