

MSU Weed Science Research Program

WEED CONTROL SYSTEMS IN CORN WITH BAS 799, 2006

Trial ID: C0706  
 Conducted: CAMPUS

Study Dir.:  
 Investigator: Christy Sprague

**Date Planted:** 5/5/2006                      **Row Spacing:** 30 IN  
**Variety:** NK33Z7                              **No. of Reps:** 4  
**Population:** 29,000 S/A                      **% OM:** 3.0  
**Soil Type:** silty clay loam                      **pH:** 6.0  
**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, REDROOT	AMARANTHUS RETROFLEXUS L.
4.	AMBEL	RAGWEED, COMMON	AMBROSIA ELATIOR L.
5.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

**Application Description**

	A	B
<b>Application Timing:</b>	PRE	POST
<b>Date Treated:</b>	5/5/2006	6/5/2006
<b>Time Treated:</b>	12:30 pm	11:00 am
<b>% Cloud Cover:</b>	75	20
<b>Air Temp., Unit:</b>	70 F	88 F
<b>% Relative Humidity:</b>	47	28
<b>Wind Speed/Unit/Dir:</b>	3 mph	3 mph W
<b>Soil Temp., Unit:</b>	57.2 F	69.5 F
<b>Soil/Leaf Surface M:</b>	3 3	5 5
<b>Soil Moist (1=w 5=d):</b>	3	5

**Crop Stage at Each Application**

	A	B
<b>Crop Name:</b>	ZEAMX	ZEAMX
<b>Height (In.):</b>		9-14 (11)
<b>Stage (L):</b>		V3-5 (4)

**Weed Stage at Each Application**

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

**Application Equipment**

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	cub	3.5	FF	8003	18"	20"	100"	20	H2O	30
B	cub	3.5	FF	8003	23"	20"	100"	20	H2O	30

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Weed Code							ANGR	CHEAL	AMARE	AMBEL	ABUTH	ANGR		
Crop Code							ZEAMX					ZEAMX		
Rating Data Type							injury	control	control	control	control	injury	control	
Rating Unit							percent	percent	percent	percent	percent	percent	percent	
Rating Date							6/5/2006	6/5/2006	6/5/2006	6/5/2006	6/5/2006	6/12/2006	6/12/2006	
Trt-Eval Interval							AT POST	AT POST	AT POST	AT POST	AT POST	7 DAPO	7 DAPO	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7	8
1	Untreated						0	0	0	0	0	0	0	0
2	Guardsman Max	5	L	4	pt/a	PRE	0	99	100	100	99	96	0	98
2	BAS 799		DF	5	oz/a	POST								
2	Activator 90		L	0.25	% v/v	POST								
2	Ammonium Sulfate		DF	5	lb/100 gal	POST								
3	Outlook	6	L	16	fl oz/a	PRE	0	99	63	100	58	76	0	99
3	BAS 799		DF	5	oz/a	POST								
3	Activator 90		L	0.25	% v/v	POST								
3	Ammonium Sulfate		DF	5	lb/100 gal	POST								
4	Dual II Magnum	7.64	L	1.33	pt/a	PRE	0	100	55	98	44	62	0	99
4	Callisto	4	SC	3	fl oz/a	POST								
4	Herbimax		L	1	% v/v	POST								
4	Ammonium Sulfate		DF	8.5	lb/100 gal	POST								
5	Bicep II Magnum	5.5	L	2.1	qt/a	PRE	0	100	100	100	96	91	0	99
5	Callisto	4	SC	3	fl oz/a	POST								
5	Herbimax		L	1	% v/v	POST								
5	Ammonium Sulfate		DF	8.5	lb/100 gal	POST								
LSD (P=.05)							0.0	1.7	6.0	2.0	5.2	10.7	0.0	1.5
Standard Deviation							0.0	1.1	3.9	1.3	3.4	6.9	0.0	1.0
CV							0.0	1.42	6.12	1.62	5.67	10.64	0.0	1.23

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Weed Code	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX	ANGR	CHEAL
Crop Code							
Rating Data Type	control	control	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent
Rating Date	6/12/2006	6/12/2006	6/12/2006	6/12/2006	6/19/2006	6/19/2006	6/19/2006
Trt-Eval Interval	7 DAPO	7 DAPO	7 DAPO	7 DAPO	14 DAPO	14 DAPO	14 DAPO

