

**University of Wisconsin-Madison**  
Weed Science Program

**Soybean Control and Crop Safety Showcase**  
(BASF, Dow, FMC, Syngenta, Valent)

**Trial ID:** 15-ARL-SB05, **Location:** Arlington, WI

**Site and Design:**

- |                               |   |
|-------------------------------|---|
| A. Treated plot width: 10 FT  | C. Tillage type: conventional till                |
| B. Treated plot length: 28 FT | D. Study design: Randomized Complete Block 4 reps |

**Planting date:** 5/19/15

**Application Description:**

	<b>A</b>	<b>B</b>	<b>C</b>
<b>Application Date:</b>	5/20/2015	6/16/2015	7/1/2015
<b>Type of Application</b>	PRE	POST	POST
<b>Crop Stage</b>	-	V2	V6
<b>Avg Weed Height</b>	-	1-2.5"	3-8"
<b>Days until Precipitation</b>	4	6	5
<b>Air Temperature, Unit:</b>	51 F	82 F	62 F
<b>% Relative Humidity:</b>	63	46	54
<b>Wind Velocity, Unit:</b>	3.75 MPH	2.5 MPH	5 MPH
<b>Soil Temperature, Unit:</b>	50 F	75 F	62 F
<b>% Cloud Cover:</b>	100	5	5

**Application Equipment:**

	<b>A</b>	<b>B</b>	<b>C</b>
<b>Appl. Equipment:</b>	CO2 Backpack	CO2 Backpack	CO2 Backpack
<b>Operating Pressure, Unit:</b>	25 PSI	25 PSI	25 PSI
<b>Nozzle Type:</b>	Flat Fan	Flat Fan	Flat Fan
<b>Nozzle Size:</b>	11002	11002	11002
<b>Boom Length, Unit:</b>	10 FT	10 FT	10 FT
<b>Boom Height, Unit:</b>	15 IN	15 IN	15 IN
<b>Ground Speed, Unit:</b>	3 MPH	3 MPH	3 MPH
<b>Carrier:</b>	WATER	WATER	WATER
<b>Spray Volume, Unit:</b>	15 GAL/AC	15 GAL/AC	15 GAL/AC
<b>Mix Size, Unit:</b>	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	Woolly cupgrass	RR pigweed	Lambquarters	Woolly cupgrass	Lambquarters
Rating Date					6/3	6/3	6/3	6/3	6/15	6/15
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl
Days After First/Last Applic.					14 14	14 14	14 14	14 14	26 26	26 26
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code						
1	CADET	0.7	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						
2	MARVEL	7.25	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						
3	AUTHORITY FIRST DF	5	oz/a	A	avg	99	100	100	100	91
	CADET	0.7	oz/a	C	stdev	2	1	0	0	5
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
4	AUTHORITY FIRST DF	5	oz/a	A	avg	98	95	100	100	78
	MARVEL	7.25	oz/a	C	stdev	5	10	0	0	32
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
5	AUTHORITY ELITE	20	oz/a	A	avg	99	98	100	100	98
	AUTHORITY FIRST DF	3.5	oz/a	A	stdev	2	5	0	0	4
	MARVEL	7.25	oz/a	C						
	SELECT	10	oz/a	C						
	CROP OIL CONCENTRATE	1	% v/v	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
6	NON-TREATED CHECK				avg	0	0	0	0	0
					stdev					
7	Roundup Powermax	32	fl oz/a	C	avg	0	0	0	0	0
	Ammonium Sulfate	2.5	lb/a	C	stdev	0	0	0	0	0
	NIS	0.25	% v/v	C						
8	FIERCE	3	oz wt/a	A	avg	100	99	100	100	96
	Roundup Powermax	32	fl oz/a	C	stdev	0	3	0	0	3
	Ammonium Sulfate	2.5	lb/a	C						
	NIS	0.25	% v/v	C						
9	AUTHORITY MAXX	6	oz wt/a	A	avg	100	100	100	100	95
	Roundup Powermax	32	fl oz/a	C	stdev	0	0	0	0	7
	Ammonium Sulfate	2.5	lb/a	C						
	NIS	0.25	% v/v	C						
10	BOUNDARY	1.8	pt/a	A	avg	92	100	93	99	100
	Roundup Powermax	32	fl oz/a	C	stdev	9	0	15	3	0
	Ammonium Sulfate	2.5	lb/a	C						
	NIS	0.25	% v/v	C						

