

University of Wisconsin-Madison
Weed Science Program

Anthem Authority Overlap
(FMC)

Trial ID: 15-ARL-SB06, **Location:** Arlington, WI

Site and Design:

A. Treated plot width: 10 FT
B. Treated plot length: 28 FT

C. Tillage type: conventional till
D. Study design: Randomized Complete Block 4 reps

Planting Date: 5/19/15

Application Description:

	A	B	C
Application Date:	5/20/2015	6/23/2015	7/1/2015
Type of Application	PRE	POST	POST
Crop Stage	-	V3	V6
Avg Weed Height	-	2-5"	1.5-7"
Days until Precipitation	4	2	5
Air Temperature, Unit:	52 F	71 F	62 F
% Relative Humidity:	57	53	54
Wind Velocity, Unit:	2 MPH	8.5 MPH	5 MPH
Soil Temperature, Unit:	51 F	70 F	62 F
% Cloud Cover:	100	0	5

Application Equipment:

	A	B	C
Appl. Equipment:	CO2 Backpack	CO2 Backpack	CO2 Backpack
Operating Pressure, Unit:	25 PSI	25 PSI	25 PSI
Nozzle Type:	Flat Fan	Flat Fan	Flat Fan
Nozzle Size:	11002	11002	11002
Boom Length, Unit:	10 FT	10 FT	10 FT
Boom Height, Unit:	15 IN	15 IN	15 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	1.89 L	1.89 L	1.89 L

HOW DATA WERE SUMMARIZED: Weed control, crop injury and yield were averaged among the 4 replications and values are provided in the tables. As variability in performance/safety can occur among replications we have provided standard deviations for each average. The standard deviation should be considered when comparing means among treatments as this provides users with an idea of how variable the response was observed in the field.

Pest Name					velvetleaf	Common dandelion	velvetleaf	Common dandelion	Lambsquarters	RR pigweed
Rating Date					6/2	6/2	6/23	6/23	6/23	6/23
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl
Days After First/Last Applic.					13 13	13 13	34 34	34 34	34 34	34 34
trt #	Treatment name	Rate	Rate Unit	appl.						
1	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	100	100	100
	ROUNDUP POWERMAX	32	oz/a	C	stdev	0	1	0	0	0
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
2	AUTHORITY FIRST DF	5	oz/a	A	avg	100	98	100	95	100
	MARVEL	6	oz/a	C	stdev	0	1	0	4	0
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
3	AUTHORITY FIRST DF	5	oz/a	A	avg	100	99	100	97	100
	ANTHEM MAXX (ANTHEM SC)	2.5	oz/a	B	stdev	0	1	0	4	0
	ROUNDUP POWERMAX	32	oz/a	B						
	AMMONIUM SULFATE	8.5	lb/100 gal	B						
4	AUTHORITY ELITE	24	oz/a	A	avg	100	98	97	89	100
	MARVEL	6	oz/a	C	stdev	0	4	4	8	0
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
5	AUTHORITY ELITE	24	oz/a	A	avg	100	100	94	86	100
	ANTHEM MAXX (ANTHEM SC)	2.5	oz/a	B	stdev	0	1	8	5	1
	ROUNDUP POWERMAX	32	oz/a	B						
	AMMONIUM SULFATE	8.5	lb/100 gal	B						
6	AUTHORITY MTZ	12	oz/a	A	avg	100	99	97	85	100
	MARVEL	6	oz/a	C	stdev	0	1	7	6	0
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
7	AUTHORITY MTZ	12	oz/a	A	avg	100	99	97	87	100
	ANTHEM MAXX (ANTHEM SC)	2.5	oz/a	B	stdev	0	1	6	3	0
	ROUNDUP POWERMAX	32	oz/a	B						
	AMMONIUM SULFATE	8.5	lb/100 gal	B						
8	FIERCE	3	oz/a	A	avg	100	100	100	95	100
	COBRA	10	oz/a	C	stdev	0	1	0	4	0
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
9	ANTHEM MAXX (ANTHEM SC)	4	oz/a	B	avg	0	0	0	0	0
	ROUNDUP POWERMAX	32	oz/a	B	stdev	0	0	0	0	0
	AMMONIUM SULFATE	8.5	lb/100 gal	B						
10	NON-TREATED CHECK				avg	0	0	0	0	0
					stdev					

