

MSU Weed Science Research Program

PRE AND POST EMERGENCE WEED CONTROL IN CORN WITH HPPD INHIBITORS, 2007

Trial ID: C1207
 Conducted: CAMPUS

Study Dir.:
 Investigator: James Kells

Date Planted: 5/7/07 **Row Spacing:** 30 IN
Variety: DKC 48-53 **No. of Reps:** 4
Population: 30,000 S/A **% OM:** 3.3
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: 300lbs/A 46-0-0 Broadcast. 125lbs/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.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

Application Description

	A	B	C
Application Timing:	PRE	MP	LP
Date Treated:	5/8/07	6/6/07	6/11/07
Time Treated:	7:45AM	3:37PM	10:45AM
% Cloud Cover:	5	20	0
Air Temp., Unit:	64 F	77 F	89 F
% Relative Humidity:	60	40	40
Wind Speed/Unit/Dir:	5 mph S	5 mph SW	5 mph N
Soil Temp., Unit:	54 F	74 F	73.5 F
Soil/Leaf Surface M:	5 5	5 5	5 5
Soil Moist (1=w 5=d):	5	2	4

Crop Stage at Each Application

	A	B	C
Crop Name:	ZEAMX	ZEAMX	ZEAMX
Height (In.):		10-14(11)	12-17(15)
Stage (L):		V4-5(5)8L	V6 9L

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	ANGR	ANGR	ANGR
Height (In.):		1	1.5
Stage (L):		2	3
Weed 2 Name:	CHEAL	CHEAL	CHEAL
Height (In.):		1-3(2)	
Stage (L):		2-10(5)	
Weed 3 Name:	ABUTH	ABUTH	ABUTH
Height (In.):		1-3(2)	
Stage (L):		1-4(4)	

Weed Density (plants/sq. ft.)

	1	2	3
Date:	5/8/07	6/6/07	6/11/07
Weed Name:	ANGR	ANGR	ANGR
Density:		1	
Date:	5/8/07	6/6/07	6/11/07
Weed Name:	CHEAL	CHEAL	CHEAL
Density:		9	
Date:	5/8/07	6/6/07	6/11/07
Weed Name:	ABUTH	ABUTH	ABUTH
Density:		1	

Application Equipment

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Nozzle Width	Boom GPA	Carrier	PSI
A	CUB	3.5	FF	8003	18"	20	100"	20	H2O	30
B	CUB	3.5	FF	8003	21"	20	100"	20	H2O	30
C	CUB	3.5	FF	8003	25"	20	100"	20	H2O	30

