

MSU Weed Science Research Program

WEED CONTROL IN CORN WITH HALEX GT, 2007

Trial ID: C0507
 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:** 3.2
Soil Type: Sandy Loam **pH:** 6.5
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 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	D
Application Timing:	PRE	MP	V6	
Date Treated:	5/7/07	5/29/07	6/11/07	
Time Treated:	9:00PM	9:21AM	11:00AM	
% Cloud Cover:	30	65	0	
Air Temp., Unit:	72 F	75 F	89 F	
% Relative Humidity:	40	53	40	
Wind Speed/Unit/Dir:	0 mph	4 mph SE	5 mph N	
Soil Temp., Unit:	62 F	61.5 F	73.5 F	
Soil/Leaf Surface M:	5 5	5 5	5 5	
Soil Moist (1=w 5=d):	5	2-3	4	

Crop Stage at Each Application

	A	B	C	D
Crop Name:	ZEAMX	ZEAMX	ZEAMX	
Height (In.):		4-6(5)	19-22(21)	
Stage (L):		V3 5L	V6-7 10L	

Weed Stage at Each Application

	A	B	C	D
Weed 1 Name:	ANGR	ANGR	ANGR	
Height (In.):		.25-3(1)	1-14(11)	
Stage (L):		2-4(3)	2-6(5)	
Weed 2 Name:	CHEAL	CHEAL	CHEAL	
Height (In.):		.25-1(.8)	1-13(10)	
Stage (L):		Cot-6(4)	4-12(10)	
Weed 3 Name:	AMARE	AMARE	AMARE	
Height (In.):		.25-1(.5)	2-14(10)	
Stage (L):		Cot-5(3)	4-18(11)	
Weed 4 Name:	ABUTH	ABUTH	ABUTH	
Height (In.):		.5(1.5)	4-13(10)	
Stage (L):		Cot-4(2)	4-6(5)	

Weed Density (plants/sq. ft.)

	1	2	3
Date:	5/7/07	6/11/07	6/11/07
Weed Name:		ANGR	ANGR
Density:		11	20
Date:	5/7/07	5/29/07	6/11/07
Weed Name:		CHEAL	CHEAL
Density:		14	18
Date:	5/7/07	5/29/07	6/11/07
Weed Name:		AMARE	AMARE
Density:		3	1
Date:	5/7/07	5/29/07	6/11/07
Weed Name:		ABUTH	ABUTH
Density:		2	1

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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	22"	20"	100"	20	H2O	30	
C	CUB	3.5	FF	8003	32"	20"	100"	20	H2O	30	

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Weed Code							ANGR	CHEAL	AMARE	ABUTH		ANGR	CHEAL	
Crop Code							ZEAMX				ZEAMX			
Rating Data Type							injury	control	control	control	control	injury	control	control
Rating Unit							percent	percent	percent	percent	percent	percent	percent	percent
Rating Date							5/29/07	5/29/07	5/29/07	5/29/07	5/29/07	6/15/07	6/15/07	6/15/07
Trt-Eval Interval							AT MP	AT MP	AT MP	AT MP	AT MP	17 DAMP	17 DAMP	17 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	0	0	0	0	0	0
2	Halex GT	4.39	L	4	pt/a	MP						0	98	100
2	Activator 90		L	0.25	% v/v	MP								
2	Ammonium Sulfate	100	DF	8.5	lb/100 gal	MP								
3	Halex GT	4.39	L	4	pt/a	MP						0	99	100
3	Atrazine	4	L	1	pt/a	MP								
3	Activator 90		L	0.25	% v/v	MP								
3	Ammonium Sulfate	100	DF	8.5	lb/100 gal	MP								
4	Lumax	3.94	SE	2	qt/a	PRE	0	99	100	100	100	0	99	100
4	Touchdown Total	4.17	L	24	fl oz/a	V6 ZE								
4	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE								
5	Harness Xtra 5.6	5.6	L	1.5	qt/a	PRE	0	99	100	100	85	1	99	99
5	Roundup OriginalMax	4.5	L	22	fl oz/a	V6 ZE								
5	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE								
6	Roundup OriginalMax	4.5	L	22	fl oz/a	V6 ZE						0	43	45
6	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE								
7	Roundup OriginalMax	4.5	L	22	fl oz/a	MP						0	98	88
7	Ammonium Sulfate	100	DF	8.5	lb/100 gal	MP								
7	Roundup OriginalMax	4.5	L	22	fl oz/a	V6 ZE								
7	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE								
8	Lumax	3.94	SE	2	qt/a	PRE	0	99	100	100	99	0	98	100
8	Halex GT	4.39	L	3.6	pt/a	V6 ZE								
8	Activator 90		L	0.25	% v/v	V6 ZE								
8	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE								
9	Weed Free											0	100	100
LSD (P=.05)							0.0	2.7	1.1	0.0	16.7	1.2	3.2	4.2
Standard Deviation							0.0	1.6	0.6	0.0	9.7	0.8	2.2	2.9
CV							0.0	2.14	0.82	0.0	13.66	600.0	2.68	3.56

