

MSU Weed Science Research Program

WEED CONTROL IN CORN WITH MESOTRIONE, 2006

Trial ID: C0606
 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	C	D
Application Timing:	PRE	EP	MP	POST
Date Treated:	5/5/2006	5/29/2006	6/1/2006	6/12/2006
Time Treated:	12:18 pm	7:00 pm	1:00 pm	10:15 am
% Cloud Cover:	75	30	96	10
Air Temp., Unit:	70 F	88 F	77 F	66 F
% Relative Humidity:	47	50	43	50
Wind Speed/Unit/Dir:	3 mph	3 mph SW	3 mph NE	2 mph NE
Soil Temp., Unit:	57.2 F	85 F	71 F	66 F
Soil/Leaf Surface M:	3 3	5 5	5 4	5 5
Soil Moist (1=w 5=d):	3	5	5	5

Crop Stage at Each Application

	A	B	C	D
Crop Name:	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Height (In.):		4-6 (5)	7-9 (9)	15-19 (18)
Stage (L):		V2-3 (2) 4L	V3-4 (4) 5L	V5-6 (5) 9L

Weed Stage at Each Application

	A	B	C	D
Weed 1 Name:	ANGR	ANGR	ANGR	ANGR
Height (In.):		.25-3 (1)	.5-4 (3)	1
Stage (L):		2-5 (3)	1-5 (3)	2
Weed 2 Name:	CHEAL	CHEAL	CHEAL	CHEAL
Height (In.):		.25-1 (.5)	.5-2 (1.5)	
Stage (L):		cot-5 (2)	2-8 (4)	
Weed 3 Name:	AMARE	AMARE	AMARE	AMARE
Height (In.):		.25	.5-2 (1)	
Stage (L):		cot	1-6 (4)	
Weed 4 Name:	AMBEL	AMBEL	AMBEL	AMBEL
Height (In.):		.25-2 (1.5)	.5-4 (2)	.25-1 (1)
Stage (L):		cot-4 (2)	2-6 (4)	cot-4 (4)
Weed 5 Name:	ABUTH	ABUTH	ABUTH	ABUTH
Height (In.):		.5-2 (.5)	1-2 (2)	.5-1 (1)
Stage (L):		cot-2 (2)	cot-3 (2)	1-2 (2)

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Weed Density (plants/sq. ft.)

	1	2
Date:	5/5/2006	5/29/2006
Weed Name:	ANGR	ANGR
Density:		62
Date:	5/5/2006	5/29/2006
Weed Name:	CHEAL	CHEAL
Density:		28
Date:	5/5/2006	5/29/2006
Weed Name:	AMARE	AMARE
Density:		2
Date:	5/5/2006	5/29/2006
Weed Name:	AMBEL	AMBEL
Density:		16
Date:	5/5/2006	5/29/2006
Weed Name:	ABUTH	ABUTH
Density:		<1

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	20"	20"	100"	20	H2O	30	
C	cub	3.5	FF	8003	23"	20"	100"	20	H2O	30	
D	cub	3.5	FF	8003	26"	20"	100"	20	H2O	30	