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Weed Code							ANGR	CHEAL	AMARE	ABUTH			ANGR	CHEAL	
Crop Code							ZEAMX				ZEAMX	ZEAMX			
Rating Data Type							injury	control	control	control	control	injury	injury	control	control
Rating Unit							percent	percent	percent	percent	percent	percent	percent	percent	percent
Rating Date							6/7/07	6/7/07	6/7/07	6/7/07	6/7/07	6/13/07	6/21/07	6/21/07	6/21/07
Trt-Eval Interval							AT MP	AT MP	AT MP	AT MP	AT MP	7 DAMP	15 DAMP	15 DAMP	15 DAMP
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	100	0	0	98	100
3	Lexar	3.7	L	3.5	qt/a	PRE	0	96	100	100	100	0	0	91	100
4	Lumax	3.94	SE	2	qt/a	PRE	0	96	100	100	100	0	0	100	100
4	Touchdown Total	4.17	L	24	fl oz/a	LP									
4	Ammonium Sulfate	100	DF	1	% w/v	LP									
5	Lexar	3.7	L	2.35	qt/a	PRE	0	96	100	100	100	0	1	99	100
5	Touchdown Total	4.17	L	24	fl oz/a	LP									
5	Ammonium Sulfate	100	DF	1	% w/v	LP									
6	Lumax	3.94	SE	3	qt/a	PRE	0	98	100	100	100	0	0	99	100
6	Touchdown Total	4.17	L	24	fl oz/a	LP									
6	Ammonium Sulfate	100	DF	1	% w/v	LP									
7	Lexar	3.7	L	3.5	qt/a	PRE	0	98	100	100	100	0	0	99	100
7	Touchdown Total	4.17	L	24	fl oz/a	LP									
7	Ammonium Sulfate	100	DF	1	% w/v	LP									
8	Dual II Magnum	7.64	L	1.3	pt/a	PRE	0	94	55	100	60	8	6	97	100
8	Callisto	4	SC	3	fl oz/a	MP									
8	Atrazine	4	L	1	pt/a	MP									
8	Herbimax		L	1	% v/v	MP									
8	28% Nitrogen		L	2.5	% v/v	MP									
9	Dual II Magnum	7.64	L	1.3	pt/a	PRE	0	96	53	95	45	1	0	98	99
9	Impact	2.8	SC	0.5	fl oz/a	MP									
9	Atrazine	4	L	1	pt/a	MP									
9	MSO		L	1	% v/v	MP									
9	28% Nitrogen		L	2.5	% v/v	MP									
10	Dual II Magnum	7.64	L	1.3	pt/a	PRE	0	98	54	96	50	0	0	98	100
10	Laudis	3.5	SC	3	fl oz/a	MP									
10	Atrazine	4	L	1	pt/a	MP									
10	MSO		L	1	% v/v	MP									
10	28% Nitrogen		L	2.5	% v/v	MP									
11	Dual II Magnum	7.64	L	1.3	pt/a	PRE	0	96	60	98	59	1	0	91	100
11	Status	61.1	DF	5	oz/a	MP									
11	Atrazine	4	L	1	pt/a	MP									
11	Herbimax		L	1	% v/v	MP									
11	28% Nitrogen		L	2.5	% v/v	MP									
LSD (P=.05)							0.0	5.0	7.3	4.9	9.0	1.9	1.6	4.5	0.7
Standard Deviation							0.0	3.5	5.0	3.4	6.2	1.3	1.1	3.1	0.5
CV							0.0	3.95	6.74	3.76	8.45	146.77	158.93	3.53	0.5

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Weed Code							AMARE	ABUTH	ANGR	CHEAL	AMARE	ABUTH	ANGR	CHEAL
Crop Code														
Rating Data Type							control	control	control	control	control	control	control	control
Rating Unit							percent	percent	percent	percent	percent	percent	percent	percent
Rating Date							6/21/07	6/21/07	7/3/07	7/3/07	7/3/07	7/3/07	7/27/07	7/27/07
Trt-Eval Interval							15 DAMP	15 DAMP	27 DAMP	27 DAMP	27 DAMP	27 DAMP	51 DAMP	51 DAMP
Trt No.	Treatment Name	Form Conc	Form Type	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	100	100	95	100
3	Lexar	3.7	L	3.5	qt/a	PRE	100	100	85	100	100	100	86	100
4	Lumax	3.94	SE	2	qt/a	PRE	100	100	94	100	100	100	97	100
4	Touchdown Total	4.17	L	24	fl oz/a	LP								
4	Ammonium Sulfate	100	DF	1	% w/v	LP								
5	Lexar	3.7	L	2.35	qt/a	PRE	100	100	96	100	100	99	97	100
5	Touchdown Total	4.17	L	24	fl oz/a	LP								
5	Ammonium Sulfate	100	DF	1	% w/v	LP								
6	Lumax	3.94	SE	3	qt/a	PRE	100	100	96	100	100	100	99	100
6	Touchdown Total	4.17	L	24	fl oz/a	LP								
6	Ammonium Sulfate	100	DF	1	% w/v	LP								
7	Lexar	3.7	L	3.5	qt/a	PRE	100	100	97	100	100	100	98	99
7	Touchdown Total	4.17	L	24	fl oz/a	LP								
7	Ammonium Sulfate	100	DF	1	% w/v	LP								
8	Dual II Magnum	7.64	L	1.3	pt/a	PRE	100	100	95	100	100	100	94	100
8	Callisto	4	SC	3	fl oz/a	MP								
8	Atrazine	4	L	1	pt/a	MP								
8	Herbimax		L	1	% v/v	MP								
8	28% Nitrogen		L	2.5	% v/v	MP								
9	Dual II Magnum	7.64	L	1.3	pt/a	PRE	100	100	95	98	100	100	93	100
9	Impact	2.8	SC	0.5	fl oz/a	MP								
9	Atrazine	4	L	1	pt/a	MP								
9	MSO		L	1	% v/v	MP								
9	28% Nitrogen		L	2.5	% v/v	MP								
10	Dual II Magnum	7.64	L	1.3	pt/a	PRE	100	100	93	100	100	100	95	100
10	Laudis	3.5	SC	3	fl oz/a	MP								
10	Atrazine	4	L	1	pt/a	MP								
10	MSO		L	1	% v/v	MP								
10	28% Nitrogen		L	2.5	% v/v	MP								
11	Dual II Magnum	7.64	L	1.3	pt/a	PRE	100	100	87	100	100	100	88	100
11	Status	61.1	DF	5	oz/a	MP								
11	Atrazine	4	L	1	pt/a	MP								
11	Herbimax		L	1	% v/v	MP								
11	28% Nitrogen		L	2.5	% v/v	MP								
LSD (P=.05)							0.0	0.0	6.5	2.2	0.0	0.7	6.5	1.1
Standard Deviation							0.0	0.0	4.5	1.5	0.0	0.5	4.5	0.8
CV							0.0	0.0	5.33	1.71	0.0	0.5	5.29	0.83

