

MSU Weed Science Research Program

WEED CONTROL IN ROUNDUP READY CORN WITH PRE AND POSTEMERGENCE HERBICIDES, 2006

Trial ID: C1206
 Conducted: CAMPUS

Study Dir.:
 Investigator: Christy Sprague

Date Planted: 5/3/2006 **Row Spacing:** 30 IN
Variety: DKC42-95 **No. of Reps:** 4
Population: 30,000 S/A **% OM:** 2.7
Soil Type: clay loam **pH:** 6.4
Plot Size: 10 X 35 FT **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: Fall Chisel, Spring Soil Finish x2
Fertilizer: 285 lbs/A 46-0-0 broadcast. 125 lbs/A 19-19-19 in row at planting.

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	Annual Grasses	
2.	CHEAL	Common lambsquarters	Chenopodium album L.
3.	AMARE	PIGWEEED, ROUGH	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	2-4 IN WD	3-5 IN WD
Date Treated:	5/3/2006	6/1/2006	6/12/2006
Time Treated:	7:20 pm	7:45 pm	9:40 am
% Cloud Cover:	25	85	10
Air Temp., Unit:	69 F	78 F	65 F
% Relative Humidity:	65	40	55
Wind Speed/Unit/Dir:	2 mph	3 mph	2 mph NE
Soil Temp., Unit:	65 F	76.1 F	66 F
Soil/Leaf Surface M:	4 4	5 5	5 5
Soil Moist (1=w 5=d):	3	4	5

Crop Stage at Each Application

	A	B	C
Crop Name:	ZEAMX	ZEAMX	ZEAMX
Height (In.):		7-9 (8)	9-14 (13)
Stage (L):		V2-3 (3) 6L	V5-6 (6) 8L

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	ANGR	ANGR	ANGR
Height (In.):		.25-5 (3)	.25-8 (5)
Stage (L):		1-5 (4)	1-6 (4)
Weed 2 Name:	CHEAL	CHEAL	CHEAL
Height (In.):		.25-2 (1)	
Stage (L):		cot-8 (4)	
Weed 3 Name:	AMARE	AMARE	AMARE
Height (In.):		.25-1 (.5)	
Stage (L):		cot-5 (4)	
Weed 4 Name:	AMBEL	AMBEL	AMBEL
Height (In.):		.5-4 (2)	.25-2 (1.5)
Stage (L):		cot-6 (4)	4-6 (6)
Weed 5 Name:	ABUTH	ABUTH	ABUTH
Height (In.):		1-2 (2)	.25-1.5 (1)
Stage (L):		cot-2 (2)	cot-3 (2)

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Weed Density (plants/sq. ft.)

	1	2
Date:	5/3/2006	6/1/2006
Weed Name:	ANGR	ANGR
Density:		63
Date:	5/3/2006	6/1/2006
Weed Name:	CHEAL	CHEAL
Density:		29
Date:	5/3/2006	6/1/2006
Weed Name:	AMARE	AMARE
Density:		1
Date:	5/3/2006	6/1/2006
Weed Name:	AMBEL	AMBEL
Density:		16
Date:	5/3/2006	6/1/2006
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	18"	20"	100"	20	H2O	30	
B	cub	3.5	FF	8003	24"	20"	100"	20	H2O	30	
C	cub	3.5	FF	8003	24"	20"	100"	20	H2O	30	

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Weed Code							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							6/3/2006	6/3/2006	6/3/2006	6/3/2006	6/3/2006	6/3/2006	6/15/2006
Rating Date							2 DA-B	2 DA-B	2 DA-B	2 DA-B	2 DA-B	2 DA-B	14 DA-B
Trt-Eval Interval													
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7
1	Lumax	3.94	SE	2.5	qt/a	PRE	0	99	100	100	98	98	0
2	Radius	4	SC	20	fl oz/a	PRE	0	99	100	100	95	98	0
3	Harness Xtra 6L	6	L	1.2	qt/a	PRE	0	99	100	100	87	90	0
3	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS							
3	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS							
4	Degree Xtra	4	L	2	qt/a	PRE	0	99	100	100	94	95	0
4	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS							
4	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS							
5	Degree Xtra	4	L	2	qt/a	2-4 IN WDS							0
5	Roundup OriginalMax	4.5	L	22	fl oz/a	2-4 IN WDS							
5	Ammonium Sulfate		DF	17	lb/100 gal	2-4 IN WDS							
6	Lumax	3.94	SE	2	qt/a	2-4 IN WDS							0
6	Touchdown Total	4.17	L	24	fl oz/a	2-4 IN WDS							
6	Ammonium Sulfate		DF	17	lb/100 gal	2-4 IN WDS							
7	Atrazine	4	L	2	qt/a	PRE	0	63	100	100	99	95	0
7	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS							
7	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS							
8	Untreated						0	0	0	0	0	0	0
LSD (P=.05)							0.0	8.2	0.4	0.0	5.9	5.4	0.0
Standard Deviation							0.0	5.4	0.3	0.0	3.9	3.6	0.0
CV							0.0	7.11	0.36	0.0	5.01	4.54	0.0