Pest name					velvetleaf	Woolly cupgrass	RR pigweed	Lambquarters	Woolly cupgrass	Lambquarters	
Rating Date					6/3	6/3	6/3	6/3	6/15	6/15	
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	
Days After First/Last Applic.					14 14	14 14	14 14	14 14	26 26	26 26	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code							
11	SONIC	4.5	oz wt/a	A	avg	100	100	100	100	88	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	0	6	0
	N-PaK AMS	2.5	% v/v	C							
12	SONIC	6	oz wt/a	A	avg	100	94	100	100	88	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	7	0	0	11	0
	N-PaK AMS	2.5	% v/v	C							
13	SONIC	3	oz wt/a	A	avg	100	100	98	97	90	99
	FIRSTRATE	0.3	oz wt/a	C	stdev	0	0	4	6	8	2
	DURANGO DMA	32	fl oz/a	C							
14	SURVEIL (GF-3192)	2.8	oz wt/a	A	avg	100	98	100	100	92	100
	DURANGO DMA	32	fl oz/a	C	stdev	1	4	0	0	5	0
	N-PaK AMS	2.5	% v/v	C							
15	SURVEIL (GF-3192)	4.2	oz wt/a	A	avg	95	92	95	98	95	100
	DURANGO DMA	32	fl oz/a	C	stdev	11	10	11	5	8	0
	N-PaK AMS	2.5	% v/v	C							
16	NON-TREATED CHECK				avg	0	0	0	0	0	0
					stdev						
17	Verdict	5	fl oz/a	A	avg	98	100	100	100	100	99
	ZIDUA WG	2	oz/a	A	stdev	2	0	0	0	1	2
	Extreme	3	pt/a	C							
	NIS	0.25	% v/v	C							
	AMS	17	lb/100 gal	C							
18	Optill	2	oz/a	A	avg	90	96	93	95	99	100
	Outlook	10	fl oz/a	A	stdev	12	5	15	10	3	1
	Roundup Powermax	22	fl oz/a	C							
	AMS	17	lb/100 gal	C							
19	Optill	2	oz/a	A	avg	99	96	99	100	100	100
	ZIDUA WG	2	oz/a	A	stdev	3	8	3	0	0	0
	Roundup Powermax	22	fl oz/a	C							
	AMS	17	lb/100 gal	C							
20	Extreme	3	pt/a	B	avg	0	0	0	0	0	0
	Zidua	2	oz/a	B	stdev	0	0	0	0	0	0
	NIS	0.25	% v/v	B							
	AMS	17	lb/100 gal	B							

Pest name					RR pigweed	Common ragweed	velvetleaf	Common dandelion	velvetleaf	Lambquarters	
Rating Date					6/15	6/15	6/15	6/15	6/30	6/30	
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	
Days After First/Last Applic.					26 26	26 26	26 26	26 26	41 14	41 14	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code							
1	CADET	0.7	oz/a	B	avg	0	0	0	0	100	100
	ROUNDUP POWERMAX	32	oz/a	B	stdev	0	0	0	0	0	0
	AMMONIUM SULFATE	8.5	lb/100 gal	B							
2	MARVEL	7.25	oz/a	B	avg	0	0	0	0	100	100
	ROUNDUP POWERMAX	32	oz/a	B	stdev	0	0	0	0	1	1
	AMMONIUM SULFATE	8.5	lb/100 gal	B							
3	AUTHORITY FIRST DF	5	oz/a	A	avg	100	99	100	100	99	100
	CADET	0.7	oz/a	C	stdev	0	3	0	0	2	0
	ROUNDUP POWERMAX	32	oz/a	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
4	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	97	96	100	100
	MARVEL	7.25	oz/a	C	stdev	0	0	7	5	0	0
	ROUNDUP POWERMAX	32	oz/a	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
5	AUTHORITY ELITE	20	oz/a	A	avg	100	98	100	100	100	100
	AUTHORITY FIRST DF	3.5	oz/a	A	stdev	0	4	1	0	0	0
	MARVEL	7.25	oz/a	C							
	SELECT	10	oz/a	C							
	CROP OIL CONCENTRATE	1	% v/v	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
6	NON-TREATED CHECK				avg	0	0	0	0	0	0
					stdev						
7	Roundup Powermax	32	fl oz/a	C	avg	0	0	0	0	0	0
	Ammonium Sulfate	2.5	lb/a	C	stdev	0	0	0	0	0	0
	NIS	0.25	% v/v	C							
8	FIERCE	3	oz wt/a	A	avg	100	100	99	98	98	98
	Roundup Powermax	32	fl oz/a	C	stdev	0	0	3	5	4	4
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							
9	AUTHORITY MAXX	6	oz wt/a	A	avg	100	100	100	100	100	100
	Roundup Powermax	32	fl oz/a	C	stdev	0	0	0	0	0	0
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							
10	BOUNDARY	1.8	pt/a	A	avg	100	91	94	91	96	96
	Roundup Powermax	32	fl oz/a	C	stdev	0	10	9	10	6	5
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							