Pest Name					Ladyshumb	Giant foxtail	Common ragweed	Common dandelion	Lambsquarters	Common ragweed
Rating Date					6/23	6/23	6/23	7/14	7/14	7/14
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl
Days After First/Last Applic.					34 34	34 34	34 34	55 13	55 13	55 13
trt #	Treatment name	Rate	Rate Unit	appl.						
1	AUTHORITY FIRST DF	5 oz/a		A	avg	100	93	100	100	100
	ROUNDUP POWERMAX	32 oz/a		C	stdev	0	7	0	0	0
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
2	AUTHORITY FIRST DF	5 oz/a		A	avg	100	80	100	100	100
	MARVEL	6 oz/a		C	stdev	0	22	0	1	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
3	AUTHORITY FIRST DF	5 oz/a		A	avg	100	85	100	100	100
	ANTHEM MAXX (ANTHEM SC)	2.5 oz/a		B	stdev	0	18	0	1	0
	ROUNDUP POWERMAX	32 oz/a		B						
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
4	AUTHORITY ELITE	24 oz/a		A	avg	97	99	94	99	100
	MARVEL	6 oz/a		C	stdev	7	3	7	2	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
5	AUTHORITY ELITE	24 oz/a		A	avg	98	98	96	100	100
	ANTHEM MAXX (ANTHEM SC)	2.5 oz/a		B	stdev	5	5	5	0	0
	ROUNDUP POWERMAX	32 oz/a		B						
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
6	AUTHORITY MTZ	12 oz/a		A	avg	99	83	97	99	100
	MARVEL	6 oz/a		C	stdev	3	3	7	1	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
7	AUTHORITY MTZ	12 oz/a		A	avg	100	81	93	99	100
	ANTHEM MAXX (ANTHEM SC)	2.5 oz/a		B	stdev	0	12	5	1	1
	ROUNDUP POWERMAX	32 oz/a		B						
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
8	FIERCE	3 oz/a		A	avg	100	95	100	100	100
	COBRA	10 oz/a		C	stdev	0	5	0	0	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
9	ANTHEM MAXX (ANTHEM SC)	4 oz/a		B	avg	0	0	0	98	100
	ROUNDUP POWERMAX	32 oz/a		B	stdev	0	0	0	4	0
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
10	NON-TREATED CHECK				avg	0	0	0	0	0
					stdev					

Pest Name					velvetleaf	Shepherd's purse	Giant foxtail	RR pigweed	Lady'sthumb	Lambquarters
Rating Date					7/14	7/14	7/14	7/14	7/14	7/30
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl
Days After First/Last Applic.					55 13	55 13	55 13	55 13	55 13	71 29
trt #	Treatment name	Rate	Rate Unit	appl.						
1	AUTHORITY FIRST DF	5 oz/a		A	avg	100	100	100	100	100
	ROUNDUP POWERMAX	32 oz/a		C	stdev	0	0	0	0	0
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
2	AUTHORITY FIRST DF	5 oz/a		A	avg	100	100	100	100	100
	MARVEL	6 oz/a		C	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
3	AUTHORITY FIRST DF	5 oz/a		A	avg	100	100	100	100	100
	ANTHEM MAXX (ANTHEM SC)	2.5 oz/a		B	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		B						
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
4	AUTHORITY ELITE	24 oz/a		A	avg	100	100	100	100	100
	MARVEL	6 oz/a		C	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
5	AUTHORITY ELITE	24 oz/a		A	avg	100	100	100	100	100
	ANTHEM MAXX (ANTHEM SC)	2.5 oz/a		B	stdev	0	0	1	0	0
	ROUNDUP POWERMAX	32 oz/a		B						
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
6	AUTHORITY MTZ	12 oz/a		A	avg	100	100	100	100	100
	MARVEL	6 oz/a		C	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
7	AUTHORITY MTZ	12 oz/a		A	avg	100	100	100	100	100
	ANTHEM MAXX (ANTHEM SC)	2.5 oz/a		B	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		B						
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
8	FIERCE	3 oz/a		A	avg	100	100	100	100	100
	COBRA	10 oz/a		C	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
9	ANTHEM MAXX (ANTHEM SC)	4 oz/a		B	avg	100	100	99	100	100
	ROUNDUP POWERMAX	32 oz/a		B	stdev	1	0	1	0	0
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
10	NON-TREATED CHECK				avg	0	0	0	0	0
					stdev					

