

MSU Weed Science Research Program

WEED CONTROL IN CORN WITH HALEX GT, 2009

Trial ID: C0409
 Conducted: CAMPUS

Study Dir.: Andy Chomas
 Investigator: Wesley Everman

Date Planted: 5/7/09 **Row Spacing:** 30 IN
Variety: PIONEER 37Y14 **No. of Reps:** 4
Population: 29,000 S/A **% OM:** 3.4
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	C	D
Application Timing:	PRE	EP	MP	LP
Date Treated:	5/7/09	5/30/09	6/4/09	6/15/09
Time Treated:	7:45 PM	8:45 AM	3:50 PM	3:15 PM
% Cloud Cover:	60	80	25	25
Air Temp., Unit:	70 F	53 F	77 F	89 F
% Relative Humidity:	54	75	25	20
Wind Speed/Unit/Dir:	3 mph W	3 mph W	3 mph S	5 mph N
Soil Temp., Unit:	60 F	51 F	78 F	80 F
Soil/Leaf Surface M:		5	5	5
Soil Moist (1=w 5=d):	3	4	4	4

Crop Stage at Each Application

	A	B	C	D
Crop Name:	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Height (In.):		4-6(6)	4-7(6)	10-18(17)
Stage (L):		4:V2-3(3)	6:V3-4(3)	7:V5-6(5)

Weed Stage at Each Application

	A	B	C	D
Weed 1 Name:	ANGR	ANGR	ANGR	ANGR
Height (In.):		1-3(2)	1-5(3)	1-3(2)
Stage (L):		1-3(2)	1-4(3)	2-5(4)
Weed 2 Name:	CHEAL	CHEAL	CHEAL	CHEAL
Height (In.):		1-2(1)	1-3(2)	.5-1.5(1)
Stage (L):		2-4(2)	2-4(4)	2-4(2)
Weed 3 Name:	AMARE	AMARE	AMARE	AMARE
Height (In.):		.5	.3-2.5(2)	1
Stage (L):		2	1-6(4)	5
Weed 4 Name:	ABUTH	ABUTH	ABUTH	ABUTH
Height (In.):		.5-1.5(1)	1-2.5(2)	.5-2(1.5)
Stage (L):		cot-1	cot-3	2-3(2)

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Weed Density (plants/sq. ft.)

	1	2	3	4
Date:	5/7/09	5/30/09	6/4/09	6/15/09
Weed Name:	ANGR	ANGR	ANGR	ANGR
Density:			24	
Date:	5/7/09	5/30/09	6/4/09	6/15/09
Weed Name:	CHEAL	CHEAL	CHEAL	CHEAL
Density:			25	
Date:	5/7/09	5/30/09	6/4/09	6/15/09
Weed Name:	AMARE	AMARE	AMARE	AMARE
Density:			9	
Date:	5/7/09	5/30/09	6/4/09	6/15/09
Weed Name:	AMBEL	AMBEL	AMBEL	AMBEL
Density:			<1	
Date:	5/7/09	5/30/09	6/4/09	6/15/09
Weed Name:	ABUTH	ABUTH	ABUTH	ABUTH
Density:			1	

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom	GPA	Carrier	PSI
	Type	MPH	Type	Size	Height	Spacing	Width			
A	CUB	3.5	FF	8003	19"	20"	100"	20	H2O	30
B	BP	3.5	FF	8003	19"	20"	100"	20	H2O	30
C	CUB	3.5	FF	8003	22"	20"	100"	20	H2O	30
D	CUB	3.5	FF	8003	24"	20"	100"	20	H2O	30

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

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	1	2	3	4	5	6	7	8	
12	Halex GT	4.39	L	3.6	pt/a	MP				9	0	99	100	100	
12	Northstar	47.4	WG	2.5	oz/a	MP									
12	Activator 90		L	0.25	% v/v	MP									
12	N-Pak AMS		L	2.5	% v/v	MP									
LSD (P=.05)							2.5	4.8	7.8	4.1	1.4	3.7	2.6	2.0	
Standard Deviation							1.4	2.8	4.5	2.9	0.9	2.5	1.8	1.4	
CV							38.49	36.85	43.08	26.05	450.64	2.65	1.86	1.39	

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Weed Code	ABUTH		ANGR	CHEAL	AMARE	ABUTH	ANGR	CHEAL
Crop Code		ZEAMX						
Rating Data Type	control	injury	control	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent	percent
Rating Date	6/18/09	7/2/09	7/2/09	7/2/09	7/2/09	7/2/09	7/28/09	7/28/09
Trt-Eval Interval	14 DAMP	28 DAMP	28 DAMP	28 DAMP	28 DAMP	28 DAMP	54 DAMP	54 DAMP