Pest name					RR pigweed	Common ragweed	velvetleaf	Common dandelion	velvetleaf	Lambsquarters	
Rating Date					6/15	6/15	6/15	6/15	6/30	6/30	
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	
Days After First/Last Applic.					26 26	26 26	26 26	26 26	41 14	41 14	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code							
11	SONIC	4.5	oz wt/a	A	avg	100	100	100	100	100	99
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	0	0	3
	N-PaK AMS	2.5	% v/v	C							
12	SONIC	6	oz wt/a	A	avg	100	96	100	100	100	99
	DURANGO DMA	32	fl oz/a	C	stdev	0	8	1	1	1	2
	N-PaK AMS	2.5	% v/v	C							
13	SONIC	3	oz wt/a	A	avg	100	99	99	100	100	100
	FIRSTRATE	0.3	oz wt/a	C	stdev	0	2	3	1	0	0
	DURANGO DMA	32	fl oz/a	C							
	N-PaK AMS	2.5	% v/v	C							
14	SURVEIL (GF-3192)	2.8	oz wt/a	A	avg	100	100	99	99	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	2	2	1	0
	N-PaK AMS	2.5	% v/v	C							
15	SURVEIL (GF-3192)	4.2	oz wt/a	A	avg	100	100	100	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	1	0	0	1
	N-PaK AMS	2.5	% v/v	C							
16	NON-TREATED CHECK				avg	0	0	0	0	0	0
					stdev						
17	Verdict	5	fl oz/a	A	avg	100	94	98	96	93	91
	ZIDUA WG	2	oz/a	A	stdev	0	7	3	5	0	1
	Extreme	3	pt/a	C							
	NIS	0.25	% v/v	C							
	AMS	17	lb/100 gal	C							
18	Optill	2	oz/a	A	avg	100	100	98	99	97	97
	Outlook	10	fl oz/a	A	stdev	0	1	4	3	3	4
	Roundup Powermax	22	fl oz/a	C							
	AMS	17	lb/100 gal	C							
19	Optill	2	oz/a	A	avg	100	99	100	100	100	100
	ZIDUA WG	2	oz/a	A	stdev	0	2	0	0	1	0
	Roundup Powermax	22	fl oz/a	C							
	AMS	17	lb/100 gal	C							
20	Extreme	3	pt/a	B	avg	0	0	0	0	100	100
	Zidua	2	oz/a	B	stdev	0	0	0	0	0	0
	NIS	0.25	% v/v	B							
	AMS	17	lb/100 gal	B							

Pest name					Common ragweed	RR pigweed	Giant foxtail	Ladysthumb	Common dandelion	E. black nightshade	
Rating Date					6/30	6/30	6/30	6/30	6/30	6/30	
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	
Days After First/Last Applic.					41 14	41 14	41 14	41 14	41 14	41 14	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code							
1	CADET	0.7	oz/a	B	avg	99	100	98	100	96	99
	ROUNDUP POWERMAX	32	oz/a	B	stdev	1	0	1	0	7	3
	AMMONIUM SULFATE	8.5	lb/100 gal	B							
2	MARVEL	7.25	oz/a	B	avg	100	100	98	100	99	100
	ROUNDUP POWERMAX	32	oz/a	B	stdev	0	0	1	0	1	0
	AMMONIUM SULFATE	8.5	lb/100 gal	B							
3	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	90	100	100	100
	CADET	0.7	oz/a	C	stdev	0	0	2	0	0	0
	ROUNDUP POWERMAX	32	oz/a	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
4	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	82	100	100	98
	MARVEL	7.25	oz/a	C	stdev	0	0	15	0	0	5
	ROUNDUP POWERMAX	32	oz/a	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
5	AUTHORITY ELITE	20	oz/a	A	avg	100	100	99	100	98	100
	AUTHORITY FIRST DF	3.5	oz/a	A	stdev	0	0	1	0	3	0
	MARVEL	7.25	oz/a	C							
	SELECT	10	oz/a	C							
	CROP OIL CONCENTRATE	1	% v/v	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
6	NON-TREATED CHECK				avg	0	0	0	0	0	0
					stdev						
7	Roundup Powermax	32	fl oz/a	C	avg	0	0	0	0	0	0
	Ammonium Sulfate	2.5	lb/a	C	stdev	0	0	0	0	0	0
	NIS	0.25	% v/v	C							
8	FIERCE	3	oz wt/a	A	avg	99	100	94	99	99	100
	Roundup Powermax	32	fl oz/a	C	stdev	3	0	4	2	3	0
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							
9	AUTHORITY MAXX	6	oz wt/a	A	avg	100	100	94	100	100	100
	Roundup Powermax	32	fl oz/a	C	stdev	0	0	5	0	0	0
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							
10	BOUNDARY	1.8	pt/a	A	avg	97	97	100	100	93	98
	Roundup Powermax	32	fl oz/a	C	stdev	7	4	0	0	5	5
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							

