

MSU Weed Science Research Program

WEED CONTROL IN CORN WITH PREEMERGENCE AND POSTEMERGENCE HERBICIDES, 2007

Trial ID: C0907
 Conducted: CAMPUS

Study Dir.:
 Investigator: James Kells

Date Planted: 5/7/07 **Row Spacing:** 30 IN
Variety: DKC 48-53 **No. of Reps:** 4
Population: 30,000 S/A **% OM:** 2.6
Soil Type: LOAM **pH:** 6.7
Plot Size: 10 X 35 FT **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: Fall Chisel, Spring Cultivated 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 Grasses	
2.	CHEAL	Common lambsquarters	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	C
Application Timing:	PRE	EP	MP
Date Treated:	5/7/07	5/24/07	5/31/07
Time Treated:	8:50PM	10:00AM	12:00PM
% Cloud Cover:	30	5	95
Air Temp., Unit:	72 F	80 F	82 F
% Relative Humidity:	32	39	39
Wind Speed/Unit/Dir:	0 mph	6 mph SW	3 mph SW
Soil Temp., Unit:	62 F	66 F	73.6 F
Soil/Leaf Surface M:	5 5	5 5	5 5
Soil Moist (1=w 5=d):	5	4	4

Crop Stage at Each Application

	A	B	C
Crop Name:	ZEAMX	ZEAMX	ZEAMX
Height (In.):		4-5(4)	8-14(12)
Stage (L):		V2 4L	V4-5(4)8L

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	ANGR	ANGR	ANGR
Height (In.):		.5-2(1)	1-8(6.5)
Stage (L):		1-4(3)	2-7(5)
Weed 2 Name:	CHEAL	CHEAL	CHEAL
Height (In.):		.5-1(.5)	.25-3(1.5)
Stage (L):		Cot-4(2)	Cot-8(6)
Weed 3 Name:	AMARE	AMARE	AMARE
Height (In.):		.25-.5(.3)	.5-5(2)
Stage (L):		Cot-2(1)	Cot-14(7)
Weed 4 Name:	ABUTH	ABUTH	ABUTH
Height (In.):		1-2(1)	.5-5(2.5)
Stage (L):		Cot-1(1)	Cot-6(4)

Weed Density (plants/sq. ft.)

	1	2	3
Date:	5/7/07	5/24/07	5/31/07
Weed Name:			ANGR
Density:			34
Date:	5/7/07	5/24/07	5/31/07
Weed Name:			CHEAL
Density:			38
Date:	5/7/07	5/24/07	5/31/07
Weed Name:			AMARE
Density:			<1
Date:	5/7/07	5/24/07	5/31/07
Weed Name:			ABUTH
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	18"	20"	100"	20	H2O	30	
B	CUB	3.5	FF	8003	19"	20"	100"	20	H2O	30	
C	CUB	3.5	FF	8003	23"	20"	100"	20	H2O	30	

Comments: The Yields have been excluded due to animal damage.

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							ANGR	CHEAL	AMARE	ABUTH	ANGR	CHEAL	AMARE	
							ZEAMX							
							injury	control	control	control	control	control	control	control
							percent	percent	percent	percent	percent	percent	percent	percent
							5/31/07	5/31/07	5/31/07	5/31/07	5/31/07	7/5/07	7/5/07	7/5/07
							AT MP	AT MP	AT MP	AT MP	AT MP	59 DAPRE	59 DAPRE	59 DAPRE
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	1	2	3	4	5	6	7	8
16	Roundup OriginalMax	4.5	L	0.75	lb ae/a	EP	0	92	90	100	97	83	80	98
16	Ammonium Sulfate	100	DF	2	% w/w	EP								
16	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP								
16	Ammonium Sulfate	100	DF	2	% w/w	MP								
17	Untreated						0	0	0	0	0	0	0	0
LSD (P=.05)							0.0	6.2	6.3	0.5	6.3	6.0	4.9	2.2
Standard Deviation							0.0	4.3	4.4	0.4	4.4	4.2	3.4	1.5
CV							0.0	4.97	4.89	0.41	5.03	4.78	3.87	1.62