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Weed Code							ANGR	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX	ANGR	
Crop Code														
Rating Data Type							control	control	control	control	control	injury	injury	
Rating Unit							percent	percent	percent	percent	percent	percent	percent	
Rating Date							6/15/2006	6/15/2006	6/15/2006	6/15/2006	6/15/2006	6/19/2006	6/19/2006	
Trt-Eval Interval							14 DA-B	14 DA-B	14 DA-B	14 DA-B	14 DA-B	47 DAP	47 DAP	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	8	9	10	11	12	13	14	
1	Lumax	3.94	SE	2.5	qt/a	PRE	98	100	100	94	94	0	99	
2	Radius	4	SC	20	fl oz/a	PRE	95	100	99	94	98	0	98	
3	Harness Xtra 6L	6	L	1.2	qt/a	PRE	89	100	100	83	71	0	99	
3	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS								
3	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS								
4	Degree Xtra	4	L	2	qt/a	PRE	96	100	100	91	76	0	100	
4	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS								
4	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS								
5	Degree Xtra	4	L	2	qt/a	2-4 IN WDS	99	100	100	100	100	0	98	
5	Roundup OriginalMax	4.5	L	22	fl oz/a	2-4 IN WDS								
5	Ammonium Sulfate		DF	17	lb/100 gal	2-4 IN WDS								
6	Lumax	3.94	SE	2	qt/a	2-4 IN WDS	99	100	100	100	100	0	99	
6	Touchdown Total	4.17	L	24	fl oz/a	2-4 IN WDS								
6	Ammonium Sulfate		DF	17	lb/100 gal	2-4 IN WDS								
7	Atrazine	4	L	2	qt/a	PRE	61	99	100	99	90	0	99	
7	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS								
7	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS								
8	Untreated						0	0	0	0	0	0	0	
LSD (P=.05)							5.2	1.3	0.5	6.3	8.9	0.0	1.0	
Standard Deviation							3.6	0.9	0.3	4.3	6.0	0.0	0.7	
CV							4.48	1.01	0.39	5.17	7.67	0.0	0.81	

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Weed Code	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX	ANGR	CHEAL							
Crop Code														
Rating Data Type														
Rating Unit														
Rating Date														
Trt-Eval Interval														
Trt No.	Treatment	Form Conc	Form Type	Rate	Unit	Grow Stg		15	16	17	18	19	20	21
1	Lumax	3.94	SE	2.5	qt/a	PRE		100	100	86	95	0	96	100
2	Radius	4	SC	20	fl oz/a	PRE		100	99	90	99	0	89	97
3	Harness Xtra 6L	6	L	1.2	qt/a	PRE		100	100	89	100	0	93	99
3	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS								
3	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS								
4	Degree Xtra	4	L	2	qt/a	PRE		100	100	94	100	0	100	100
4	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS								
4	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS								
5	Degree Xtra	4	L	2	qt/a	2-4 IN WDS		100	100	100	100	0	98	100
5	Roundup OriginalMax	4.5	L	22	fl oz/a	2-4 IN WDS								
5	Ammonium Sulfate		DF	17	lb/100 gal	2-4 IN WDS								
6	Lumax	3.94	SE	2	qt/a	2-4 IN WDS		100	100	100	100	0	98	100
6	Touchdown Total	4.17	L	24	fl oz/a	2-4 IN WDS								
6	Ammonium Sulfate		DF	17	lb/100 gal	2-4 IN WDS								
7	Atrazine	4	L	2	qt/a	PRE		100	100	99	100	0	95	100
7	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS								
7	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS								
8	Untreated							0	0	0	0	0	0	0
LSD (P=.05)								0.8	0.8	4.2	5.3	0.0	3.5	2.6
Standard Deviation								0.5	0.5	2.9	3.6	0.0	2.4	1.8
CV								0.59	0.61	3.5	4.13	0.0	2.86	2.04

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							AMARE	AMBEL	ABUTH	ZEAMX
							control	control	control	yield
							percent	percent	percent	bu/ac
							6/29/2006	6/29/2006	6/29/2006	10/29/2006
							28 DA-B	28 DA-B	28 DA-B	HARVEST
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg				
1	Lumax	3.94	SE	2.5	qt/a	PRE	100	84	91	211
2	Radius	4	SC	20	fl oz/a	PRE	96	89	91	202
3	Harness Xtra 6L	6	L	1.2	qt/a	PRE	99	100	100	221
3	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS				
3	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS				
4	Degree Xtra	4	L	2	qt/a	PRE	100	99	100	220
4	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS				
4	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS				
5	Degree Xtra	4	L	2	qt/a	2-4 IN WDS	100	100	100	228
5	Roundup OriginalMax	4.5	L	22	fl oz/a	2-4 IN WDS				
5	Ammonium Sulfate		DF	17	lb/100 gal	2-4 IN WDS				
6	Lumax	3.94	SE	2	qt/a	2-4 IN WDS	100	100	100	219
6	Touchdown Total	4.17	L	24	fl oz/a	2-4 IN WDS				
6	Ammonium Sulfate		DF	17	lb/100 gal	2-4 IN WDS				
7	Atrazine	4	L	2	qt/a	PRE	100	99	98	225
7	Roundup OriginalMax	4.5	L	22	fl oz/a	3-5 IN WDS				
7	Ammonium Sulfate		DF	17	lb/100 gal	3-5 IN WDS				
8	Untreated						0	0	0	5
LSD (P=.05)							1.3	6.0	7.7	19.5
Standard Deviation							0.9	4.1	5.2	13.2
CV							1.03	4.87	6.12	6.91