Pest name					Common ragweed	RR pigweed	Giant foxtail	Ladysthumb	Common dandelion	E. black nightshade	
Rating Date					6/30	6/30	6/30	6/30	6/30	6/30	
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	
Days After First/Last Applic.					41 14	41 14	41 14	41 14	41 14	41 14	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code							
11	SONIC	4.5	oz wt/a	A	avg	100	100	92	100	96	99
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	4	0	8	3
	N-PaK AMS	2.5	% v/v	C							
12	SONIC	6	oz wt/a	A	avg	98	100	85	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	5	0	12	0	0	0
	N-PaK AMS	2.5	% v/v	C							
13	SONIC	3	oz wt/a	A	avg	100	100	87	100	100	100
	FIRSTRATE	0.3	oz wt/a	C	stdev	0	0	12	0	1	0
	DURANGO DMA	32	fl oz/a	C							
	N-PaK AMS	2.5	% v/v	C							
14	SURVEIL (GF-3192)	2.8	oz wt/a	A	avg	100	100	87	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	5	0	1	0
	N-PaK AMS	2.5	% v/v	C							
15	SURVEIL (GF-3192)	4.2	oz wt/a	A	avg	99	100	92	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	2	0	8	0	0	0
	N-PaK AMS	2.5	% v/v	C							
16	NON-TREATED CHECK				avg	0	0	0	0	0	0
					stdev						
17	Verdict	5	fl oz/a	A	avg	96	100	98	95	74	100
	ZIDUA WG	2	oz/a	A	stdev	6	0	4	0	20	0
	Extreme	3	pt/a	C							
	NIS	0.25	% v/v	C							
	AMS	17	lb/100 gal	C							
18	Optill	2	oz/a	A	avg	96	99	95	100	86	98
	Outlook	10	fl oz/a	A	stdev	5	2	5	0	11	4
	Roundup Powermax	22	fl oz/a	C							
	AMS	17	lb/100 gal	C							
19	Optill	2	oz/a	A	avg	98	100	98	100	98	100
	ZIDUA WG	2	oz/a	A	stdev	2	0	2	0	5	0
	Roundup Powermax	22	fl oz/a	C							
	AMS	17	lb/100 gal	C							
20	Extreme	3	pt/a	B	avg	100	100	100	100	100	100
	Zidua	2	oz/a	B	stdev	0	0	0	0	0	0
	NIS	0.25	% v/v	B							
	AMS	17	lb/100 gal	B							

Pest name					Lambquarters	velvetleaf	Common ragweed	Ladyshrub	RR pigweed	Giant foxtail	
Rating Date					7/14	7/14	7/14	7/14	7/14	7/14	
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	
Days After First/Last Applic.					55 13	55 13	55 13	55 13	55 13	55 13	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code							
1	CADET	0.7	oz/a	B	avg	97	100	100	100	100	95
	ROUNDUP POWERMAX	32	oz/a	B	stdev	1	0	0	0	1	6
	AMMONIUM SULFATE	8.5	lb/100 gal	B							
2	MARVEL	7.25	oz/a	B	avg	98	99	100	100	100	94
	ROUNDUP POWERMAX	32	oz/a	B	stdev	1	3	0	0	1	4
	AMMONIUM SULFATE	8.5	lb/100 gal	B							
3	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	100	100	100	100
	CADET	0.7	oz/a	C	stdev	0	0	0	0	0	0
	ROUNDUP POWERMAX	32	oz/a	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
4	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	100	100	100	100
	MARVEL	7.25	oz/a	C	stdev	0	0	0	0	0	0
	ROUNDUP POWERMAX	32	oz/a	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
5	AUTHORITY ELITE	20	oz/a	A	avg	100	100	100	100	100	100
	AUTHORITY FIRST DF	3.5	oz/a	A	stdev	0	0	0	0	0	0
	MARVEL	7.25	oz/a	C							
	SELECT	10	oz/a	C							
	CROP OIL CONCENTRATE	1	% v/v	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
6	NON-TREATED CHECK				avg	0	0	0	0	0	0
					stdev						
7	Roundup Powermax	32	fl oz/a	C	avg	99	100	100	99	100	100
	Ammonium Sulfate	2.5	lb/a	C	stdev	2	0	1	1	0	0
	NIS	0.25	% v/v	C							
8	FIERCE	3	oz wt/a	A	avg	100	100	100	100	100	100
	Roundup Powermax	32	fl oz/a	C	stdev	0	0	0	0	0	0
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							
9	AUTHORITY MAXX	6	oz wt/a	A	avg	100	100	100	100	100	100
	Roundup Powermax	32	fl oz/a	C	stdev	0	0	0	0	0	0
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							
10	BOUNDARY	1.8	pt/a	A	avg	100	100	100	100	100	100
	Roundup Powermax	32	fl oz/a	C	stdev	0	0	0	0	0	0
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							