Pest Name					Common dandelion	Common ragweed	Ladyshrub	velvetleaf	RR pigweed	Giant foxtail
Rating Date					7/30	7/30	7/30	7/30	7/30	7/30
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl
Days After First/Last Applic.					71 29	71 29	71 29	71 29	71 29	71 29
trt #	Treatment name	Rate	Rate Unit	appl.						
1	AUTHORITY FIRST DF	5 oz/a		A	avg	100	100	100	100	100
	ROUNDUP POWERMAX	32 oz/a		C	stdev	0	0	0	0	0
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
2	AUTHORITY FIRST DF	5 oz/a		A	avg	100	100	100	100	100
	MARVEL	6 oz/a		C	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
3	AUTHORITY FIRST DF	5 oz/a		A	avg	100	100	100	100	100
	ANTHEM MAXX (ANTHEM SC)	2.5 oz/a		B	stdev	1	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		B						
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
4	AUTHORITY ELITE	24 oz/a		A	avg	100	100	100	100	100
	MARVEL	6 oz/a		C	stdev	1	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
5	AUTHORITY ELITE	24 oz/a		A	avg	99	100	100	100	100
	ANTHEM MAXX (ANTHEM SC)	2.5 oz/a		B	stdev	3	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		B						
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
6	AUTHORITY MTZ	12 oz/a		A	avg	97	100	100	100	100
	MARVEL	6 oz/a		C	stdev	2	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
7	AUTHORITY MTZ	12 oz/a		A	avg	99	100	100	100	99
	ANTHEM MAXX (ANTHEM SC)	2.5 oz/a		B	stdev	3	0	0	0	3
	ROUNDUP POWERMAX	32 oz/a		B						
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
8	FIERCE	3 oz/a		A	avg	100	100	100	100	100
	COBRA	10 oz/a		C	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32 oz/a		C						
	AMMONIUM SULFATE	8.5 lb/100 gal		C						
9	ANTHEM MAXX (ANTHEM SC)	4 oz/a		B	avg	95	100	100	100	99
	ROUNDUP POWERMAX	32 oz/a		B	stdev	4	0	0	1	3
	AMMONIUM SULFATE	8.5 lb/100 gal		B						
10	NON-TREATED CHECK				avg	0	0	0	0	0
					stdev					

Pest Name					Shepherd's purse	Lambsquartars	RR pigweed	Lady'sthumb	Common ragweed	Giart foxtail
Rating Date					7/30	9/30	9/30	9/30	9/30	9/30
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl
Days After First/Last Applic.					71 29	133 91	133 91	133 91	133 91	133 91
trt #	Treatment name	Rate	Rate Unit	appl.						
1	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	100	100	100
	ROUNDUP POWERMAX	32	oz/a	C	stdev	0	0	0	0	0
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
2	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	100	100	100
	MARVEL	6	oz/a	C	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
3	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	100	100	100
	ANTHEM MAXX (ANTHEM SC)	2.5	oz/a	B	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32	oz/a	B						
	AMMONIUM SULFATE	8.5	lb/100 gal	B						
4	AUTHORITY ELITE	24	oz/a	A	avg	100	100	100	100	100
	MARVEL	6	oz/a	C	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
5	AUTHORITY ELITE	24	oz/a	A	avg	100	100	100	100	100
	ANTHEM MAXX (ANTHEM SC)	2.5	oz/a	B	stdev	0	0	0	0	0
	ROUNDUP POWERMAX	32	oz/a	B						
	AMMONIUM SULFATE	8.5	lb/100 gal	B						
6	AUTHORITY MTZ	12	oz/a	A	avg	100	100	100	100	100
	MARVEL	6	oz/a	C	stdev	0	0	0	1	0
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
7	AUTHORITY MTZ	12	oz/a	A	avg	100	100	100	100	100
	ANTHEM MAXX (ANTHEM SC)	2.5	oz/a	B	stdev	0	0	0	0	1
	ROUNDUP POWERMAX	32	oz/a	B						
	AMMONIUM SULFATE	8.5	lb/100 gal	B						
8	FIERCE	3	oz/a	A	avg	100	100	100	100	100
	COBRA	10	oz/a	C	stdev	0	0	0	0	1
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
9	ANTHEM MAXX (ANTHEM SC)	4	oz/a	B	avg	100	100	100	100	100
	ROUNDUP POWERMAX	32	oz/a	B	stdev	0	1	1	1	0
	AMMONIUM SULFATE	8.5	lb/100 gal	B						
10	NON-TREATED CHECK				avg	0	0	0	0	0
					stdev					