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Weed Code							ANGR	CHEAL	AMARE	AMBEL	ABUTH			ANGR	
Crop Code							ZEAMX					ZEAMX	ZEAMX	ANGR	
Rating Data Type							injury	control	control	control	control	injury	injury	control	
Rating Unit							percent	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	6/5/2006	6/12/2006	6/12/2006
Trt-Eval Interval							AT MP	AT MP	AT MP	AT MP	AT MP	AT MP	7 DAEP	14 DAEP	14 DAEP
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7	8	9
1	Untreated						0	0	0	0	0	0	0	0	0
2	Lumax	3.94	SE	3	qt/a	PRE	0	100	100	100	98	98	0	0	100
3	Lexar	3.7	L	3.5	qt/a	PRE	0	100	100	100	98	98	0	0	99
4	Lumax	3.94	SE	2	qt/a	PRE	0	99	100	100	94	97	0	0	99
4	Touchdown Total	4.17	L	24	fl oz/a	POST									
4	Ammonium Sulfate		DF	1	% w/w	POST									
5	Lexar	3.7	L	2.35	qt/a	PRE	0	99	100	100	96	98	0	0	98
5	Touchdown Total	4.17	L	24	fl oz/a	POST									
5	Ammonium Sulfate		DF	1	% w/w	POST									
6	Lumax	3.94	SE	2	qt/a	EP							0	0	100
6	Touchdown Total	4.17	L	24	fl oz/a	EP									
6	Ammonium Sulfate		DF	1	% w/w	EP									
7	Lexar	3.7	L	2.35	qt/a	EP							0	0	99
7	Touchdown Total	4.17	L	24	fl oz/a	EP									
7	Ammonium Sulfate		DF	1	% w/w	EP									
8	Lumax	3.94	SE	3	qt/a	PRE	0	100	100	100	100	99	0	0	100
8	Touchdown Total	4.17	L	24	fl oz/a	POST									
8	Ammonium Sulfate		DF	1	% w/w	POST									
9	Lexar	3.7	L	3.5	qt/a	PRE	0	100	100	100	100	99	0	0	99
9	Touchdown Total	4.17	L	24	fl oz/a	POST									
9	Ammonium Sulfate		DF	1	% w/w	POST									
10	Dual II Magnum	7.64	L	2	pt/a	PRE	0	100	70	92	55	78	0	0	100
10	Callisto	4	SC	3	fl oz/a	MP									
10	Atrazine	4	L	1	pt/a	MP									
10	Herbimax		L	1	% w/w	MP									
LSD (P=.05)							0.0	0.8	5.6	4.8	5.1	4.9	0.0	0.0	0.8
Standard Deviation							0.0	0.6	3.8	3.3	3.5	3.3	0.0	0.0	0.6
CV							0.0	0.65	4.56	3.81	4.32	3.99	0.0	0.0	0.63

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Weed Code	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX	ANGR	CHEAL	AMARE
Crop Code								
Rating Data Type	control	control	control	control	injury	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent	percent
Rating Date	6/12/2006	6/12/2006	6/12/2006	6/12/2006	6/27/2006	6/27/2006	6/27/2006	6/27/2006
Trt-Eval Interval	14 DAEP	14 DAEP	14 DAEP	14 DAEP	29 DAEP	29 DAEP	29 DAEP	29 DAEP

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Grow Stg	10	11	12	13	14	15	16	17
1	Untreated						0	0	0	0	0	0	0	0
2	Lumax	3.94	SE	3	qt/a	PRE	100	100	97	100	0	99	100	100
3	Lexar	3.7	L	3.5	qt/a	PRE	100	100	94	98	0	93	100	100
4	Lumax	3.94	SE	2	qt/a	PRE	100	100	89	99	0	100	100	100
4	Touchdown Total	4.17	L	24	fl oz/a	POST								
4	Ammonium Sulfate		DF	1	% w/w	POST								
5	Lexar	3.7	L	2.35	qt/a	PRE	100	100	91	99	0	100	100	100
5	Touchdown Total	4.17	L	24	fl oz/a	POST								
5	Ammonium Sulfate		DF	1	% w/w	POST								
6	Lumax	3.94	SE	2	qt/a	EP	100	100	100	100	0	97	100	100
6	Touchdown Total	4.17	L	24	fl oz/a	EP								
6	Ammonium Sulfate		DF	1	% w/w	EP								
7	Lexar	3.7	L	2.35	qt/a	EP	100	100	100	100	0	96	100	100
7	Touchdown Total	4.17	L	24	fl oz/a	EP								
7	Ammonium Sulfate		DF	1	% w/w	EP								
8	Lumax	3.94	SE	3	qt/a	PRE	100	100	96	100	0	100	100	100
8	Touchdown Total	4.17	L	24	fl oz/a	POST								
8	Ammonium Sulfate		DF	1	% w/w	POST								
9	Lexar	3.7	L	3.5	qt/a	PRE	100	100	95	99	0	100	100	100
9	Touchdown Total	4.17	L	24	fl oz/a	POST								
9	Ammonium Sulfate		DF	1	% w/w	POST								
10	Dual II Magnum	7.64	L	2	pt/a	PRE	100	100	100	100	0	99	100	100
10	Callisto	4	SC	3	fl oz/a	MP								
10	Atrazine	4	L	1	pt/a	MP								
10	Herbimax		L	1	% w/w	MP								
LSD (P=.05)							0.0	0.0	3.9	2.7	0.0	2.2	0.0	0.0
Standard Deviation							0.0	0.0	2.7	1.9	0.0	1.5	0.0	0.0
CV							0.0	0.0	3.11	2.08	0.0	1.74	0.0	0.0