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Weed Code		ABUTH	ANGR	CHEAL	AMARE	ABUTH
Crop Code						
Rating Data Type		control	control	control	control	control
Rating Unit		percent	percent	percent	percent	percent
Rating Date		7/5/07	9/25/07	9/25/07	9/25/07	9/25/07
Trt-Eval Interval		59 DAPRE	HARVEST	HARVEST	HARVEST	HARVEST

Trt No.	Treatment	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	9	10	11	12	13
1	Harness Xtra 5.6	5.6	L	1.5	qt/a	PRE	99	85	85	99	99
1	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP					
1	Ammonium Sulfate	100	DF	2	% w/w	MP					
2	Degree Xtra	4	L	1.5	qt/a	PRE	94	90	84	100	94
2	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP					
2	Ammonium Sulfate	100	DF	2	% w/w	MP					
3	Guardsman Max	5	L	2.5	pt/a	PRE	98	83	83	96	99
3	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP					
3	Ammonium Sulfate	100	DF	2	% w/w	MP					
4	Guardsman Max	5	L	3	pt/a	PRE	98	85	83	99	94
4	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP					
4	Ammonium Sulfate	100	DF	2	% w/w	MP					
5	Harness	7	L	1.5	pt/a	PRE	95	87	67	99	96
5	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP					
5	Ammonium Sulfate	100	DF	2	% w/w	MP					
6	Degree	3.8	L	1.5	qt/a	PRE	99	87	75	99	96
6	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP					
6	Ammonium Sulfate	100	DF	2	% w/w	MP					
7	Outlook	6	L	0.75	pt/a	PRE	100	84	68	99	93
7	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP					
7	Ammonium Sulfate	100	DF	2	% w/w	MP					
8	Outlook	6	L	1	pt/a	PRE	99	90	73	100	98
8	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP					
8	Ammonium Sulfate	100	DF	2	% w/w	MP					
9	Lexar	3.7	L	2	qt/a	PRE	100	85	89	99	99
9	Touchdown Total	4.17	L	0.78	lb ae/a	MP					
9	Ammonium Sulfate	100	DF	2	% w/w	MP					
10	Bicep II Magnum	5.5	L	1.1	qt/a	PRE	96	84	83	99	96
10	Touchdown Total	4.17	L	0.78	lb ae/a	MP					
10	Ammonium Sulfate	100	DF	2	% w/w	MP					
11	Atrazine	4	L	1.5	qt/a	PRE	100	72	81	100	100
11	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP					
11	Ammonium Sulfate	100	DF	2	% w/w	MP					
12	Balance Pro	4	SC	2	fl oz/a	PRE	100	80	85	96	99
12	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP					
12	Ammonium Sulfate	100	DF	2	% w/w	MP					
13	Resolve	25	DF	1	oz/a	PRE	100	89	96	100	100
13	Atrazine	4	L	1	qt/a	PRE					
13	Steadfast	75	WG	0.75	oz/a	MP					
13	Callisto	4	SC	2	fl oz/a	MP					
13	Herbimax		L	1	% v/v	MP					
14	Lexar	3.7	L	3	qt/a	PRE	100	80	90	99	100
15	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP	98	72	64	98	93
15	Ammonium Sulfate	100	DF	2	% w/w	MP					

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Rating Unit		percent	percent	percent	percent	percent
Rating Date		7/5/07	9/25/07	9/25/07	9/25/07	9/25/07
Trt-Eval Interval		59 DAPRE	HARVEST	HARVEST	HARVEST	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	9	10	11	12	13
16	Roundup OriginalMax	4.5	L	0.75	lb ae/a	EP	98	74	63	100	98
16	Ammonium Sulfate	100	DF	2	% w/w	EP					
16	Roundup OriginalMax	4.5	L	0.75	lb ae/a	MP					
16	Ammonium Sulfate	100	DF	2	% w/w	MP					
17	Untreated						0	0	0	0	0
LSD (P=.05)							3.4	8.3	8.4	3.1	5.6
Standard Deviation							2.4	5.8	5.9	2.2	3.9
CV							2.58	7.46	7.9	2.36	4.32