Pest name					Lambsquarters	velvetleaf	Common ragweed	Ladyshrub	RR pigweed	Giant foxtail
Rating Date					7/14	7/14	7/14	7/14	7/14	7/14
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl
Days After First/Last Applic.					55 13	55 13	55 13	55 13	55 13	55 13
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code						
11	SONIC	4.5	oz wt/a	A	avg	100	100	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	0	0
	N-PaK AMS	2.5	% v/v	C						
12	SONIC	6	oz wt/a	A	avg	100	100	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	0	1
	N-PaK AMS	2.5	% v/v	C						
13	SONIC	3	oz wt/a	A	avg	100	100	100	100	99
	FIRSTRATE	0.3	oz wt/a	C	stdev	0	0	0	0	1
	DURANGO DMA	32	fl oz/a	C						
	N-PaK AMS	2.5	% v/v	C						
14	SURVEIL (GF-3192)	2.8	oz wt/a	A	avg	100	100	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	0	0
	N-PaK AMS	2.5	% v/v	C						
15	SURVEIL (GF-3192)	4.2	oz wt/a	A	avg	100	100	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	0	0
	N-PaK AMS	2.5	% v/v	C						
16	NON-TREATED CHECK				avg	0	0	0	0	0
					stdev					
17	Verdict	5	fl oz/a	A	avg	100	100	100	100	100
	ZIDUA WG	2	oz/a	A	stdev	0	0	0	0	0
	Extreme	3	pt/a	C						
	NIS	0.25	% v/v	C						
	AMS	17	lb/100 gal	C						
18	Optill	2	oz/a	A	avg	100	100	100	100	100
	Outlook	10	fl oz/a	A	stdev	0	0	0	0	0
	Roundup Powermax	22	fl oz/a	C						
	AMS	17	lb/100 gal	C						
19	Optill	2	oz/a	A	avg	100	100	100	100	100
	ZIDUA WG	2	oz/a	A	stdev	0	0	0	0	0
	Roundup Powermax	22	fl oz/a	C						
	AMS	17	lb/100 gal	C						
20	Extreme	3	pt/a	B	avg	100	100	100	100	98
	Zidua	2	oz/a	B	stdev	0	0	0	0	1
	NIS	0.25	% v/v	B						
	AMS	17	lb/100 gal	B						

Pest name					Common ragweed	RR pigweed	Ladyshrub	Common dandelion	Lambsquarters	Velvetleaf	
Rating Date					7/29	7/29	7/29	7/29	7/29	7/29	
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	
Days After First/Last Applic.					70 28	70 28	70 28	70 28	70 28	70 28	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code							
1	CADET	0.7	oz/a	B	avg	100	98	100	94	98	99
	ROUNDUP POWERMAX	32	oz/a	B	stdev	0	5	0	7	5	3
	AMMONIUM SULFATE	8.5	lb/100 gal	B							
2	MARVEL	7.25	oz/a	B	avg	100	99	100	96	96	98
	ROUNDUP POWERMAX	32	oz/a	B	stdev	0	3	0	5	4	4
	AMMONIUM SULFATE	8.5	lb/100 gal	B							
3	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	100	100	100	100
	CADET	0.7	oz/a	C	stdev	0	0	0	1	0	0
	ROUNDUP POWERMAX	32	oz/a	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
4	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	100	100	100	100
	MARVEL	7.25	oz/a	C	stdev	0	0	0	1	0	0
	ROUNDUP POWERMAX	32	oz/a	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
5	AUTHORITY ELITE	20	oz/a	A	avg	98	100	100	99	100	100
	AUTHORITY FIRST DF	3.5	oz/a	A	stdev	5	0	0	1	0	0
	MARVEL	7.25	oz/a	C							
	SELECT	10	oz/a	C							
	CROP OIL CONCENTRATE	1	% v/v	C							
	AMMONIUM SULFATE	8.5	lb/100 gal	C							
6	NON-TREATED CHECK				avg	0	0	0	0	0	0
					stdev						
7	Roundup Powermax	32	fl oz/a	C	avg	100	100	100	98	100	100
	Ammonium Sulfate	2.5	lb/a	C	stdev	0	0	0	2	0	0
	NIS	0.25	% v/v	C							
8	FIERCE	3	oz wt/a	A	avg	100	100	100	100	100	100
	Roundup Powermax	32	fl oz/a	C	stdev	0	0	0	0	0	1
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							
9	AUTHORITY MAXX	6	oz wt/a	A	avg	100	100	100	100	100	100
	Roundup Powermax	32	fl oz/a	C	stdev	0	0	0	0	0	0
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							
10	BOUNDARY	1.8	pt/a	A	avg	100	100	100	98	100	100
	Roundup Powermax	32	fl oz/a	C	stdev	0	0	0	3	0	0
	Ammonium Sulfate	2.5	lb/a	C							
	NIS	0.25	% v/v	C							

