

MSU Weed Science Research Program

WEED CONTROL IN GAT CORN, 2009

Trial ID: DGAT  
 Conducted: CAMPUS C26

Study Dir.: Andy Chomas  
 Investigator: Wesley Everman

**Date Planted:** 5/18/09                      **Row Spacing:** 30 IN  
**Variety:** GAT                                      **No. of Reps:** 4  
**Population:** 25,000 S/A                      **% OM:** 3.3  
**Soil Type:** Sandy Loam                      **pH:** 6.2  
**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. No Starter

**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.	AMBEL	RAGWEEED, COMMON	AMBROSIA ARTEMISIIFOLIA
5.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

**Application Description**

	A	B	C
<b>Application Timing:</b>	PRE	EP	MP
<b>Date Treated:</b>	5/18/09	6/12/09	6/22/09
<b>Time Treated:</b>	11:30 AM	10:00 AM	4:45 PM
<b>% Cloud Cover:</b>	0	0	20
<b>Air Temp., Unit:</b>	63 F	67 F	83 F
<b>% Relative Humidity:</b>	34	52	52
<b>Wind Speed/Unit/Dir:</b>	5 mph W	4 mph W	3 mph E
<b>Soil Temp., Unit:</b>	51 F	60 F	82 F
<b>Soil/Leaf Surface M:</b>	5	5	5
<b>Soil Moist (1=w 5=d):</b>	4	3	2

**Crop Stage at Each Application**

	A	B	C
<b>Crop Name:</b>	ZEAMX	ZEAMX	ZEAMX
<b>Height (In.):</b>		4-6(5)	8-12(10)
<b>Stage (L):</b>		5:V2-3(2)	6:V5-6(5)

**Weed Stage at Each Application**

	A	B	C
<b>Weed 1 Name:</b>	ANGR	ANGR	ANGR
<b>Height (In.):</b>		.3-6(4)	2-8(6)
<b>Stage (L):</b>		1-4(4)	3-6(6)
<b>Weed 2 Name:</b>	CHEAL	CHEAL	CHEAL
<b>Height (In.):</b>		.2-3(2)	.3-4(3)
<b>Stage (L):</b>		cot-3(2)	cot-5(4)
<b>Weed 3 Name:</b>	AMARE	AMARE	AMARE
<b>Height (In.):</b>		.3-1(1)	.3-3(2)
<b>Stage (L):</b>		cot-2(2)	cot-4(3)
<b>Weed 4 Name:</b>	AMBEL	AMBEL	AMBEL
<b>Height (In.):</b>		.3-3(2)	2-9(7)
<b>Stage (L):</b>		cot-3(2)	2-6(4)
<b>Weed 5 Name:</b>	ABUTH	ABUTH	ABUTH
<b>Height (In.):</b>		.3-1(1)	.5-4(3)
<b>Stage (L):</b>		cot-2(2)	1-4(4)

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Weed Density (plants/sq. ft.)

1  
Date: 6/12/09  
Weed Name: ANGR  
Density: 8  
Date: 6/12/09  
Weed Name: CHEAL  
Density: 48  
Date: 6/12/09  
Weed Name: AMARE  
Density: 2  
Date: 6/12/09  
Weed Name: AMBEL  
Density: 7  
Date: 6/12/09  
Weed Name: ABUTH  
Density: <1

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom	GPA	Carrier	PSI
	Type	MPH	Type	Size	Height	Spacing	Width			
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	25"	20"	100"	30	H2O	30

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Weed Code								ANGR	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									6/23/09	6/23/09	6/23/09	6/23/09	6/23/09	6/29/09	7/7/09	7/7/09
Trt-Eval Interval									AT MP	AT MP	AT MP	AT MP	AT MP	7 DAMP	15 DAMP	15 DAMP
ARM Action Codes																