Pest Name					Common dandelion	E. black nightshade	large crabgrass		
Rating Date					9/30	9/30	9/30	10/19	
Rating Type					% cntrl	% cntrl	% cntrl	YIELD Bu/A	
Days After First/Last Applic.					133 91	133 91	133 91	152 110	
trt #	Treatment name	Rate	Rate Unit	appl.					
1	AUTHORITY FIRST DF	5	oz/a	A	avg	99	100	100	56
	ROUNDUP POWERMAX	32	oz/a	C	stdev	1	0	0	3
	AMMONIUM SULFATE	8.5	lb/100 gal	C					
2	AUTHORITY FIRST DF	5	oz/a	A	avg	99	100	100	55
	MARVEL	6	oz/a	C	stdev	1	0	1	3
	ROUNDUP POWERMAX	32	oz/a	C					
	AMMONIUM SULFATE	8.5	lb/100 gal	C					
3	AUTHORITY FIRST DF	5	oz/a	A	avg	99	100	100	54
	ANTHEM MAXX (ANTHEM SC)	2.5	oz/a	B	stdev	1	0	0	3
	ROUNDUP POWERMAX	32	oz/a	B					
	AMMONIUM SULFATE	8.5	lb/100 gal	B					
4	AUTHORITY ELITE	24	oz/a	A	avg	98	100	100	53
	MARVEL	6	oz/a	C	stdev	1	0	0	5
	ROUNDUP POWERMAX	32	oz/a	C					
	AMMONIUM SULFATE	8.5	lb/100 gal	C					
5	AUTHORITY ELITE	24	oz/a	A	avg	99	100	100	53
	ANTHEM MAXX (ANTHEM SC)	2.5	oz/a	B	stdev	1	0	0	0
	ROUNDUP POWERMAX	32	oz/a	B					
	AMMONIUM SULFATE	8.5	lb/100 gal	B					
6	AUTHORITY MTZ	12	oz/a	A	avg	98	100	100	53
	MARVEL	6	oz/a	C	stdev	2	0	0	1
	ROUNDUP POWERMAX	32	oz/a	C					
	AMMONIUM SULFATE	8.5	lb/100 gal	C					
7	AUTHORITY MTZ	12	oz/a	A	avg	98	100	100	54
	ANTHEM MAXX (ANTHEM SC)	2.5	oz/a	B	stdev	1	0	0	5
	ROUNDUP POWERMAX	32	oz/a	B					
	AMMONIUM SULFATE	8.5	lb/100 gal	B					
8	FIERCE	3	oz/a	A	avg	100	100	100	53
	COBRA	10	oz/a	C	stdev	0	0	0	5
	ROUNDUP POWERMAX	32	oz/a	C					
	AMMONIUM SULFATE	8.5	lb/100 gal	C					
9	ANTHEM MAXX (ANTHEM SC)	4	oz/a	B	avg	98	100	100	54
	ROUNDUP POWERMAX	32	oz/a	B	stdev	1	1	0	2
	AMMONIUM SULFATE	8.5	lb/100 gal	B					
10	NON-TREATED CHECK				avg	0	0	0	34
					stdev				7