Trt No.	Treatment	Form Conc	Form Type	Form Rate	Rate Unit	Grow Stg	9	10	11	12	13	14	15
1	Untreated						0	0	0	0	0	0	0
2	Guardsman Max	5	L	4	pt/a	PRE	100	100	99	96	0	98	100
2	BAS 799		DF	5	oz/a	POST							
2	Activator 90		L	0.25	% v/v	POST							
2	Ammonium Sulfate		DF	5	lb/100 gal	POST							
3	Outlook	6	L	16	fl oz/a	PRE	65	96	67	69	0	99	79
3	BAS 799		DF	5	oz/a	POST							
3	Activator 90		L	0.25	% v/v	POST							
3	Ammonium Sulfate		DF	5	lb/100 gal	POST							
4	Dual II Magnum	7.64	L	1.33	pt/a	PRE	73	99	64	71	0	98	99
4	Callisto	4	SC	3	fl oz/a	POST							
4	Herbimax		L	1	% v/v	POST							
4	Ammonium Sulfate		DF	8.5	lb/100 gal	POST							
5	Bicep II Magnum	5.5	L	2.1	qt/a	PRE	100	100	100	99	0	99	100
5	Callisto	4	SC	3	fl oz/a	POST							
5	Herbimax		L	1	% v/v	POST							
5	Ammonium Sulfate		DF	8.5	lb/100 gal	POST							

LSD (P=.05)	7.1	3.7	4.3	2.6	0.0	1.5	3.3
Standard Deviation	4.6	2.4	2.8	1.7	0.0	1.0	2.2
CV	6.87	3.0	4.21	2.5	0.0	1.27	2.86

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Weed Code						AMARE	AMBEL	ABUTH		ANGR	CHEAL	AMARE	AMBEL	
Crop Code									ZEAMX					
Rating Data Type						control	control	control	injury	control	control	control	control	
Rating Unit						percent	percent	percent	percent	percent	percent	percent	percent	
Rating Date						6/19/2006	6/19/2006	6/19/2006	7/3/2006	7/3/2006	7/3/2006	7/3/2006	7/3/2006	
Trt-Eval Interval						14 DAPO	14 DAPO	14 DAPO	28 DAPO	28 DAPO	28 DAPO	28 DAPO	28 DAPO	
Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Grow Stg	16	17	18	19	20	21	22	23
1	Untreated						0	0	0	0	0	0	0	0
2	Guardsman Max	5	L	4	pt/a	PRE	100	100	98	0	97	100	100	100
2	BAS 799		DF	5	oz/a	POST								
2	Activator 90		L	0.25	% v/v	POST								
2	Ammonium Sulfate		DF	5	lb/100 gal	POST								
3	Outlook	6	L	16	fl oz/a	PRE	100	74	86	9	94	100	99	100
3	BAS 799		DF	5	oz/a	POST								
3	Activator 90		L	0.25	% v/v	POST								
3	Ammonium Sulfate		DF	5	lb/100 gal	POST								
4	Dual II Magnum	7.64	L	1.33	pt/a	PRE	100	70	96	0	89	100	100	81
4	Callisto	4	SC	3	fl oz/a	POST								
4	Herbimax		L	1	% v/v	POST								
4	Ammonium Sulfate		DF	8.5	lb/100 gal	POST								
5	Bicep II Magnum	5.5	L	2.1	qt/a	PRE	100	100	100	0	96	100	100	100
5	Callisto	4	SC	3	fl oz/a	POST								
5	Herbimax		L	1	% v/v	POST								
5	Ammonium Sulfate		DF	8.5	lb/100 gal	POST								
LSD (P=.05)							0.7	1.9	2.5	1.7	4.0	0.0	1.0	3.5
Standard Deviation							0.4	1.2	1.6	1.1	2.6	0.0	0.7	2.3
CV							0.56	1.8	2.12	63.89	3.5	0.0	0.84	3.01

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Weed Code						ABUTH			
Crop Code							ZEAMX	ZEAMX	
Rating Data Type						control	root inj	yield	
Rating Unit						percent	percent	bu/ac	
Rating Date						7/3/2006	7/31/2006	10/23/2006	
Trt-Eval Interval						28 DAPO	56 DAPO	HARVEST	

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Grow Stg	ABUTH	ZEAMX	ZEAMX
							24	25	26
1	Untreated						0	0	74
2	Guardsman Max	5	L	4	pt/a	PRE	100	4	203
2	BAS 799		DF	5	oz/a	POST			
2	Activator 90		L	0.25	% v/v	POST			
2	Ammonium Sulfate		DF	5	lb/100 gal	POST			
3	Outlook	6	L	16	fl oz/a	PRE	99	4	192
3	BAS 799		DF	5	oz/a	POST			
3	Activator 90		L	0.25	% v/v	POST			
3	Ammonium Sulfate		DF	5	lb/100 gal	POST			
4	Dual II Magnum	7.64	L	1.33	pt/a	PRE	100	5	191
4	Callisto	4	SC	3	fl oz/a	POST			
4	Herbimax		L	1	% v/v	POST			
4	Ammonium Sulfate		DF	8.5	lb/100 gal	POST			
5	Bicep II Magnum	5.5	L	2.1	qt/a	PRE	100	4	202
5	Callisto	4	SC	3	fl oz/a	POST			
5	Herbimax		L	1	% v/v	POST			
5	Ammonium Sulfate		DF	8.5	lb/100 gal	POST			

LSD (P=.05)	1.1	1.3	35.4
Standard Deviation	0.7	0.9	23.0
CV	0.89	25.95	13.33