

MSU Weed Science Research Program

WEED CONTROL WITH HPPD INHIBITORS, 2009

Trial ID: C0709
 Conducted: CAMPUS

Study Dir.: Andy Chomas
 Investigator: Wesley Everman

Date Planted: 5/7/09 **Row Spacing:** 30 IN
Variety: DEKALB 46-60 **No. of Reps:** 3
Population: 31,000 S/A **% OM:** 2.9
Soil Type: Loam **pH:** 6.4
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 Plant.

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	Annual Grass species	
2.	CHEAL	LAMBSQUARTERS, COMMON	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
Application Timing:	PRE	V3-V5	V4-V6
Date Treated:	5/7/09	6/4/09	6/10/09
Time Treated:	8:30 PM	8:50 AM	3:45 PM
% Cloud Cover:	60	5	25
Air Temp., Unit:	70 F	74 F	78 F
% Relative Humidity:	54	44	45
Wind Speed/Unit/Dir:	3 mph W	6 mph E	3 mph E
Soil Temp., Unit:	60 F	54 F	77 F
Soil/Leaf Surface M:		5	5
Soil Moist (1=w 5=d):	3	3	3

Crop Stage at Each Application

	A	B	C
Crop Name:	ZEAMX	ZEAMX	ZEAMX
Height (In.):		4-6(5)	8-11(9)
Stage (L):		5:V3	6:V4-6(5)

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	ANGR	ANGR	ANGR
Height (In.):		.3-4(3)	.3-6(3)
Stage (L):		1-5(4)	1
Weed 2 Name:	CHEAL	CHEAL	CHEAL
Height (In.):		.3-2(.5)	.3-1.5(1)
Stage (L):		cot-2(1)	2-4(3)
Weed 3 Name:	AMARE	AMARE	AMARE
Height (In.):		1-2(1)	.5-3(1.5)
Stage (L):		cot-5(3)	3-11(7)
Weed 4 Name:	ABUTH	ABUTH	ABUTH
Height (In.):		.25-2(1)	.3-3.5(2)
Stage (L):		cot-2(2)	1-3(3)

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Weed Density (plants/sq. ft.)

	1	2	3
Date:	5/7/09	6/4/09	6/10/09
Weed Name:	ANGR	ANGR	ANGR
Density:	25	7	
Date:	5/7/09	6/4/09	6/10/09
Weed Name:	CHEAL	CHEAL	CHEAL
Density:	14	5	
Date:	5/7/09	6/4/09	6/10/09
Weed Name:	AMARE	AMARE	AMARE
Density:	3	1	
Date:	5/7/09	6/4/09	6/10/09
Weed Name:	AMBEL	AMBEL	AMBEL
Date:	5/7/09	6/4/09	6/10/09
Weed Name:	ABUTH	ABUTH	ABUTH
Density:	2	3	

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	19"	20"	100"	20	H2O	30
B	CUB	3.5	FF	8003	22"	20"	100"	20	H2O	30
C	CUB	3.5	FF	8003	22"	20"	100"	20	H2O	30

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	ARM Action Codes	ZEAMX injury percent	ZEAMX injury percent	ZEAMX injury percent	ANGR control percent	CHEAL control percent	AMARE control percent	ABUTH control percent
							6/11/09	6/18/09	7/2/09	7/2/09	7/2/09	7/2/09	7/2/09
							7 DAV3	14 DAV3	28 DAV3	28 DAV3	28 DAV3	28 DAV3	28 DAV3

