

MSU Weed Science Research Program

WEED CONTROL IN ROUNDUP READY CORN WITH GLYPHOSATE AND BAS 799, 2006

Trial ID: C1506  
 Conducted: CAMPUS

Study Dir.:  
 Investigator: Christy Sprague

**Date Planted:** 5/3/2006                      **Row Spacing:** 30 IN  
**Variety:** DKC42-95                              **No. of Reps:** 4  
**Population:** 30,000 S/A                        **% OM:** 2.7  
**Soil Type:** clay loam                           **pH:** 6.4  
**Plot Size:** 10 X 35 FT                        **Design:** RANDOMIZED COMPLETE BLOCK

**Tillage:** Fall Chisel, Spring Soil Finish x2  
**Fertilizer:** 285 lbs/A 46-0-0 broadcast. 125 lbs/A 19-19-19 in row at planting.

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1.	ANGR	Annual Grasses	
2.	CHEAL	Common lambsquarters	Chenopodium album L.
3.	AMARE	PIGWEEED, ROUGH	AMARANTHUS RETROFLEXUS L.
4.	AMBEL	RAGWEEED, COMMON	AMBROSIA ELATIOR L.
5.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

**Application Description**

	A	B	C
<b>Application Timing:</b>	PRE	5-8 ZE	10-12 ZE
<b>Date Treated:</b>	5/3/2006	6/1/2006	6/8/2006
<b>Time Treated:</b>	8:05 pm	7:45 pm	10:10 am
<b>% Cloud Cover:</b>	25	85	5
<b>Air Temp., Unit:</b>	69 F	78 F	74 F
<b>% Relative Humidity:</b>	65	40	74
<b>Wind Speed/Unit/Dir:</b>	2 mph	3 mph	2 mph N
<b>Soil Temp., Unit:</b>	65 F	76.1 F	68.7 F
<b>Soil/Leaf Surface M:</b>	4 4	5 5	5 5
<b>Soil Moist (1=w 5=d):</b>	3	4	2

**Crop Stage at Each Application**

	A	B	C
<b>Crop Name:</b>	ZEAMX	ZEAMX	ZEAMX
<b>Height (In.):</b>		6-9 (7)	6-11 (9)
<b>Stage (L):</b>		V3-4 (3) 5L	V4-5 (5) 6L

**Weed Stage at Each Application**

	A	B	C
<b>Weed 1 Name:</b>	ANGR	ANGR	ANGR
<b>Height (In.):</b>		2.5-5 (3)	1-9 (7)
<b>Stage (L):</b>		1-5 (4)	2-7 (5)
<b>Weed 2 Name:</b>	CHEAL	CHEAL	CHEAL
<b>Height (In.):</b>		.25-2 (1)	1-5 (3)
<b>Stage (L):</b>		cot-6 (4)	cot-9 (6)
<b>Weed 3 Name:</b>	AMARE	AMARE	AMARE
<b>Height (In.):</b>		.5-2 (1)	1-5 (1.5)
<b>Stage (L):</b>		cot-6 (4)	2-7 (5)
<b>Weed 4 Name:</b>	AMBEL	AMBEL	AMBEL
<b>Height (In.):</b>		.5-3 (1.5)	1-6 (3)
<b>Stage (L):</b>		2-6 (4)	4-10 (8)
<b>Weed 5 Name:</b>	ABUTH	ABUTH	ABUTH
<b>Height (In.):</b>		1-2 (2)	1-4 (2)
<b>Stage (L):</b>		cot-2 (2)	cot-4 (3)

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**Weed Density (plants/sq. ft.)**

	<b>1</b>	<b>2</b>	<b>3</b>
<b>Date:</b>	5/3/2006	6/1/2006	6/8/2006
<b>Weed Name:</b>	ANGR	ANGR	ANGR
<b>Density:</b>		45	28
<b>Date:</b>	5/3/2006	6/1/2006	6/8/2006
<b>Weed Name:</b>	CHEAL	CHEAL	CHEAL
<b>Density:</b>		23	25
<b>Date:</b>	5/3/2006	6/1/2006	6/8/2006
<b>Weed Name:</b>	AMARE	AMARE	AMARE
<b>Density:</b>		1	<1
<b>Date:</b>	5/3/2006	6/1/2006	6/8/2006
<b>Weed Name:</b>	AMBEL	AMBEL	AMBEL
<b>Density:</b>		13	10
<b>Date:</b>	5/3/2006	6/1/2006	6/8/2006
<b>Weed Name:</b>	ABUTH	ABUTH	ABUTH
<b>Density:</b>		<1	<1

**Application Equipment**

	<b>Appl</b>	<b>Sprayer</b>	<b>Speed</b>	<b>Nozzle</b>	<b>Nozzle</b>	<b>Nozzle</b>	<b>Nozzle</b>	<b>Boom</b>			
	<b>Type</b>	<b>MPH</b>	<b>Type</b>	<b>Size</b>	<b>Height</b>	<b>Spacing</b>	<b>Width</b>	<b>GPA</b>	<b>Carrier</b>	<b>PSI</b>	
<b>A</b>	cub	3.5	FF	8003	18"	20"	100"	20	H2O	30	
<b>B</b>	cub	3.5	FF	8003	24"	20"	100"	20	H2O	30	
<b>C</b>	cub	3.5	FF	8003	26"	20"	100"	20	H2O	30	

