

MSU Weed Science Research Program

WEED CONTROL IN CORN WITH BAS 756, 2007

Trial ID: C0607  
Conducted:

Study Dir.:  
Investigator: James Kells

**Date Planted:** 5/7/07                      **Row Spacing:** 30 IN  
**Variety:** DKC 48-53                      **No. of Reps:** 3  
**Population:** 30,000 S/A                      **% OM:** 3.2  
**Soil Type:** Sandy Loam                      **pH:** 6.5  
**Plot Size:** 10 X 35 FT                      **Design:** RANDOMIZED COMPLETE BLOCK

**Tillage:** Fall Chisel, Spring Field Cultivated X2  
**Fertilizer:** 300 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, REDROOT	AMARANTHUS RETROFLEXUS L.
4.	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>	5/7/07	5/29/07	6/6/07
<b>Time Treated:</b>	7:37PM	9:30AM	4:20PM
<b>% Cloud Cover:</b>	30	65	20
<b>Air Temp., Unit:</b>	74 F	75 F	77 F
<b>% Relative Humidity:</b>	37	53	40
<b>Wind Speed/Unit/Dir:</b>	5 mph SE	4 mph SE	5 mph SW
<b>Soil Temp., Unit:</b>	62 F	61.5 F	74 F
<b>Soil/Leaf Surface M:</b>	5 5	5 5	5 5
<b>Soil Moist (1=w 5=d):</b>	5	2-3	2

**Crop Stage at Each Application**

	A	B	C
<b>Crop Name:</b>	ZEAMX	ZEAMX	ZEAMX
<b>Height (In.):</b>		4-6(5)	11-14(12)
<b>Stage (L):</b>		V3 5L	V4-5(5)8L

**Weed Stage at Each Application**

	A	B	C
<b>Weed 1 Name:</b>	ANGR	ANGR	ANGR
<b>Height (In.):</b>		.25-3(1)	1-11(7)
<b>Stage (L):</b>		2-4(3)	2-6(6)
<b>Weed 2 Name:</b>	CHEAL	CHEAL	CHEAL
<b>Height (In.):</b>		.25-1(.8)	1-7(5)
<b>Stage (L):</b>		Cot-6(4)	1-12(9)
<b>Weed 3 Name:</b>	AMARE	AMARE	AMARE
<b>Height (In.):</b>		.25-1(.5)	2-9(6)
<b>Stage (L):</b>		Cot-5(3)	2-13(11)
<b>Weed 4 Name:</b>	ABUTH	ABUTH	ABUTH
<b>Height (In.):</b>		.5-1.5(1)	2-8(5)
<b>Stage (L):</b>		Cot-4(2)	3-6(5)

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

	1	2	3
<b>Date:</b>	5/7/07	5/29/07	6/6/07
<b>Weed Name:</b>	ANGR	ANGR	ANGR
<b>Density:</b>		19	15
<b>Date:</b>	5/7/07	5/29/07	6/6/07
<b>Weed Name:</b>	CHEAL	CHEAL	CHEAL
<b>Density:</b>		31	25
<b>Date:</b>	5/7/07	5/29/07	6/6/07
<b>Weed Name:</b>	AMARE	AMARE	AMARE
<b>Density:</b>		1	1
<b>Date:</b>	5/7/07	5/29/07	6/6/07
<b>Weed Name:</b>	ABUTH	ABUTH	ABUTH
<b>Density:</b>		2	2

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**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	22"	20"	100"	20	H2O	30	
<b>C</b>	CUB	3.5	FF	8003	27"	20"	100"	20	H2O	30	

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Weed Code							ANGR	CHEAL	AMARE	ABUTH				ANGR	CHEAL	
Crop Code							ZEAMX					ZEAMX				
Rating Data Type							injury	control	control	control	control	injury	control	control		
Rating Unit							percent	percent	percent	percent	percent	percent	percent	percent		
Rating Date							5/29/07	5/29/07	5/29/07	5/29/07	5/29/07	6/12/07	6/12/07	6/12/07		
Trt-Eval Interval							AT MP	AT MP	AT MP	AT MP	AT MP	14 DA-B	14 DA-B	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	81	83		
1	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE										
2	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12" ZE						0	94	93		
2	Ammonium Sulfate	100	DF	8.5	lb/100 gal	10-12" ZE										
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE						0	89	94		
3	Status	61.1	DF	2.5	oz/a	5-8" ZE										
3	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE										
4	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE						0	92	98		
4	Callisto	4	SC	1.5	fl oz/a	5-8" ZE										
4	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE										
5	BAS 756	5	L	3	pt/a	5-8" ZE						0	94	99		
5	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE										
5	Activator 90		L	0.25	% v/v	5-8" ZE										
6	Guardsman Max	5	L	2.5	pt/a	PRE	0	100	100	100	93	0	99	100		
6	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12" ZE										
6	Ammonium Sulfate	100	DF	8.5	lb/100 gal	10-12" ZE										
7	Guardsman Max	5	L	2.5	pt/a	PRE	0	100	100	100	94	0	100	100		
7	Status	61.1	DF	2.5	oz/a	10-12" ZE										
7	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12" ZE										
7	Ammonium Sulfate	100	DF	8.5	lb/100 gal	10-12" ZE										
8	Untreated						0	0	0	0	0	0	0	0		
LSD (P=.05)							0.0	0.0	0.0	0.0	5.5	0.0	5.3	6.2		
Standard Deviation							0.0	0.0	0.0	0.0	2.4	0.0	3.0	3.5		
CV							0.0	0.0	0.0	0.0	3.92	0.0	3.64	4.15		

