

MSU Weed Science Research Program

EFFECT OF APPLICATION TIMING OF STATUS AND ROUNDUP WEATHERMAX ON WEED CONTROL
IN CORN, 2008

Trial ID: C0808

Study Dir.:

Conducted: CAMPUS

Investigator: Wesley Everman

Date Planted: 5/5/08	Row Spacing: 30 IN
Variety: DKC 46-60	No. of Reps: 3
Population: 29,000 S/A	% OM: 3.4
Soil Type: Clay Loam	pH: 6.6
Plot Size: 10 X 35 FT	Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall Chisel, Spring Field Cultivation 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 Grass	
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	AMARE	PIGWEEED, REDROOT	AMARANTHUS RETROFLEXUS L.
4.	AMBEL	RAGWEEED, COMMON	AMBROSIA ELATIOR L.
5.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

Application Description

	A	B	C
Application Timing:	PRE	5-8" ZE	8-12" ZE
Date Treated:	5/5/08	6/9/08	6/14/08
Time Treated:	7:30 PM	11:00 AM	10:00 AM
% Cloud Cover:	45	45	10
Air Temp., Unit:	69 F	81 F	80 F
% Relative Humidity:	25	67	55
Wind Speed/Unit/Dir:	4 mph W	5 mph SW	5 mph W
Soil Temp., Unit:	67 F	70 F	75 F
Soil/Leaf Surface M:	5 5	5 5	5 5
Soil Moist (1=w 5=d):	4	2	3

Crop Stage at Each Application

	A	B	C
Crop Name:	ZEAMX	ZEAMX	ZEAMX
Height (In.):		7-9(9)	9-14(12)
Stage (L):		V4-5(5)7L	V5-6(6)9L

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	ANGR	ANGR	ANGR
Height (In.):		5-8(6)	1-12(8)
Stage (L):		2-7(6)	2-7(7)
Weed 2 Name:	CHEAL	CHEAL	CHEAL
Height (In.):		.5-7(5)	1-12(8)
Stage (L):		2-10(8)	6-12(10)
Weed 3 Name:	AMARE	AMARE	AMARE
Height (In.):		2-6(4)	2-12(9)
Stage (L):		4-12(8)	5-12(9)
Weed 4 Name:	AMBEL	AMBEL	AMBEL
Height (In.):		2-6(4)	2-10(8)
Stage (L):		2-9(4)	4-8(8)
Weed 5 Name:	ABUTH	ABUTH	ABUTH
Height (In.):		2-5(4)	4-8(6)
Stage (L):		3-5(4)	4-5(5)

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Weed Density (plants/sq. ft.)

	1	2	3
Date:	5/5/08	6/9/08	6/14/08
Weed Name:	ANGR	ANGR	ANGR
Density:	18	19	
Date:	5/5/08	6/9/08	6/14/08
Weed Name:	CHEAL	CHEAL	CHEAL
Density:	15	10	
Date:	5/5/08	6/9/08	6/14/08
Weed Name:	AMARE	AMARE	AMARE
Density:	1	<1	
Date:	5/5/08	6/9/08	6/14/08
Weed Name:	AMBEL	AMBEL	AMBEL
Density:	11	7	
Date:	5/5/08	6/9/08	6/14/08
Weed Name:	ABUTH	ABUTH	ABUTH
Density:	1	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	18"	20"	100"	20	H20	30
B	CUB	3.5	FF	8003	24"	20"	100"	20	H20	30
C	CUB	3.5	FF	8003	27"	20"	100"	20	H20	30

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Weed Code							anгр	cheal	amare	ambel	abuth	
Crop Code							ZEAMX					
Rating Data Type							injury	control	control	control	control	
Rating Unit							percent	percent	percent	percent	percent	
Rating Date							6/9/08	6/9/08	6/9/08	6/9/08	6/9/08	
Trt-Eval Interval							AT 5IN	AT 5IN	AT 5IN	AT 5IN	AT 5IN	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	1	2	3	4	5	6
1	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE						
1	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE						
2	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE						
2	Status	56	DF	2.5	oz/a	5-8"ZE						
2	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE						
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE						
3	Status	56	DF	5	oz/a	5-8"ZE						
3	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE						
4	Guardsman Max	5	L	2.5	pt/a	PRE	0	78	75	98	63	63
4	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE						
4	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE						
5	Guardsman Max	5	L	2.5	pt/a	PRE	0	82	72	100	63	67
5	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE						
5	Status	56	DF	2.5	oz/a	8-12ZE						
5	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE						
6	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE						
6	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE						
7	Guardsman Max	5	L	2.5	pt/a	PRE	0	82	77	100	63	67
7	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE						
7	Status	56	DF	5	oz/a	8-12ZE						
7	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE						
8	Non-Treated											
LSD (P=.05)							0.0	14.1	11.0	3.8	12.2	8.9
Standard Deviation							0.0	6.2	4.9	1.7	5.4	3.9
CV							0.0	7.71	6.53	1.68	8.5	5.96