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Weed Code							ANGR	CHEAL	AMARE	AMBEL	ABUTH		
Crop Code							ZEAMX					ZEAMX	ZEAMX
Rating Data Type							injury	control	control	control	control	injury	injury
Rating Unit							percent	percent	percent	percent	percent	percent	percent
Rating Date							6/3/2006	6/3/2006	6/3/2006	6/3/2006	6/3/2006	6/3/2006	6/15/2006
Trt-Eval Interval							2 DA-B	2 DA-B	2 DA-B	2 DA-B	2 DA-B	7 DAT	14 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7	8
1	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE							0	0
1	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
2	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12"ZE							0	0
2	Ammonium Sulfate		DF	3	lb/100 gal	10-12"ZE								
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE							0	0
3	BAS 799		DF	2.5	oz/a	5-8" ZE								
3	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
4	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE							0	0
4	Prowl H2O	3.8	L	2.5	pt/a	5-8" ZE								
4	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
5	Guardsman Max	5	L	2.5	pt/a	PRE	0	97	100	100	84	90	0	0
5	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE								
5	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
6	Outlook	6	L	12	fl oz/a	PRE	0	98	91	100	56	70	0	0
6	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE								
6	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
7	Guardsman Max	5	L	2.5	pt/a	PRE	0	97	100	100	85	88	0	0
7	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE								
7	BAS 799		DF	2.5	oz/a	5-8" ZE								
7	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
8	Outlook	6	L	12	fl oz/a	PRE	0	96	95	100	54	80	0	0
8	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE								
8	BAS 799		DF	2.5	oz/a	5-8" ZE								
8	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
9	Untreated						0	0	0	0	0	0	0	0
LSD (P=.05)							0.0	2.8	3.9	0.0	15.3	19.3	0.0	0.0
Standard Deviation							0.0	1.8	2.5	0.0	9.9	12.5	0.0	0.0
CV							0.0	2.37	3.28	0.0	17.86	19.16	0.0	0.0

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Weed Code							ANGR	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX	ANGR	
Crop Code														
Rating Data Type							control	control	control	control	control	injury	control	
Rating Unit							percent	percent	percent	percent	percent	percent	percent	
Rating Date							6/15/2006	6/15/2006	6/15/2006	6/15/2006	6/15/2006	6/29/2006	6/29/2006	
Trt-Eval Interval							14 DA-B	14 DA-B	14 DA-B	14 DA-B	14 DA-B	28 DA-B	28 DA-B	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	9	10	11	12	13	14	15	
1	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	91	100	100	97	88	0	54	
1	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
2	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12"ZE	98	100	100	70	100	0	93	
2	Ammonium Sulfate		DF	3	lb/100 gal	10-12"ZE								
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	92	100	100	100	94	0	62	
3	BAS 799		DF	2.5	oz/a	5-8" ZE								
3	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
4	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	99	100	100	99	100	0	91	
4	Prowl H2O	3.8	L	2.5	pt/a	5-8" ZE								
4	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
5	Guardsman Max	5	L	2.5	pt/a	PRE	98	100	100	98	96	0	86	
5	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE								
5	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
6	Outlook	6	L	12	fl oz/a	PRE	98	100	100	99	94	0	91	
6	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE								
6	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
7	Guardsman Max	5	L	2.5	pt/a	PRE	98	100	100	100	91	0	89	
7	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE								
7	BAS 799		DF	2.5	oz/a	5-8" ZE								
7	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
8	Outlook	6	L	12	fl oz/a	PRE	99	100	100	100	93	0	89	
8	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE								
8	BAS 799		DF	2.5	oz/a	5-8" ZE								
8	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE								
9	Untreated						0	0	0	0	0	0	0	
LSD (P=.05)							2.5	0.7	0.0	3.8	6.4	0.0	8.3	
Standard Deviation							1.7	0.5	0.0	2.6	4.4	0.0	5.7	
CV							2.0	0.54	0.0	3.11	5.22	0.0	7.87	

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Weed Code							CHEAL	AMARE	AMBEL	ABUTH	ZEAMX	
Crop Code												
Rating Data Type							control	control	control	control	control	yield
Rating Unit							percent	percent	percent	percent	percent	bu/ac
Rating Date							6/29/2006	6/29/2006	6/29/2006	6/29/2006	6/29/2006	10/23/2006
Trt-Eval Interval							28 DA-B	28 DA-B	28 DA-B	28 DA-B	28 DA-B	HARVEST
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	16	17	18	19	20	
1	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	91	96	88	80	191	
1	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE						
2	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12"ZE	99	100	97	99	193	
2	Ammonium Sulfate		DF	3	lb/100 gal	10-12"ZE						
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	100	100	99	85	192	
3	BAS 799		DF	2.5	oz/a	5-8" ZE						
3	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE						
4	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	100	100	91	99	197	
4	Prowl H2O	3.8	L	2.5	pt/a	5-8" ZE						
4	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE						
5	Guardsman Max	5	L	2.5	pt/a	PRE	99	98	88	77	197	
5	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE						
5	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE						
6	Outlook	6	L	12	fl oz/a	PRE	99	98	94	81	187	
6	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE						
6	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE						
7	Guardsman Max	5	L	2.5	pt/a	PRE	99	100	98	81	193	
7	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE						
7	BAS 799		DF	2.5	oz/a	5-8" ZE						
7	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE						
8	Outlook	6	L	12	fl oz/a	PRE	99	100	99	86	193	
8	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE						
8	BAS 799		DF	2.5	oz/a	5-8" ZE						
8	Ammonium Sulfate		DF	3	lb/100 gal	5-8" ZE						
9	Untreated						0	0	0	0	5	
LSD (P=.05)							2.2	3.9	6.1	10.8	14.6	
Standard Deviation							1.5	2.7	4.2	7.4	10.0	
CV							1.73	3.06	4.99	9.64	5.81	