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7	8	9
1	Instigate		DF	6.9	oz/a	PRE	0	81	88	100	71	100	8	3	82
1	Cinch ATZ	5.5	L	1.5	pt/a	PRE									
2	Atrazine	4	L	1.63	qt/a	PRE	0	87	91	100	76	100	3	0	82
2	Cinch	7.64	L	1.32	pt/a	PRE									
3	Instigate		DF	6.9	oz/a	PRE	0	78	98	100	86	100	7	0	96
3	Atrazine	4	L	1	qt/a	PRE									
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP									
3	Ammonium Sulfate	100	DF	2	lb/a	MP									
4	Traverse		DF	2	oz/a	PRE	0	73	94	100	71	100	5	0	98
4	Atrazine	4	L	1	qt/a	PRE									
4	Roundup PowerMAX	4.5	L	22	fl oz/a	MP									
4	Trigate		DF	3.75	oz/a	MP									
4	Ammonium Sulfate	100	DF	2	lb/a	MP									
5	Cinch ATZ	5.5	L	1.5	pt/a	PRE	0	66	48	63	18	88	3	0	96
5	Roundup PowerMAX	4.5	L	22	fl oz/a	MP									
5	Trigate		DF	3.75	oz/a	MP									
5	Atrazine	4	L	1	qt/a	MP									
5	Ammonium Sulfate	100	DF	2	lb/a	MP									
6	Roundup PowerMAX	4.5	L	22	fl oz/a	EP	0	96	100	100	85	100	2	0	82
6	Trigate		DF	3.75	oz/a	EP									
6	Ammonium Sulfate	100	DF	2	lb/a	EP									
7	Roundup PowerMAX	4.5	L	22	fl oz/a	EP	0	98	100	100	100	100	0	0	86
7	Trigate		DF	3.75	oz/a	EP									
7	Atrazine	4	L	1.25	qt/a	EP									
7	Ammonium Sulfate	100	DF	2	lb/a	EP									
8	Roundup PowerMAX	4.5	L	22	fl oz/a	EP	0	91	98	99	86	98	0	0	78
8	Ammonium Sulfate	100	DF	2	lb/a	EP									
9	Non-Treated						0	15	20	25	5	25	0	0	0
LSD (P=.05)							0.0	16.7	24.5	29.8	11.6	26.6	5.4	2.4	9.2
Standard Deviation							0.0	11.4	16.8	20.4	7.9	18.2	3.1	1.7	6.3
CV							0.0	15.04	20.55	23.35	11.95	20.26	98.45	600.0	8.12

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Weed Code	CHEAL	AMARE	AMBEL	ABUTH	ANGR	CHEAL	AMARE	AMBEL
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	7/7/09	7/7/09	7/7/09	7/7/09	7/20/09	7/20/09	7/20/09	7/20/09
Trt-Eval Interval	15 DAMP	15 DAMP	15 DAMP	15 DAMP	28 DAMP	28 DAMP	28 DAMP	28 DAMP
ARM Action Codes								

