

MSU Weed Science Research Program

PRE AND POST WEED CONTROL COMPARISONS IN CORN, 2009

Trial ID: C0809
 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
Application Timing:	PRE	MP
Date Treated:	5/7/09	6/4/09
Time Treated:	8:45 PM	4:30 PM
% Cloud Cover:	60	25
Air Temp., Unit:	70 F	77 F
% Relative Humidity:	54	25
Wind Speed/Unit/Dir:	3 mph W	3 mph S
Soil Temp., Unit:	60 F	78 F
Soil/Leaf Surface M:		5
Soil Moist (1=w 5=d):	3	4

Crop Stage at Each Application

	A	B
Crop Name:	ZEAMX	ZEAMX
Height (In.):		6-11(8)
Stage (L):		6:V3-4(3)

Weed Stage at Each Application

	A	B
Weed 1 Name:	ANGR	ANGR
Height (In.):		1-5(3)
Stage (L):		1-4(3)
Weed 2 Name:	CHEAL	CHEAL
Height (In.):		1-3(2)
Stage (L):		2-4(4)
Weed 3 Name:	AMARE	AMARE
Height (In.):		.3-2.5(2)
Stage (L):		1-6(4)
Weed 4 Name:	ABUTH	ABUTH
Height (In.):		1-2.5(2)
Stage (L):		cot-3

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Weed Density (plants/sq. ft.)

	1	2
Date:	5/7/09	6/4/09
Weed Name:	ANGR	ANGR
Density:	38	
Date:	5/7/09	6/4/09
Weed Name:	CHEAL	CHEAL
Density:	62	
Date:	5/7/09	6/4/09
Weed Name:	AMARE	AMARE
Density:	3	
Date:	5/7/09	6/4/09
Weed Name:	AMBEL	AMBEL
Density:	<1	
Date:	5/7/09	6/4/09
Weed Name:	ABUTH	ABUTH
Density:	<1	

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

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Weed Code	ANGR	CHEAL	AMARE	AMBEL	ABUTH	ANGR
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Rating Data Type	injury	control	control	control	control	injury
Rating Unit	percent	percent	percent	percent	percent	percent
Rating Date	6/4/09	6/4/09	6/4/09	6/4/09	6/4/09	6/18/09
Trt-Eval Interval	AT MP	AT MP	AT MP	AT MP	AT MP	14 DAMP
ARM Action Codes	AT MP	AT MP	AT MP	AT MP	AT MP	14 DAMP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7	8
1	Untreated												0	0
2	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							0	92
2	Ammonium Sulfate	100	DF	17	lb/100 gal	MP								
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							0	99
3	Status	56	DF	2.5	oz/a	MP								
3	Ammonium Sulfate	100	DF	17	lb/100 gal	MP								
4	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							0	98
4	Status	56	DF	5	oz/a	MP								
4	Ammonium Sulfate	100	DF	17	lb/100 gal	MP								
5	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							0	99
5	Callisto	4	SC	1.5	fl oz/a	MP								
5	Atrazine	4	L	0.5	qt/a	MP								
5	Ammonium Sulfate	100	DF	17	lb/100 gal	MP								
6	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							0	98
6	Prowl H2O	3.8	L	2	pt/a	MP								
6	Status	56	DF	2.5	oz/a	MP								
6	Ammonium Sulfate	100	DF	17	lb/100 gal	MP								
7	Guardsman Max	5	L	2.5	pt/a	PRE	0	96	100	100	100	83	0	99
7	Roundup PowerMAX	4.5	L	22	fl oz/a	MP								
7	Ammonium Sulfate	100	DF	17	lb/100 gal	MP								
8	Guardsman Max	5	L	2.5	pt/a	PRE	0	96	100	100	100	86	0	100
8	Roundup PowerMAX	4.5	L	22	fl oz/a	MP								
8	Status	56	DF	2.5	oz/a	MP								
8	Ammonium Sulfate	100	DF	17	lb/100 gal	MP								
LSD (P=.05)							0.0	0.0	0.0	0.0	0.0	6.3	0.0	2.4
Standard Deviation							0.0	0.0	0.0	0.0	0.0	1.8	0.0	1.3
CV							0.0	0.0	0.0	0.0	0.0	2.11	0.0	1.57