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Weed Code	AMARE	ABUTH	
Crop Code			Zeamx
Rating Data Type	control	control	yield
Rating Unit	percent	percent	bu/ac
Rating Date	7/27/07	7/27/07	10/3/07
Trt-Eval Interval	51 DAMP	51 DAMP	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	18	19	20
1	Untreated						0	0	81
2	Lumax	3.94	SE	3	qt/a	PRE	100	100	180
3	Lexar	3.7	L	3.5	qt/a	PRE	100	100	177
4	Lumax	3.94	SE	2	qt/a	PRE	100	100	179
4	Touchdown Total	4.17	L	24	fl oz/a	LP			
4	Ammonium Sulfate	100	DF	1	% w/v	LP			
5	Lexar	3.7	L	2.35	qt/a	PRE	100	100	186
5	Touchdown Total	4.17	L	24	fl oz/a	LP			
5	Ammonium Sulfate	100	DF	1	% w/v	LP			
6	Lumax	3.94	SE	3	qt/a	PRE	100	100	182
6	Touchdown Total	4.17	L	24	fl oz/a	LP			
6	Ammonium Sulfate	100	DF	1	% w/v	LP			
7	Lexar	3.7	L	3.5	qt/a	PRE	100	100	184
7	Touchdown Total	4.17	L	24	fl oz/a	LP			
7	Ammonium Sulfate	100	DF	1	% w/v	LP			
8	Dual II Magnum	7.64	L	1.3	pt/a	PRE	100	100	172
8	Callisto	4	SC	3	fl oz/a	MP			
8	Atrazine	4	L	1	pt/a	MP			
8	Herbimax		L	1	% v/v	MP			
8	28% Nitrogen		L	2.5	% v/v	MP			
9	Dual II Magnum	7.64	L	1.3	pt/a	PRE	100	100	182
9	Impact	2.8	SC	0.5	fl oz/a	MP			
9	Atrazine	4	L	1	pt/a	MP			
9	MSO		L	1	% v/v	MP			
9	28% Nitrogen		L	2.5	% v/v	MP			
10	Dual II Magnum	7.64	L	1.3	pt/a	PRE	100	100	179
10	Laudis	3.5	SC	3	fl oz/a	MP			
10	Atrazine	4	L	1	pt/a	MP			
10	MSO		L	1	% v/v	MP			
10	28% Nitrogen		L	2.5	% v/v	MP			
11	Dual II Magnum	7.64	L	1.3	pt/a	PRE	100	100	179
11	Status	61.1	DF	5	oz/a	MP			
11	Atrazine	4	L	1	pt/a	MP			
11	Herbimax		L	1	% v/v	MP			
11	28% Nitrogen		L	2.5	% v/v	MP			

LSD (P=.05)	0.0	0.0	15.7
Standard Deviation	0.0	0.0	10.9
CV	0.0	0.0	6.34