

MSU Weed Science Research Program

WEED CONTROL IN CORN WITH PERMIT, 2006

Trial ID: C0306  
 Conducted: CAMPUS

Study Dir.:  
 Investigator: Christy Sprague

**Date Planted:** 5/4/2006                      **Row Spacing:** 30 IN  
**Variety:** P37R70                              **No. of Reps:** 3  
**Population:** 30,000 S/A                      **% OM:** 3.4  
**Soil Type:** clay loam                         **pH:** 6.6  
**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.	CHEAL	Common lambsquarters	Chenopodium album L.
2.	AMARE	PIGWEEED, REDROOT	AMARANTHUS RETROFLEXUS L.
3.	AMBEL	RAGWEEED, COMMON	AMBROSIA ELATIOR L.
4.	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>	5/4/2006	6/5/2006
<b>Time Treated:</b>	9:30 pm	11:00 am
<b>% Cloud Cover:</b>	30	20
<b>Air Temp., Unit:</b>	54 F	88 F
<b>% Relative Humidity:</b>	52	28
<b>Wind Speed/Unit/Dir:</b>	4 mph	2 mph W
<b>Soil Temp., Unit:</b>	62 F	70 F
<b>Soil/Leaf Surface M:</b>	4 4	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>		8-13 (11)
<b>Stage (L):</b>		V3-4 (4) 7L

**Weed Stage at Each Application**

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

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

	1	2
<b>Date:</b>	5/4/2006	6/5/2006
<b>Weed Name:</b>	CHEAL	CHEAL
<b>Density:</b>		15
<b>Date:</b>	5/4/2006	6/5/2006
<b>Weed Name:</b>	AMARE	AMARE
<b>Density:</b>		0
<b>Date:</b>	5/4/2006	6/5/2006
<b>Weed Name:</b>	AMBEL	AMBEL
<b>Density:</b>		13
<b>Date:</b>	5/4/2006	6/5/2006
<b>Weed Name:</b>	ABUTH	ABUTH
<b>Density:</b>		0

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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	23"	20"	100"	20	H2O	30

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Weed Code							CHEAL	AMARE	AMBEL	ABUTH			ANGR	
Crop Code							ZEAMX						ZEAMX	ZEAMX
Rating Data Type							injury	control	control	control	control	injury	injury	control
Rating Unit							percent	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	6/19/2006	6/19/2006
Trt-Eval Interval							AT MP	AT MP	AT MP	AT MP	AT MP	7 DAPO	14 DAPO	14 DAPO
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7	8
1	Dual II Magnum	7.64	L	0.75	pt/a	PRE						8	0	94
1	Permit	75	DF	0.66	oz/a	POST								
1	Atrazine	4	L	1	pt/a	POST								
1	Herbimax		L	1	% v/v	POST								
1	Ammonium Sulfate		DF	1	% w/w	POST								
2	Dual II Magnum	7.64	L	0.75	pt/a	PRE						8	0	87
2	Permit	75	DF	0.66	oz/a	POST								
2	Callisto	4	SC	1	oz/a	POST								
2	Herbimax		L	1	% v/v	POST								
2	Ammonium Sulfate		DF	1	% w/w	POST								
3	Dual II Magnum	7.64	L	0.75	pt/a	PRE						8	0	95
3	Permit	75	DF	0.66	oz/a	POST								
3	Impact	2.8	SC	0.5	fl oz/a	POST								
3	Herbimax		L	1	% v/v	POST								
3	Ammonium Sulfate		DF	1	% w/w	POST								
4	Dual II Magnum	7.64	L	0.75	pt/a	PRE						0	0	96
4	Callisto	4	SC	3	fl oz/a	POST								
4	Atrazine	4	L	0.66	pt/a	POST								
4	Herbimax		L	1	% v/v	POST								
4	Ammonium Sulfate		DF	1	% w/w	POST								
5	Dual II Magnum	7.64	L	0.75	pt/a	PRE	0	98	100	87	93	15	18	100
5	Permit	75	DF	0.66	oz/a	PRE								
5	Roundup WeatherMax	4.5	L	22	fl oz/a	POST								
5	Ammonium Sulfate		DF	1	% w/w	POST								
6	Dual II Magnum	7.64	L	0.75	pt/a	PRE	0	95	100	84	96	12	9	100
6	Permit	75	DF	0.66	oz/a	PRE								
6	GWN-5004		DF	3	oz/a	PRE								
6	Roundup WeatherMax	4.5	L	22	fl oz/a	POST								
6	Ammonium Sulfate		DF	1	% w/w	POST								
7	Untreated											0	0	0
7	Dual II Magnum	7.64	L	0.75	pt/a	PRE								
LSD (P=.05)							0.0	14.3	0.0	8.7	4.3	6.7	2.3	6.3
Standard Deviation							0.0	4.1	0.0	2.5	1.2	3.8	1.3	3.6
CV							0.0	4.22	0.0	2.91	1.3	51.21	33.76	4.35

