

MSU Weed Science Research Program

WEED CONTROL IN CORN WITH METOLACHLOR FORMULATIONS, 2009

Trial ID: C2009
 Conducted: CAMPUS C26

Study Dir.: Andy Chomas
 Investigator: Wesley Everman

Date Planted: 5/12/09 **Row Spacing:** 30 IN
Variety: DEKALB 46-60 **No. of Reps:** 4
Population: 31,000 S/A **% OM:** 1.8
Soil Type: Sandy Loam **pH:** 6.6
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. 200 lbs/A 19-19-19 In Row at Planting.

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
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

Application Description

	A	B
Application Timing:	MP	LP
Date Treated:	6/16/09	6/18/09
Time Treated:	11:00 AM	5:00 PM
% Cloud Cover:	45	20
Air Temp., Unit:	71 F	80 F
% Relative Humidity:	51	50
Wind Speed/Unit/Dir:	4 mph E	2 mph W
Soil Temp., Unit:	72 F	81 F
Soil/Leaf Surface M:	4	5
Soil Moist (1=w 5=d):	4	2

Crop Stage at Each Application

	A	B
Crop Name:	ZEAMX	ZEAMX
Height (In.):	8-11(10)	8-13(12)
Stage (L):	8:V4-5(5)	8:V4-6(6)

Weed Stage at Each Application

	A	B
Weed 1 Name:	ANGR	ANGR
Height (In.):	.5-8(4)	.5-10(5)
Stage (L):	3-6(5)	3-6(5)
Weed 2 Name:	CHEAL	CHEAL
Height (In.):	.5-4(4)	.5-4(4)
Stage (L):	cot-5(3)	cot-5(3)
Weed 3 Name:	AMARE	AMARE
Height (In.):	1-3(2)	1-5(3)
Stage (L):	4-6(6)	4-8(6)
Weed 4 Name:	AMBEL	AMBEL
Height (In.):	1-6(4)	1-5(3)
Stage (L):	4-6(6)	4-6(6)

Weed Density (plants/sq. ft.)

	1
Date:	6/16/09
Weed Name:	ANGR
Density:	22
Date:	6/16/09
Weed Name:	CHEAL
Density:	46
Date:	6/16/09
Weed Name:	AMARE
Density:	3
Date:	6/16/09
Weed Name:	AMBEL

Density:

2

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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	24"	20"	100"	20	H2O	30
B	BackPack	3.5	FF	8003	24"	20"	100"	20	H2O	30

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Weed Code	ZEAMX	ANGR	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX
Crop Code	injury	control	control	control	control	control	injury
Rating Data Type	percent	percent	percent	percent	percent	percent	percent
Rating Unit	6/30/09	6/30/09	6/30/09	6/30/09	6/30/09	6/30/09	7/15/09
Rating Date	14 DAMP	14 DAMP	14 DAMP	14 DAMP	14 DAMP	14 DAMP	29 DAMP
Trt-Eval Interval							
ARM Action Codes							

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7
1	Parallel	7.8	EC	1	pt/a	MP	0	98	83	100	83	100	0
1	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
1	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
2	Dual II Magnum	7.64	L	1	pt/a	MP	0	100	88	100	87	99	0
2	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
2	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
3	Parallel	7.8	EC	1.5	pt/a	MP	0	99	94	100	85	99	0
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
3	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
4	Dual II Magnum	7.64	L	1.5	pt/a	MP	0	100	93	100	86	100	0
4	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
4	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
5	Parallel	7.8	EC	2	pt/a	MP	1	99	89	100	81	96	0
5	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
5	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
6	Dual II Magnum	7.64	L	2	pt/a	MP	0	100	95	100	82	96	0
6	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
6	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
7	Parallel	7.8	EC	4	pt/a	MP	6	100	98	100	77	100	0
7	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
7	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
8	Dual II Magnum	7.64	L	4	pt/a	MP	5	100	96	100	80	100	0
8	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
8	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
9	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	0	96	83	100	84	100	0
9	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
10	Parallel	7.8	EC	1.5	pt/a	LP	5	99	100	100	98	100	0
10	Roundup PowerMAX	4.5	L	22	fl oz/a	LP							
10	Ammonium Sulfate	100	DF	17	lb/100 gal	LP							
10	Atrazine	4	L	1	qt/a	LP							
11	Dual II Magnum	7.64	L	1.5	pt/a	LP	6	100	100	100	100	100	0
11	Roundup PowerMAX	4.5	L	22	fl oz/a	LP							
11	Ammonium Sulfate	100	DF	17	lb/100 gal	LP							
11	Atrazine	4	L	1	qt/a	LP							
12	Non-Treated						0	0	0	0	0	0	0
LSD (P=.05)							1.9	2.6	8.4	0.0	5.3	5.0	0.0
Standard Deviation							1.3	1.8	5.8	0.0	3.7	3.4	0.0
CV							65.04	2.0	6.84	0.0	4.7	3.78	0.0