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Weed Code							AMBEL	ABUTH	ANGR	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX	
Crop Code															
Rating Data Type							control	control	control	control	control	control	control	control	yield
Rating Unit							percent	percent	percent	percent	percent	percent	percent	percent	bu/ac
Rating Date							6/27/2006	6/27/2006	7/25/2006	7/25/2006	7/25/2006	7/25/2006	7/25/2006	7/25/2006	10/23/2006
Trt-Eval Interval							29 DAEP	29 DAEP	57 DAEP	57 DAEP	57 DAEP	57 DAEP	57 DAEP	57 DAEP	HARVEST
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	18	19	20	21	22	23	24	25	
1	Untreated						0	0	0	0	0	0	0	29	
2	Lumax	3.94	SE	3	qt/a	PRE	97	100	96	100	100	94	100	200	
3	Lexar	3.7	L	3.5	qt/a	PRE	95	97	92	100	100	91	98	201	
4	Lumax	3.94	SE	2	qt/a	PRE	99	100	100	100	100	99	100	200	
4	Touchdown Total	4.17	L	24	fl oz/a	POST									
4	Ammonium Sulfate		DF	1	% w/w	POST									
5	Lexar	3.7	L	2.35	qt/a	PRE	100	100	99	100	100	98	100	201	
5	Touchdown Total	4.17	L	24	fl oz/a	POST									
5	Ammonium Sulfate		DF	1	% w/w	POST									
6	Lumax	3.94	SE	2	qt/a	EP	99	100	93	100	100	100	100	202	
6	Touchdown Total	4.17	L	24	fl oz/a	EP									
6	Ammonium Sulfate		DF	1	% w/w	EP									
7	Lexar	3.7	L	2.35	qt/a	EP	100	99	94	100	100	100	100	196	
7	Touchdown Total	4.17	L	24	fl oz/a	EP									
7	Ammonium Sulfate		DF	1	% w/w	EP									
8	Lumax	3.94	SE	3	qt/a	PRE	99	100	100	100	100	98	100	201	
8	Touchdown Total	4.17	L	24	fl oz/a	POST									
8	Ammonium Sulfate		DF	1	% w/w	POST									
9	Lexar	3.7	L	3.5	qt/a	PRE	100	100	100	99	100	98	100	201	
9	Touchdown Total	4.17	L	24	fl oz/a	POST									
9	Ammonium Sulfate		DF	1	% w/w	POST									
10	Dual II Magnum	7.64	L	2	pt/a	PRE	100	100	98	100	100	100	100	194	
10	Callisto	4	SC	3	fl oz/a	MP									
10	Atrazine	4	L	1	pt/a	MP									
10	Herbimax		L	1	% w/w	MP									
LSD (P=.05)							2.1	2.2	3.3	1.2	0.0	4.9	2.3	8.3	
Standard Deviation							1.4	1.5	2.3	0.8	0.0	3.4	1.6	5.7	
CV							1.62	1.68	2.62	0.9	0.0	3.87	1.76	3.13	