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7
1	Non-Treated						0	0	0	0	0	0	0
2	Dual II Magnum	7.64	L	0.66	pt/a	PRE	1	0	0	68	20	40	7
3	Dual II Magnum	7.64	L	0.66	pt/a	PRE	7	0	0	89	100	100	87
3	Impact	2.8	SC	0.75	fl oz/a	V3-V5ZE							
3	Atrazine	4	L	1	pt/a	V3-V5ZE							
3	MSO		L	1	% v/v	V3-V5ZE							
3	UAN 28%		L	2.5	% v/v	V3-V5ZE							
4	Dual II Magnum	7.64	L	0.66	pt/a	PRE	11	0	0	97	100	100	97
4	Laudis	3.5	SC	3	fl oz/a	V3-V5ZE							
4	Atrazine	4	L	1	pt/a	V3-V5ZE							
4	MSO		L	1	% v/v	V3-V5ZE							
4	UAN 28%		L	1.5	qt/a	V3-V5ZE							
5	Dual II Magnum	7.64	L	0.66	pt/a	PRE	3	0	0	92	89	88	87
5	Impact	2.8	SC	0.50	fl oz/a	V4-V6 ZE							
5	Roundup PowerMAX	4.5	L	22	fl oz/a	V4-V6 ZE							
5	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V4-V6 ZE							
6	Dual II Magnum	7.64	L	0.66	pt/a	PRE	2	0	0	97	100	100	92
6	Impact	2.8	SC	0.50	fl oz/a	V4-V6 ZE							
6	Roundup PowerMAX	4.5	L	22	fl oz/a	V4-V6 ZE							
6	Atrazine	4	L	1	pt/a	V4-V6 ZE							
6	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V4-V6 ZE							
7	Dual II Magnum	7.64	L	0.66	pt/a	PRE	2	0	0	93	88	93	86
7	Roundup PowerMAX	4.5	L	22	fl oz/a	V4-V6 ZE							
7	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V4-V6 ZE							
8	Dual II Magnum	7.64	L	0.66	pt/a	PRE	2	0	0	96	100	100	100
8	Impact	2.8	SC	0.75	fl oz/a	V4-V6 ZE							
8	Roundup PowerMAX	4.5	L	10.8	fl oz/a	V4-V6 ZE							
8	Atrazine	4	L	1	pt/a	V4-V6 ZE							
8	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V4-V6 ZE							
LSD (P=.05)							4.8	0.0	0.0	3.5	1.8	11.6	13.0
Standard Deviation							2.7	0.0	0.0	2.0	1.0	6.6	7.4
CV							83.3	0.0	0.0	2.51	1.4	8.53	10.68

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Weed Code
 Crop Code ZEAMX
 Rating Data Type yield
 Rating Unit bu/ac
 Rating Date 11/5/09
 Trt-Eval Interval HARVEST
 ARM Action Codes

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	
						8	
1	Non-Treated						167
2	Dual II Magnum	7.64	L	0.66	pt/a	PRE	232
3	Dual II Magnum	7.64	L	0.66	pt/a	PRE	259
3	Impact	2.8	SC	0.75	fl oz/a	V3-V5ZE	
3	Atrazine	4	L	1	pt/a	V3-V5ZE	
3	MSO		L	1	% v/v	V3-V5ZE	
3	UAN 28%		L	2.5	% v/v	V3-V5ZE	
4	Dual II Magnum	7.64	L	0.66	pt/a	PRE	260
4	Laudis	3.5	SC	3	fl oz/a	V3-V5ZE	
4	Atrazine	4	L	1	pt/a	V3-V5ZE	
4	MSO		L	1	% v/v	V3-V5ZE	
4	UAN 28%		L	1.5	qt/a	V3-V5ZE	
5	Dual II Magnum	7.64	L	0.66	pt/a	PRE	254
5	Impact	2.8	SC	0.50	fl oz/a	V4-V6 ZE	
5	Roundup PowerMAX	4.5	L	22	fl oz/a	V4-V6 ZE	
5	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V4-V6 ZE	
6	Dual II Magnum	7.64	L	0.66	pt/a	PRE	253
6	Impact	2.8	SC	0.50	fl oz/a	V4-V6 ZE	
6	Roundup PowerMAX	4.5	L	22	fl oz/a	V4-V6 ZE	
6	Atrazine	4	L	1	pt/a	V4-V6 ZE	
6	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V4-V6 ZE	
7	Dual II Magnum	7.64	L	0.66	pt/a	PRE	267
7	Roundup PowerMAX	4.5	L	22	fl oz/a	V4-V6 ZE	
7	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V4-V6 ZE	
8	Dual II Magnum	7.64	L	0.66	pt/a	PRE	246
8	Impact	2.8	SC	0.75	fl oz/a	V4-V6 ZE	
8	Roundup PowerMAX	4.5	L	10.8	fl oz/a	V4-V6 ZE	
8	Atrazine	4	L	1	pt/a	V4-V6 ZE	
8	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V4-V6 ZE	
LSD (P=.05)							25.7
Standard Deviation							14.6
CV							6.01