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

Trt No.	Treatment	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	9	10	11	12	13	14	15
1	Untreated						0	0	0	0	0	0	0
2	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	89	100	98	0	75	85	81
2	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	92	100	98	0	79	86	85
3	Status	56	DF	2.5	oz/a	MP							
3	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
4	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	93	100	100	0	84	88	96
4	Status	56	DF	5	oz/a	MP							
4	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
5	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	100	100	100	0	80	100	100
5	Callisto	4	SC	1.5	fl oz/a	MP							
5	Atrazine	4	L	0.5	qt/a	MP							
5	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
6	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	90	100	100	0	92	98	99
6	Prowl H2O	3.8	L	2	pt/a	MP							
6	Status	56	DF	2.5	oz/a	MP							
6	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
7	Guardsman Max	5	L	2.5	pt/a	PRE	99	100	100	0	87	83	81
7	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
7	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
8	Guardsman Max	5	L	2.5	pt/a	PRE	100	100	100	0	88	84	97
8	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
8	Status	56	DF	2.5	oz/a	MP							
8	Ammonium Sulfate	100	DF	17	lb/100 gal	MP							
LSD (P=.05)							6.9	0.0	2.3	0.0	6.0	5.0	6.9
Standard Deviation							4.0	0.0	1.3	0.0	3.4	2.9	4.0
CV							4.78	0.0	1.53	0.0	4.71	3.67	4.97

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Weed Code	ABUTH	ANGR	CHEAL	AMARE	ABUTH	
Crop Code						ZEAMX
Rating Data Type	control	control	control	control	control	yield
Rating Unit	percent	percent	percent	percent	percent	bu/ac
Rating Date	7/2/09	8/24/09	8/24/09	8/24/09	8/24/09	11/5/09
Trt-Eval Interval	28 DAMP	81 DAMP	81 DAMP	81 DAMP	81 DAMP	HARVEST
ARM Action Codes						

Trt No.	Treatment	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	16	17	18	19	20	21
1	Untreated						0	0	0	0	0	118
2	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	88	70	72	72	68	243
2	Ammonium Sulfate	100	DF	17	lb/100 gal	MP						
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	83	73	73	76	70	233
3	Status	56	DF	2.5	oz/a	MP						
3	Ammonium Sulfate	100	DF	17	lb/100 gal	MP						
4	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	87	74	76	90	75	239
4	Status	56	DF	5	oz/a	MP						
4	Ammonium Sulfate	100	DF	17	lb/100 gal	MP						
5	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	100	72	99	99	99	238
5	Callisto	4	SC	1.5	fl oz/a	MP						
5	Atrazine	4	L	0.5	qt/a	MP						
5	Ammonium Sulfate	100	DF	17	lb/100 gal	MP						
6	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	96	84	93	92	95	238
6	Prowl H2O	3.8	L	2	pt/a	MP						
6	Status	56	DF	2.5	oz/a	MP						
6	Ammonium Sulfate	100	DF	17	lb/100 gal	MP						
7	Guardsman Max	5	L	2.5	pt/a	PRE	81	78	75	81	73	241
7	Roundup PowerMAX	4.5	L	22	fl oz/a	MP						
7	Ammonium Sulfate	100	DF	17	lb/100 gal	MP						
8	Guardsman Max	5	L	2.5	pt/a	PRE	90	80	76	88	78	227
8	Roundup PowerMAX	4.5	L	22	fl oz/a	MP						
8	Status	56	DF	2.5	oz/a	MP						
8	Ammonium Sulfate	100	DF	17	lb/100 gal	MP						
LSD (P=.05)							7.6	8.7	5.4	6.8	8.4	17.8
Standard Deviation							4.3	4.9	3.1	3.9	4.8	10.1
CV							5.57	7.44	4.38	5.22	6.87	4.54