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Crop Code							
Rating Data Type	control	control	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent
Rating Date	7/15/09	7/15/09	7/15/09	7/15/09	7/15/09	7/28/09	7/28/09
Trt-Eval Interval	29 DAMP	29 DAMP	29 DAMP	29 DAMP	29 DAMP	42 DAMP	42 DAMP
ARM Action Codes							

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	8	9	10	11	12	13	14
1	Parallel	7.8	EC	1	pt/a	MP	91	77	100	87	100	90	70
1	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
1	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
2	Dual II Magnum	7.64	L	1	pt/a	MP	93	82	100	89	98	93	79
2	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
2	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
3	Parallel	7.8	EC	1.5	pt/a	MP	95	83	99	85	99	94	76
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
3	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
4	Dual II Magnum	7.64	L	1.5	pt/a	MP	93	87	100	88	97	93	80
4	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
4	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
5	Parallel	7.8	EC	2	pt/a	MP	94	84	100	86	94	90	78
5	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
5	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
6	Dual II Magnum	7.64	L	2	pt/a	MP	96	89	100	88	96	91	88
6	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
6	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
7	Parallel	7.8	EC	4	pt/a	MP	91	91	97	76	95	95	93
7	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
7	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
8	Dual II Magnum	7.64	L	4	pt/a	MP	96	89	100	80	100	96	90
8	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
8	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
9	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	85	73	94	86	95	75	70
9	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
10	Parallel	7.8	EC	1.5	pt/a	LP	99	100	100	99	100	96	98
10	Roundup PowerMAX	4.5	L	22	fl oz/a	LP							
10	Ammonium Sulfate	100	DF	17	lb/100 gal	LP							
10	Atrazine	4	L	1	qt/a	LP							
11	Dual II Magnum	7.64	L	1.5	pt/a	LP	99	100	100	100	100	95	100
11	Roundup PowerMAX	4.5	L	22	fl oz/a	LP							
11	Ammonium Sulfate	100	DF	17	lb/100 gal	LP							
11	Atrazine	4	L	1	qt/a	LP							
12	Non-Treated						0	0	0	0	0	0	0
LSD (P=.05)							3.4	8.1	2.8	5.1	5.5	3.9	7.4
Standard Deviation							2.4	5.6	2.0	3.5	3.8	2.7	5.1
CV							2.75	7.08	2.17	4.37	4.25	3.19	6.65

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Crop Code							
Rating Data Type	control	control	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent
Rating Date	7/28/09	7/28/09	7/28/09	8/11/09	8/11/09	8/11/09	8/11/09
Trt-Eval Interval	42 DAMP	42 DAMP	42 DAMP	56 DAMP	56 DAMP	56 DAMP	56 DAMP
ARM Action Codes							