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	10	11	12	13	14	15	16	17
1	Instigate		DF	6.9	oz/a	PRE	90	100	68	100	68	82	95	62
1	Cinch ATZ	5.5	L	1.5	pt/a	PRE								
2	Atrazine	4	L	1.63	qt/a	PRE	85	98	68	100	73	75	96	63
2	Cinch	7.64	L	1.32	pt/a	PRE								
3	Instigate		DF	6.9	oz/a	PRE	100	100	95	100	89	99	100	99
3	Atrazine	4	L	1	qt/a	PRE								
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP								
3	Ammonium Sulfate	100	DF	2	lb/a	MP								
4	Traverse		DF	2	oz/a	PRE	100	100	93	100	95	100	100	98
4	Atrazine	4	L	1	qt/a	PRE								
4	Roundup PowerMAX	4.5	L	22	fl oz/a	MP								
4	Trigate		DF	3.75	oz/a	MP								
4	Ammonium Sulfate	100	DF	2	lb/a	MP								
5	Cinch ATZ	5.5	L	1.5	pt/a	PRE	100	100	85	94	96	100	100	99
5	Roundup PowerMAX	4.5	L	22	fl oz/a	MP								
5	Trigate		DF	3.75	oz/a	MP								
5	Atrazine	4	L	1	qt/a	MP								
5	Ammonium Sulfate	100	DF	2	lb/a	MP								
6	Roundup PowerMAX	4.5	L	22	fl oz/a	EP	100	100	93	100	80	96	100	87
6	Trigate		DF	3.75	oz/a	EP								
6	Ammonium Sulfate	100	DF	2	lb/a	EP								
7	Roundup PowerMAX	4.5	L	22	fl oz/a	EP	100	100	100	100	77	100	100	98
7	Trigate		DF	3.75	oz/a	EP								
7	Atrazine	4	L	1.25	qt/a	EP								
7	Ammonium Sulfate	100	DF	2	lb/a	EP								
8	Roundup PowerMAX	4.5	L	22	fl oz/a	EP	89	98	76	96	69	75	98	70
8	Ammonium Sulfate	100	DF	2	lb/a	EP								
9	Non-Treated						0	0	0	0	0	0	0	0
LSD (P=.05)							12.1	1.9	18.3	6.8	7.9	13.8	4.5	5.4
Standard Deviation							8.3	1.3	12.6	4.7	5.4	9.5	3.1	3.7
CV							9.78	1.44	16.68	5.34	7.55	11.71	3.52	4.97

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Weed Code	ABUTH	ANGR	CHEAL	AMARE	AMBEL	ABUTH
Crop Code						
Rating Data Type	control	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Rating Date	7/20/09	7/27/09	7/27/09	7/27/09	7/27/09	7/27/09
Trt-Eval Interval	28 DAMP	35 DAMP	35 DAMP	35 DAMP	35 DAMP	35 DAMP
ARM Action Codes						

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	18	19	20	21	22	23
1	Instigate		DF	6.9	oz/a	PRE	98	65	88	100	73	100
1	Cinch ATZ	5.5	L	1.5	pt/a	PRE						
2	Atrazine	4	L	1.63	qt/a	PRE	95	68	68	100	43	93
2	Cinch	7.64	L	1.32	pt/a	PRE						
3	Instigate		DF	6.9	oz/a	PRE	100	78	98	100	89	100
3	Atrazine	4	L	1	qt/a	PRE						
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP						
3	Ammonium Sulfate	100	DF	2	lb/a	MP						
4	Traverse		DF	2	oz/a	PRE	100	88	100	100	91	100
4	Atrazine	4	L	1	qt/a	PRE						
4	Roundup PowerMAX	4.5	L	22	fl oz/a	MP						
4	Trigate		DF	3.75	oz/a	MP						
4	Ammonium Sulfate	100	DF	2	lb/a	MP						
5	Cinch ATZ	5.5	L	1.5	pt/a	PRE	100	94	100	100	97	100
5	Roundup PowerMAX	4.5	L	22	fl oz/a	MP						
5	Trigate		DF	3.75	oz/a	MP						
5	Atrazine	4	L	1	qt/a	MP						
5	Ammonium Sulfate	100	DF	2	lb/a	MP						
6	Roundup PowerMAX	4.5	L	22	fl oz/a	EP	100	72	98	100	85	98
6	Trigate		DF	3.75	oz/a	EP						
6	Ammonium Sulfate	100	DF	2	lb/a	EP						
7	Roundup PowerMAX	4.5	L	22	fl oz/a	EP	100	74	100	100	96	100
7	Trigate		DF	3.75	oz/a	EP						
7	Atrazine	4	L	1.25	qt/a	EP						
7	Ammonium Sulfate	100	DF	2	lb/a	EP						
8	Roundup PowerMAX	4.5	L	22	fl oz/a	EP	95	62	69	95	65	88
8	Ammonium Sulfate	100	DF	2	lb/a	EP						
9	Non-Treated						0	0	0	0	0	0
LSD (P=.05)							4.5	10.1	10.6	2.9	18.1	7.0
Standard Deviation							3.1	6.9	7.3	2.0	12.4	4.8
CV							3.5	10.32	9.11	2.22	17.44	5.55