Pest name					Common ragweed	RR pigweed	Ladyshrub	Common dandelion	Lambsquarters	Velvetleaf
Rating Date					7/29	7/29	7/29	7/29	7/29	7/29
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl
Days After First/Last Applic.					70 28	70 28	70 28	70 28	70 28	70 28
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code						
11	SONIC	4.5	oz wt/a	A	avg	100	100	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	0	0
	N-PaK AMS	2.5	% v/v	C						
12	SONIC	6	oz wt/a	A	avg	100	100	100	99	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	2	0
	N-PaK AMS	2.5	% v/v	C						
13	SONIC	3	oz wt/a	A	avg	100	100	100	99	100
	FIRSTRATE	0.3	oz wt/a	C	stdev	0	0	0	3	0
	DURANGO DMA	32	fl oz/a	C						
	N-PaK AMS	2.5	% v/v	C						
14	SURVEIL (GF-3192)	2.8	oz wt/a	A	avg	100	100	100	99	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	2	0
	N-PaK AMS	2.5	% v/v	C						
15	SURVEIL (GF-3192)	4.2	oz wt/a	A	avg	100	100	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	1	0
	N-PaK AMS	2.5	% v/v	C						
16	NON-TREATED CHECK				avg	0	0	0	0	0
					stdev					
17	Verdict	5	fl oz/a	A	avg	100	100	100	99	100
	ZIDUA WG	2	oz/a	A	stdev	0	0	0	2	0
	Extreme	3	pt/a	C						
	NIS	0.25	% v/v	C						
	AMS	17	lb/100 gal	C						
18	Optill	2	oz/a	A	avg	100	100	100	100	100
	Outlook	10	fl oz/a	A	stdev	0	0	0	1	0
	Roundup Powermax	22	fl oz/a	C						
	AMS	17	lb/100 gal	C						
19	Optill	2	oz/a	A	avg	100	100	100	100	100
	ZIDUA WG	2	oz/a	A	stdev	0	0	0	1	0
	Roundup Powermax	22	fl oz/a	C						
	AMS	17	lb/100 gal	C						
20	Extreme	3	pt/a	B	avg	100	100	100	98	100
	Zidua	2	oz/a	B	stdev	0	0	0	3	0
	NIS	0.25	% v/v	B						
	AMS	17	lb/100 gal	B						