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Crop Code							ZEAMX					
Rating Data Type							injury	control	control	control	control	control
Rating Unit							percent	percent	percent	percent	percent	percent
Rating Date							6/16/08	6/16/08	6/16/08	6/16/08	6/16/08	6/16/08
Trt-Eval Interval							7 DA5IN	7 DA5IN	7 DA5IN	7 DA5IN	7 DA5IN	7 DA5IN
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	7	8	9	10	11	12
1	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	0	97	96	100	97	100
1	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE						
2	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	0	99	98	100	97	98
2	Status	56	DF	2.5	oz/a	5-8"ZE						
2	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE						
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	0	99	100	100	99	100
3	Status	56	DF	5	oz/a	5-8"ZE						
3	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE						
4	Guardsman Max	5	L	2.5	pt/a	PRE	0	91	80	100	72	74
4	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE						
4	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE						
5	Guardsman Max	5	L	2.5	pt/a	PRE	0	95	76	100	75	76
5	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE						
5	Status	56	DF	2.5	oz/a	8-12ZE						
5	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE						
6	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE	0	5	5	5	5	5
6	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE						
7	Guardsman Max	5	L	2.5	pt/a	PRE	0	94	78	100	71	75
7	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE						
7	Status	56	DF	5	oz/a	8-12ZE						
7	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE						
8	Non-Treated						0	0	0	0	0	0
LSD (P=.05)							0.0	7.6	10.6	3.1	8.2	11.6
Standard Deviation							0.0	4.3	6.0	1.8	4.7	6.6
CV							0.0	6.0	9.04	2.34	7.31	9.98

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Weed Code							angr	cheal	amare	ambel	
Crop Code							ZEAMX				
Rating Data Type							injury	control	control	control	control
Rating Unit							percent	percent	percent	percent	percent
Rating Date							6/23/08	6/23/08	6/23/08	6/23/08	6/23/08
Trt-Eval Interval							14 DA5IN	14 DA5IN	14 DA5IN	14 DA5IN	14 DA5IN
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	13	14	15	16	17
1	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	0	98	98	99	94
1	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE					
2	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	0	99	100	100	98
2	Status	56	DF	2.5	oz/a	5-8"ZE					
2	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE					
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	0	99	100	100	100
3	Status	56	DF	5	oz/a	5-8"ZE					
3	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE					
4	Guardsman Max	5	L	2.5	pt/a	PRE	0	100	100	100	97
4	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE					
4	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
5	Guardsman Max	5	L	2.5	pt/a	PRE	0	100	99	100	100
5	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE					
5	Status	56	DF	2.5	oz/a	8-12ZE					
5	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
6	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE	0	100	97	100	99
6	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
7	Guardsman Max	5	L	2.5	pt/a	PRE	0	100	100	100	98
7	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE					
7	Status	56	DF	5	oz/a	8-12ZE					
7	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
8	Non-Treated						0	0	0	0	0
LSD (P=.05)							0.0	1.8	2.0	1.1	2.3
Standard Deviation							0.0	1.0	1.1	0.6	1.3
CV							0.0	1.19	1.31	0.7	1.54