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							AMARE	ABUTH		ANGR	CHEAL	AMARE	ABUTH
							control	control	ZEAMX	control	control	control	control
							percent	percent	injury	percent	percent	percent	percent
							6/15/07	6/15/07	6/26/07	6/26/07	6/26/07	6/26/07	6/26/07
							17 DAMP	17 DAMP	28 DAMP	28 DAMP	28 DAMP	28 DAMP	28 DAMP
Trt	Treatment	Form	Form	Rate	Rate	Grow	9	10	11	12	13	14	15
No.	Name	Conc	Type	Unit	Unit	Stg							
1	Untreated						0	0	0	0	0	0	0
2	Halex GT	4.39	L	4	pt/a	MP	100	100	0	89	99	100	100
2	Activator 90		L	0.25	% v/v	MP							
2	Ammonium Sulfate	100	DF	8.5	lb/100 gal	MP							
3	Halex GT	4.39	L	4	pt/a	MP	100	100	0	96	100	100	98
3	Atrazine	4	L	1	pt/a	MP							
3	Activator 90		L	0.25	% v/v	MP							
3	Ammonium Sulfate	100	DF	8.5	lb/100 gal	MP							
4	Lumax	3.94	SE	2	qt/a	PRE	100	99	0	100	100	100	100
4	Touchdown Total	4.17	L	24	fl oz/a	V6 ZE							
4	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE							
5	Harness Xtra 5.6	5.6	L	1.5	qt/a	PRE	100	71	0	100	99	100	100
5	Roundup OriginalMax	4.5	L	22	fl oz/a	V6 ZE							
5	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE							
6	Roundup OriginalMax	4.5	L	22	fl oz/a	V6 ZE	48	43	0	100	85	100	99
6	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE							
7	Roundup OriginalMax	4.5	L	22	fl oz/a	MP	100	89	0	98	100	100	99
7	Ammonium Sulfate	100	DF	8.5	lb/100 gal	MP							
7	Roundup OriginalMax	4.5	L	22	fl oz/a	V6 ZE							
7	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE							
8	Lumax	3.94	SE	2	qt/a	PRE	100	100	0	100	100	100	100
8	Halex GT	4.39	L	3.6	pt/a	V6 ZE							
8	Activator 90		L	0.25	% v/v	V6 ZE							
8	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE							
9	Weed Free						100	100	0	100	100	100	100
LSD (P=.05)							4.7	9.2	0.0	3.5	2.5	0.0	1.5
Standard Deviation							3.2	6.3	0.0	2.4	1.7	0.0	1.1
CV							3.84	8.06	0.0	2.78	1.94	0.0	1.2

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Weed Code							ANGR	CHEAL	AMARE	ABUTH	
Crop Code											Zeamx
Rating Data Type							control	control	control	control	yield
Rating Unit							percent	percent	percent	percent	bu/ac
Rating Date							7/24/07	7/24/07	7/24/07	7/24/07	10/3/07
Trt-Eval Interval							56 DAMP	56 DAMP	56 DAMP	56 DAMP	HARVEST
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	16	17	18	19	20
1	Untreated						0	0	0	0	111
2	Halex GT	4.39	L	4	pt/a	MP	85	98	100	100	197
2	Activator 90		L	0.25	% v/v	MP					
2	Ammonium Sulfate	100	DF	8.5	lb/100 gal	MP					
3	Halex GT	4.39	L	4	pt/a	MP	91	100	100	100	200
3	Atrazine	4	L	1	pt/a	MP					
3	Activator 90		L	0.25	% v/v	MP					
3	Ammonium Sulfate	100	DF	8.5	lb/100 gal	MP					
4	Lumax	3.94	SE	2	qt/a	PRE	94	100	100	100	201
4	Touchdown Total	4.17	L	24	fl oz/a	V6 ZE					
4	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE					
5	Harness Xtra 5.6	5.6	L	1.5	qt/a	PRE	96	100	100	100	202
5	Roundup OriginalMax	4.5	L	22	fl oz/a	V6 ZE					
5	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE					
6	Roundup OriginalMax	4.5	L	22	fl oz/a	V6 ZE	100	81	100	100	190
6	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE					
7	Roundup OriginalMax	4.5	L	22	fl oz/a	MP	95	98	100	100	194
7	Ammonium Sulfate	100	DF	8.5	lb/100 gal	MP					
7	Roundup OriginalMax	4.5	L	22	fl oz/a	V6 ZE					
7	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE					
8	Lumax	3.94	SE	2	qt/a	PRE	98	100	100	100	191
8	Halex GT	4.39	L	3.6	pt/a	V6 ZE					
8	Activator 90		L	0.25	% v/v	V6 ZE					
8	Ammonium Sulfate	100	DF	8.5	lb/100 gal	V6 ZE					
9	Weed Free						100	100	100	100	195
LSD (P=.05)							5.8	4.1	0.0	0.0	24.2
Standard Deviation							4.0	2.8	0.0	0.0	16.6
CV							4.71	3.24	0.0	0.0	8.88