Pest name					Giant foxtail	Lambquarters	Giant foxtail	Ladyshrub	RR pigweed	
Rating Date					7/29	10/14	10/14	10/14	10/14	
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	
Days After First/Last Applic.					70 28	147 105	147 105	147 105	147 105	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code						
1	CADET	0.7	oz/a	B	avg	90	95	96	100	99
	ROUNDUP POWERMAX	32	oz/a	B	stdev	<b>11</b>	<b>7</b>	<b>8</b>	<b>0</b>	<b>3</b>
	AMMONIUM SULFATE	8.5	lb/100 gal	B						
2	MARVEL	7.25	oz/a	B	avg	94	95	100	98	100
	ROUNDUP POWERMAX	32	oz/a	B	stdev	<b>9</b>	<b>7</b>	<b>1</b>	<b>5</b>	<b>0</b>
	AMMONIUM SULFATE	8.5	lb/100 gal	B						
3	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	100	100	100
	CADET	0.7	oz/a	C	stdev	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
4	AUTHORITY FIRST DF	5	oz/a	A	avg	100	100	100	100	100
	MARVEL	7.25	oz/a	C	stdev	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	ROUNDUP POWERMAX	32	oz/a	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
5	AUTHORITY ELITE	20	oz/a	A	avg	100	99	100	100	100
	AUTHORITY FIRST DF	3.5	oz/a	A	stdev	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>
	MARVEL	7.25	oz/a	C						
	SELECT	10	oz/a	C						
	CROP OIL CONCENTRATE	1	% v/v	C						
	AMMONIUM SULFATE	8.5	lb/100 gal	C						
6	NON-TREATED CHECK				avg	0	0	0	0	0
					stdev					
7	Roundup Powermax	32	fl oz/a	C	avg	100	100	100	96	100
	Ammonium Sulfate	2.5	lb/a	C	stdev	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>
	NIS	0.25	% v/v	C						
8	FIERCE	3	oz wt/a	A	avg	100	100	100	100	100
	Roundup Powermax	32	fl oz/a	C	stdev	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Ammonium Sulfate	2.5	lb/a	C						
	NIS	0.25	% v/v	C						
9	AUTHORITY MAXX	6	oz wt/a	A	avg	100	100	100	100	100
	Roundup Powermax	32	fl oz/a	C	stdev	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Ammonium Sulfate	2.5	lb/a	C						
	NIS	0.25	% v/v	C						
10	BOUNDARY	1.8	pt/a	A	avg	100	100	100	100	100
	Roundup Powermax	32	fl oz/a	C	stdev	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Ammonium Sulfate	2.5	lb/a	C						
	NIS	0.25	% v/v	C						

Pest name					Giant foxtail	Lambquarters	Giant foxtail	Ladyshrub	RR pigweed	
Rating Date					7/29	10/14	10/14	10/14	10/14	
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	
Days After First/Last Applic.					70 28	147 105	147 105	147 105	147 105	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code						
11	SONIC	4.5	oz wt/a	A	avg	100	100	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	0	0
	N-PaK AMS	2.5	% v/v	C						
12	SONIC	6	oz wt/a	A	avg	99	100	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	3	0	0	0	0
	N-PaK AMS	2.5	% v/v	C						
13	SONIC	3	oz wt/a	A	avg	99	100	100	100	100
	FIRSTRATE	0.3	oz wt/a	C	stdev	2	0	0	0	0
	DURANGO DMA	32	fl oz/a	C						
	N-PaK AMS	2.5	% v/v	C						
14	SURVEIL (GF-3192)	2.8	oz wt/a	A	avg	100	100	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	0	0	0	0
	N-PaK AMS	2.5	% v/v	C						
15	SURVEIL (GF-3192)	4.2	oz wt/a	A	avg	100	78	100	100	100
	DURANGO DMA	32	fl oz/a	C	stdev	0	45	0	0	0
	N-PaK AMS	2.5	% v/v	C						
16	NON-TREATED CHECK				avg	0	0	0	0	0
					stdev					
17	Verdict	5	fl oz/a	A	avg	100	100	100	100	100
	ZIDUA WG	2	oz/a	A	stdev	0	0	0	0	0
	Extreme	3	pt/a	C						
	NIS	0.25	% v/v	C						
	AMS	17	lb/100 gal	C						
18	Optill	2	oz/a	A	avg	100	100	100	100	100
	Outlook	10	fl oz/a	A	stdev	0	0	0	0	0
	Roundup Powermax	22	fl oz/a	C						
	AMS	17	lb/100 gal	C						
19	Optill	2	oz/a	A	avg	100	100	100	100	100
	ZIDUA WG	2	oz/a	A	stdev	0	0	0	0	0
	Roundup Powermax	22	fl oz/a	C						
	AMS	17	lb/100 gal	C						
20	Extreme	3	pt/a	B	avg	99	100	99	100	100
	Zidua	2	oz/a	B	stdev	2	0	2	0	0
	NIS	0.25	% v/v	B						
	AMS	17	lb/100 gal	B						