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	15	16	17	18	19	20	21
1	Parallel	7.8	EC	1	pt/a	MP	98	71	100	91	72	96	76
1	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
1	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
2	Dual II Magnum	7.64	L	1	pt/a	MP	100	76	95	89	71	98	78
2	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
2	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
3	Parallel	7.8	EC	1.5	pt/a	MP	99	80	99	93	78	96	74
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
3	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
4	Dual II Magnum	7.64	L	1.5	pt/a	MP	100	78	91	91	80	99	77
4	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
4	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
5	Parallel	7.8	EC	2	pt/a	MP	100	70	90	93	77	100	76
5	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
5	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
6	Dual II Magnum	7.64	L	2	pt/a	MP	100	79	95	94	87	100	75
6	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
6	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
7	Parallel	7.8	EC	4	pt/a	MP	98	70	98	92	87	98	69
7	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
7	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
8	Dual II Magnum	7.64	L	4	pt/a	MP	100	73	98	93	89	99	71
8	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
8	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
9	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	95	74	93	83	71	91	79
9	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
10	Parallel	7.8	EC	1.5	pt/a	LP	100	100	100	99	98	100	100
10	Roundup PowerMAX	4.5	L	22	fl oz/a	LP							
10	Ammonium Sulfate	100	DF	17	lb/100 gal	LP							
10	Atrazine	4	L	1	qt/a	LP							
11	Dual II Magnum	7.64	L	1.5	pt/a	LP	100	98	100	97	100	100	100
11	Roundup PowerMAX	4.5	L	22	fl oz/a	LP							
11	Ammonium Sulfate	100	DF	17	lb/100 gal	LP							
11	Atrazine	4	L	1	qt/a	LP							
12	Non-Treated						0	0	0	0	0	0	0
LSD (P=.05)							4.0	7.5	8.4	5.1	9.6	4.9	4.5
Standard Deviation							2.8	5.2	5.8	3.5	6.7	3.4	3.1
CV							3.04	7.14	6.62	4.18	8.81	3.77	4.23

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Trial ID: C2009

Study Dir.: Andy Chomas

Conducted: CAMPUS C26

Investigator: Wesley Everman

Weed Code ABUTH
 Crop Code
 Rating Data Type control
 Rating Unit percent
 Rating Date 8/11/09
 Trt-Eval Interval 56 DAMP
 ARM Action Codes

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	22
1	Parallel	7.8	EC	1	pt/a	MP	95
1	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	
1	Ammonium Sulfate	100	DF	17	lb/100 gal	MP	
2	Dual II Magnum	7.64	L	1	pt/a	MP	98
2	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	
2	Ammonium Sulfate	100	DF	17	lb/100 gal	MP	
3	Parallel	7.8	EC	1.5	pt/a	MP	100
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	
3	Ammonium Sulfate	100	DF	17	lb/100 gal	MP	
4	Dual II Magnum	7.64	L	1.5	pt/a	MP	93
4	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	
4	Ammonium Sulfate	100	DF	17	lb/100 gal	MP	
5	Parallel	7.8	EC	2	pt/a	MP	90
5	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	
5	Ammonium Sulfate	100	DF	17	lb/100 gal	MP	
6	Dual II Magnum	7.64	L	2	pt/a	MP	93
6	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	
6	Ammonium Sulfate	100	DF	17	lb/100 gal	MP	
7	Parallel	7.8	EC	4	pt/a	MP	100
7	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	
7	Ammonium Sulfate	100	DF	17	lb/100 gal	MP	
8	Dual II Magnum	7.64	L	4	pt/a	MP	96
8	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	
8	Ammonium Sulfate	100	DF	17	lb/100 gal	MP	
9	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	96
9	Ammonium Sulfate	100	DF	17	lb/100 gal	MP	
10	Parallel	7.8	EC	1.5	pt/a	LP	100
10	Roundup PowerMAX	4.5	L	22	fl oz/a	LP	
10	Ammonium Sulfate	100	DF	17	lb/100 gal	LP	
10	Atrazine	4	L	1	qt/a	LP	
11	Dual II Magnum	7.64	L	1.5	pt/a	LP	100
11	Roundup PowerMAX	4.5	L	22	fl oz/a	LP	
11	Ammonium Sulfate	100	DF	17	lb/100 gal	LP	
11	Atrazine	4	L	1	qt/a	LP	
12	Non-Treated						0

LSD (P=.05) 8.9
 Standard Deviation 6.1
 CV 6.94