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Weed Code							AMARE	ABUTH	ZEAMX	ANGR	CHEAL	AMARE	ABUTH	ANGR
Crop Code														
Rating Data Type							control	control	injury	control	control	control	control	control
Rating Unit							percent	percent	percent	percent	percent	percent	percent	percent
Rating Date							6/12/07	6/12/07	6/26/07	6/26/07	6/26/07	6/26/07	6/26/07	7/10/07
Trt-Eval Interval							14 DA-B	14 DA-B	28 DA-B	28 DA-B	28 DA-B	28 DA-B	28 DA-B	42 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	9	10	11	12	13	14	15	16
1	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	92	79	0	68	58	78	69	63
1	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE								
2	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12" ZE	100	94	0	97	95	100	97	89
2	Ammonium Sulfate	100	DF	8.5	lb/100 gal	10-12" ZE								
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	100	84	0	70	68	96	69	70
3	Status	61.1	DF	2.5	oz/a	5-8" ZE								
3	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE								
4	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	100	98	0	81	85	100	97	76
4	Callisto	4	SC	1.5	fl oz/a	5-8" ZE								
4	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE								
5	BAS 756	5	L	3	pt/a	5-8" ZE	100	97	0	92	85	96	88	79
5	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE								
5	Activator 90		L	0.25	% v/v	5-8" ZE								
6	Guardsman Max	5	L	2.5	pt/a	PRE	100	99	0	98	100	100	92	92
6	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12" ZE								
6	Ammonium Sulfate	100	DF	8.5	lb/100 gal	10-12" ZE								
7	Guardsman Max	5	L	2.5	pt/a	PRE	100	98	0	99	100	100	97	90
7	Status	61.1	DF	2.5	oz/a	10-12" ZE								
7	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12" ZE								
7	Ammonium Sulfate	100	DF	8.5	lb/100 gal	10-12" ZE								
8	Untreated						0	0	0	0	0	0	0	0
LSD (P=.05)							8.3	5.7	0.0	9.7	12.9	12.0	8.7	7.3
Standard Deviation							4.6	3.2	0.0	5.5	7.3	6.7	4.9	4.1
CV							5.37	3.93	0.0	7.23	9.82	8.03	6.41	5.92

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Weed Code	CHEAL	AMARE	ABUTH	
Crop Code				Zeamx
Rating Data Type	control	control	control	yield
Rating Unit	percent	percent	percent	bu/ac
Rating Date	7/10/07	7/10/07	7/10/07	10/3/07
Trt-Eval Interval	42 DA-B	42 DA-B	42 DA-B	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	CHEAL	AMARE	ABUTH	Zeamx
1	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	65	80	63	187
1	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE				
2	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12" ZE	87	97	95	189
2	Ammonium Sulfate	100	DF	8.5	lb/100 gal	10-12" ZE				
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	73	95	74	195
3	Status	61.1	DF	2.5	oz/a	5-8" ZE				
3	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE				
4	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8" ZE	81	98	95	183
4	Callisto	4	SC	1.5	fl oz/a	5-8" ZE				
4	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE				
5	BAS 756	5	L	3	pt/a	5-8" ZE	79	95	83	173
5	Ammonium Sulfate	100	DF	8.5	lb/100 gal	5-8" ZE				
5	Activator 90		L	0.25	% v/v	5-8" ZE				
6	Guardsman Max	5	L	2.5	pt/a	PRE	88	98	92	185
6	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12" ZE				
6	Ammonium Sulfate	100	DF	8.5	lb/100 gal	10-12" ZE				
7	Guardsman Max	5	L	2.5	pt/a	PRE	98	100	95	183
7	Status	61.1	DF	2.5	oz/a	10-12" ZE				
7	Roundup WeatherMax	4.5	L	22	fl oz/a	10-12" ZE				
7	Ammonium Sulfate	100	DF	8.5	lb/100 gal	10-12" ZE				
8	Untreated						0	0	0	55

LSD (P=.05)	8.7	9.2	8.0	26.2
Standard Deviation	4.9	5.2	4.5	14.7
CV	6.86	6.25	6.01	8.74