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Weed Code		CHEAL	AMARE	AMBEL	ABUTH		ANGR	CHEAL	AMARE					
Crop Code						ZEAMX								
Rating Data Type		control	control	control	control	injury	control	control	control					
Rating Unit		percent	percent	percent	percent	percent	percent	percent	percent					
Rating Date		6/19/2006	6/19/2006	6/19/2006	6/19/2006	7/3/2006	7/3/2006	7/3/2006	7/3/2006					
Trt-Eval Interval		14 DAPO	14 DAPO	14 DAPO	14 DAPO	28 DAPO	28 DAPO	28 DAPO	28 DAPO					
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	9	10	11	12	13	14	15	16
1	Dual II Magnum	7.64	L	0.75	pt/a	PRE	96	98	72	90	0	87	98	100
1	Permit	75	DF	0.66	oz/a	POST								
1	Atrazine	4	L	1	pt/a	POST								
1	Herbimax		L	1	% v/v	POST								
1	Ammonium Sulfate		DF	1	% w/w	POST								
2	Dual II Magnum	7.64	L	0.75	pt/a	PRE	99	95	70	90	0	84	100	95
2	Permit	75	DF	0.66	oz/a	POST								
2	Callisto	4	SC	1	oz/a	POST								
2	Herbimax		L	1	% v/v	POST								
2	Ammonium Sulfate		DF	1	% w/w	POST								
3	Dual II Magnum	7.64	L	0.75	pt/a	PRE	80	95	77	95	0	94	77	100
3	Permit	75	DF	0.66	oz/a	POST								
3	Impact	2.8	SC	0.5	fl oz/a	POST								
3	Herbimax		L	1	% v/v	POST								
3	Ammonium Sulfate		DF	1	% w/w	POST								
4	Dual II Magnum	7.64	L	0.75	pt/a	PRE	100	100	95	100	0	92	100	100
4	Callisto	4	SC	3	fl oz/a	POST								
4	Atrazine	4	L	0.66	pt/a	POST								
4	Herbimax		L	1	% v/v	POST								
4	Ammonium Sulfate		DF	1	% w/w	POST								
5	Dual II Magnum	7.64	L	0.75	pt/a	PRE	99	100	100	99	10	98	97	100
5	Permit	75	DF	0.66	oz/a	PRE								
5	Roundup WeatherMax	4.5	L	22	fl oz/a	POST								
5	Ammonium Sulfate		DF	1	% w/w	POST								
6	Dual II Magnum	7.64	L	0.75	pt/a	PRE	99	100	99	100	2	98	99	100
6	Permit	75	DF	0.66	oz/a	PRE								
6	GWN-5004		DF	3	oz/a	PRE								
6	Roundup WeatherMax	4.5	L	22	fl oz/a	POST								
6	Ammonium Sulfate		DF	1	% w/w	POST								
7	Untreated						0	0	0	0	0	98	0	0
7	Dual II Magnum	7.64	L	0.75	pt/a	PRE								
LSD (P=.05)							5.4	4.6	7.8	4.7	1.9	4.3	5.1	3.4
Standard Deviation							3.1	2.6	4.4	2.6	1.1	2.4	2.8	1.9
CV							3.73	3.04	6.01	3.22	65.47	2.59	3.49	2.22

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Weed Code	AMBEL	ABUTH	ZEAMX
Crop Code			
Rating Data Type	control	control	YIELD
Rating Unit	percent	percent	bu/ac
Rating Date	7/3/2006	7/3/2006	10/21/2006
Trt-Eval Interval	28 DAPO	28 DAPO	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	AMBEL	ABUTH	ZEAMX
1	Dual II Magnum	7.64	L	0.75	pt/a	PRE	90	99	221
1	Permit	75	DF	0.66	oz/a	POST			
1	Atrazine	4	L	1	pt/a	POST			
1	Herbimax		L	1	% v/v	POST			
1	Ammonium Sulfate		DF	1	% w/w	POST			
2	Dual II Magnum	7.64	L	0.75	pt/a	PRE	87	100	213
2	Permit	75	DF	0.66	oz/a	POST			
2	Callisto	4	SC	1	oz/a	POST			
2	Herbimax		L	1	% v/v	POST			
2	Ammonium Sulfate		DF	1	% w/w	POST			
3	Dual II Magnum	7.64	L	0.75	pt/a	PRE	96	100	217
3	Permit	75	DF	0.66	oz/a	POST			
3	Impact	2.8	SC	0.5	fl oz/a	POST			
3	Herbimax		L	1	% v/v	POST			
3	Ammonium Sulfate		DF	1	% w/w	POST			
4	Dual II Magnum	7.64	L	0.75	pt/a	PRE	96	100	223
4	Callisto	4	SC	3	fl oz/a	POST			
4	Atrazine	4	L	0.66	pt/a	POST			
4	Herbimax		L	1	% v/v	POST			
4	Ammonium Sulfate		DF	1	% w/w	POST			
5	Dual II Magnum	7.64	L	0.75	pt/a	PRE	97	99	213
5	Permit	75	DF	0.66	oz/a	PRE			
5	Roundup WeatherMax	4.5	L	22	fl oz/a	POST			
5	Ammonium Sulfate		DF	1	% w/w	POST			
6	Dual II Magnum	7.64	L	0.75	pt/a	PRE	97	99	223
6	Permit	75	DF	0.66	oz/a	PRE			
6	GWN-5004		DF	3	oz/a	PRE			
6	Roundup WeatherMax	4.5	L	22	fl oz/a	POST			
6	Ammonium Sulfate		DF	1	% w/w	POST			
7	Untreated						0	0	142
7	Dual II Magnum	7.64	L	0.75	pt/a	PRE			
LSD (P=.05)							7.7	1.3	8.6
Standard Deviation							4.3	0.7	4.8
CV							5.38	0.87	2.32