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Weed Code							abuth		anгр	cheal	amare
Crop Code								ZEAMX			
Rating Data Type							control	injury	control	control	control
Rating Unit							percent	percent	percent	percent	percent
Rating Date							6/23/08	7/7/08	7/7/08	7/7/08	7/7/08
Trt-Eval Interval							14 DA5IN	28 DA5IN	28 DA5IN	28 DA5IN	28 DA5IN
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	18	19	20	21	22
1	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	100	0	91	94	95
1	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE					
2	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	99	0	94	99	97
2	Status	56	DF	2.5	oz/a	5-8"ZE					
2	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE					
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	98	0	96	98	100
3	Status	56	DF	5	oz/a	5-8"ZE					
3	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE					
4	Guardsman Max	5	L	2.5	pt/a	PRE	100	0	96	99	100
4	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE					
4	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
5	Guardsman Max	5	L	2.5	pt/a	PRE	100	0	99	100	100
5	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE					
5	Status	56	DF	2.5	oz/a	8-12ZE					
5	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
6	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE	100	0	97	98	99
6	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
7	Guardsman Max	5	L	2.5	pt/a	PRE	100	0	99	100	100
7	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE					
7	Status	56	DF	5	oz/a	8-12ZE					
7	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
8	Non-Treated						0	0	0	0	0
LSD (P=.05)							1.8	0.0	5.0	4.1	3.8
Standard Deviation							1.0	0.0	2.9	2.4	2.1
CV							1.2	0.0	3.43	2.74	2.49

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Weed Code							ambel	abuth		angr	cheal
Crop Code									ZEAMX		
Rating Data Type							control	control	injury	control	control
Rating Unit							percent	percent	percent	percent	percent
Rating Date							7/7/08	7/7/08	7/21/08	7/21/08	7/21/08
Trt-Eval Interval							28 DA5IN	28 DA5IN	42 DA5IN	42 DA5IN	42 DA5IN
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	23	24	25	26	27
1	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	83	92	0	88	92
1	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE					
2	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	88	95	0	85	95
2	Status	56	DF	2.5	oz/a	5-8"ZE					
2	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE					
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	95	97	0	93	98
3	Status	56	DF	5	oz/a	5-8"ZE					
3	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE					
4	Guardsman Max	5	L	2.5	pt/a	PRE	97	100	0	98	99
4	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE					
4	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
5	Guardsman Max	5	L	2.5	pt/a	PRE	100	100	0	100	100
5	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE					
5	Status	56	DF	2.5	oz/a	8-12ZE					
5	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
6	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE	100	100	0	98	93
6	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
7	Guardsman Max	5	L	2.5	pt/a	PRE	100	100	0	98	100
7	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE					
7	Status	56	DF	5	oz/a	8-12ZE					
7	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE					
8	Non-Treated						0	0	0	0	0
LSD (P=.05)							9.1	5.1	0.0	13.3	7.8
Standard Deviation							5.2	2.9	0.0	7.6	4.5
CV							6.25	3.41	0.0	9.2	5.27

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Weed Code		amare	ambel	abuth	
Crop Code					ZEAMX
Rating Data Type		control	control	control	yield
Rating Unit		percent	percent	percent	bu/ac
Rating Date		7/21/08	7/21/08	7/21/08	10/18/08
Trt-Eval Interval		42 DA5IN	42 DA5IN	42 DA5IN	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	28	29	30	31
1	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	100	80	95	221
1	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE				
2	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	98	88	98	218
2	Status	56	DF	2.5	oz/a	5-8"ZE				
2	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE				
3	Roundup WeatherMax	4.5	L	22	fl oz/a	5-8"ZE	100	92	96	219
3	Status	56	DF	5	oz/a	5-8"ZE				
3	Ammonium Sulfate	100	DF	17	lb/100 gal	5-8"ZE				
4	Guardsman Max	5	L	2.5	pt/a	PRE	100	96	100	229
4	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE				
4	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE				
5	Guardsman Max	5	L	2.5	pt/a	PRE	100	100	100	223
5	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE				
5	Status	56	DF	2.5	oz/a	8-12ZE				
5	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE				
6	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE	100	93	100	221
6	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE				
7	Guardsman Max	5	L	2.5	pt/a	PRE	100	100	100	223
7	Roundup WeatherMax	4.5	L	22	fl oz/a	8-12ZE				
7	Status	56	DF	5	oz/a	8-12ZE				
7	Ammonium Sulfate	100	DF	17	lb/100 gal	8-12ZE				
8	Non-Treated						0	0	0	60
LSD (P=.05)							1.7	12.7	4.7	21.1
Standard Deviation							1.0	7.3	2.7	12.0
CV							1.11	8.94	3.15	5.97