Pest name					Common dandelion		
Rating Date					10/14	10/19	
Rating Type					% cntrl	YIELD Bu/A	
Days After First/Last Applic.					147 105	152 110	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code			
1	CADET	0.7	oz/a	B	avg	89	51
	ROUNDUP POWERMAX	32	oz/a	B	stdev	7	4
	AMMONIUM SULFATE	8.5	lb/100 gal	B			
2	MARVEL	7.25	oz/a	B	avg	91	52
	ROUNDUP POWERMAX	32	oz/a	B	stdev	7	1
	AMMONIUM SULFATE	8.5	lb/100 gal	B			
3	AUTHORITY FIRST DF	5	oz/a	A	avg	99	51
	CADET	0.7	oz/a	C	stdev	1	2
	ROUNDUP POWERMAX	32	oz/a	C			
	AMMONIUM SULFATE	8.5	lb/100 gal	C			
4	AUTHORITY FIRST DF	5	oz/a	A	avg	98	54
	MARVEL	7.25	oz/a	C	stdev	2	4
	ROUNDUP POWERMAX	32	oz/a	C			
	AMMONIUM SULFATE	8.5	lb/100 gal	C			
5	AUTHORITY ELITE	20	oz/a	A	avg	100	52
	AUTHORITY FIRST DF	3.5	oz/a	A	stdev	1	4
	MARVEL	7.25	oz/a	C			
	SELECT	10	oz/a	C			
	CROP OIL CONCENTRATE	1	% v/v	C			
	AMMONIUM SULFATE	8.5	lb/100 gal	C			
6	NON-TREATED CHECK				avg	0	29
					stdev		12
7	Roundup Powermax	32	fl oz/a	C	avg	98	48
	Ammonium Sulfate	2.5	lb/a	C	stdev	2	10
	NIS	0.25	% v/v	C			
8	FIERCE	3	oz wt/a	A	avg	100	54
	Roundup Powermax	32	fl oz/a	C	stdev	0	3
	Ammonium Sulfate	2.5	lb/a	C			
	NIS	0.25	% v/v	C			
9	AUTHORITY MAXX	6	oz wt/a	A	avg	100	55
	Roundup Powermax	32	fl oz/a	C	stdev	0	2
	Ammonium Sulfate	2.5	lb/a	C			
	NIS	0.25	% v/v	C			
10	BOUNDARY	1.8	pt/a	A	avg	100	54
	Roundup Powermax	32	fl oz/a	C	stdev	1	4
	Ammonium Sulfate	2.5	lb/a	C			
	NIS	0.25	% v/v	C			

Pest name					Common dandelion		
Rating Date					10/14	10/19	
Rating Type					% cntrl	YIELD Bu/A	
Days After First/Last Applic.					147 105	152 110	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code			
11	SONIC	4.5	oz wt/a	A	avg	100	55
	DURANGO DMA	32	fl oz/a	C	stdev	<b>1</b>	<b>2</b>
	N-PaK AMS	2.5	% v/v	C			
12	SONIC	6	oz wt/a	A	avg	98	55
	DURANGO DMA	32	fl oz/a	C	stdev	<b>2</b>	<b>4</b>
	N-PaK AMS	2.5	% v/v	C			
13	SONIC	3	oz wt/a	A	avg	100	54
	FIRSTRATE	0.3	oz wt/a	C	stdev	<b>1</b>	<b>2</b>
	DURANGO DMA	32	fl oz/a	C			
	N-PaK AMS	2.5	% v/v	C			
14	SURVEIL (GF-3192)	2.8	oz wt/a	A	avg	100	54
	DURANGO DMA	32	fl oz/a	C	stdev	<b>1</b>	<b>5</b>
	N-PaK AMS	2.5	% v/v	C			
15	SURVEIL (GF-3192)	4.2	oz wt/a	A	avg	100	54
	DURANGO DMA	32	fl oz/a	C	stdev	<b>0</b>	<b>5</b>
	N-PaK AMS	2.5	% v/v	C			
16	NON-TREATED CHECK				avg	0	35
					stdev		<b>11</b>
17	Verdict	5	fl oz/a	A	avg	99	52
	ZIDUA WG	2	oz/a	A	stdev	<b>2</b>	<b>6</b>
	Extreme	3	pt/a	C			
	NIS	0.25	% v/v	C			
	AMS	17	lb/100 gal	C			
18	Optill	2	oz/a	A	avg	100	58
	Outlook	10	fl oz/a	A	stdev	<b>1</b>	<b>8</b>
	Roundup Powermax	22	fl oz/a	C			
	AMS	17	lb/100 gal	C			
19	Optill	2	oz/a	A	avg	100	54
	ZIDUA WG	2	oz/a	A	stdev	<b>0</b>	<b>2</b>
	Roundup Powermax	22	fl oz/a	C			
	AMS	17	lb/100 gal	C			
20	Extreme	3	pt/a	B	avg	97	53
	Zidua	2	oz/a	B	stdev	<b>7</b>	<b>4</b>
	NIS	0.25	% v/v	B			
	AMS	17	lb/100 gal	B			