ARM Action Codes

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	9	10	11	12	13	14	15	16	
12	Halex GT	4.39	L	3.6	pt/a	MP	100	0	95	100	98	99	93	100	
12	Northstar	47.4	WG	2.5	oz/a	MP									
12	Activator 90		L	0.25	% v/v	MP									
12	N-Pak AMS		L	2.5	% v/v	MP									
LSD (P=.05)							2.3	2.0	4.9	4.5	4.1	7.2	7.9	3.9	
Standard Deviation							1.6	1.4	3.4	3.1	2.8	5.0	4.6	2.3	
CV							1.65	242.08	3.58	3.14	2.87	5.21	5.14	2.32	

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Weed Code	AMARE	ABUTH	ANGR	CHEAL	AMARE	ABUTH	
Crop Code							ZEAMX
Rating Data Type	control	control	control	control	control	control	yield
Rating Unit	percent	percent	percent	percent	percent	percent	bu/ac
Rating Date	7/28/09	7/28/09	8/24/09	8/24/09	8/24/09	8/24/09	11/5/09
Trt-Eval Interval	54 DAMP	54 DAMP	81 DAMP	81 DAMP	81 DAMP	81 DAMP	HARVEST
ARM Action Codes							

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	17	18	19	20	21	22	23
1	Halex GT	4.39	L	3.6	pt/a	MP	98	100	91	99	97	99	226
1	Atrazine	4	L	0.5	pt/a	MP							
1	Activator 90		L	0.25	% v/v	MP							
1	N-Pak AMS		L	2.5	% v/v	MP							
2	Halex GT	4.39	L	3.6	pt/a	MP	98	100	95	100	93	100	218
2	Buctril	2	EC	6	fl oz/a	MP							
2	Activator 90		L	0.25	% v/v	MP							
2	N-Pak AMS		L	2.5	% v/v	MP							
3	Bicep II Magnum	5.5	L	1	qt/a	PRE	100	99	98	100	98	100	227
3	Halex GT	4.39	L	3.6	pt/a	MP							
3	Activator 90		L	0.25	% v/v	MP							
3	N-Pak AMS		L	2.5	% v/v	MP							
4	Lumax	3.94	SE	3	pt/a	PRE	97	100	87	100	94	100	244
4	Touchdown Total	4.17	L	24	fl oz/a	MP							
4	Activator 90		L	0.25	% v/v	MP							
4	N-Pak AMS		L	2.5	% v/v	MP							
5	Dual II Magnum	7.64	L	1.33	pt/a	PRE	100	100	98	100	98	100	224
5	Halex GT	4.39	L	3.6	pt/a	MP							
5	Activator 90		L	0.25	% v/v	MP							
5	N-Pak AMS		L	2.5	% v/v	MP							
6	Halex GT	4.39	L	2	pt/a	EP	100	98	91	100	100	100	235
6	Atrazine	4	L	0.5	pt/a	EP							
6	Activator 90		L	0.25	% v/v	EP							
6	N-Pak AMS		L	2.5	% v/v	EP							
6	Halex GT	4.39	L	2	pt/a	MP							
6	Activator 90		L	0.25	% v/v	MP							
6	N-Pak AMS		L	2.5	% v/v	MP							
7	Corvus	2.6	SC	4.5	fl oz/a	EP	100	98	72	93	95	97	241
7	Activator 90		L	0.25	% v/v	EP							
7	N-Pak AMS		L	2.5	% v/v	EP							
8	Touchdown Total	4.17	L	24	fl oz/a	MP	93	91	84	93	93	88	247
8	Capreno	3.45	SC	3	fl oz/a	MP							
8	Activator 90		L	0.25	% v/v	MP							
8	N-Pak AMS		L	2.5	% v/v	MP							
9	Ignite 280	2.34	L	24	fl oz/a	MP	98	93	85	95	98	92	237
9	Capreno	3.45	SC	3	fl oz/a	MP							
9	Activator 90		L	0.25	% v/v	MP							
9	N-Pak AMS		L	2.5	% v/v	MP							
10	Touchdown Total	4.17	L	24	fl oz/a	MP	98	98	92	100	98	100	231
10	SureStart	4.18	SE	1.75	pt/a	MP							
10	Activator 90		L	0.25	% v/v	MP							
10	N-Pak AMS		L	2.5	% v/v	MP							
11	Roundup PowerMAX	4.5	L	22	fl oz/a	EP	78	76	79	83	88	78	243
11	N-Pak AMS		L	2.5	% v/v	EP							
11	Roundup PowerMAX	4.5	L	22	fl oz/a	LP							
11	N-Pak AMS		L	2.5	% v/v	LP							

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Rating Unit	percent	percent	percent	percent	percent	percent	bu/ac
Rating Date	7/28/09	7/28/09	8/24/09	8/24/09	8/24/09	8/24/09	11/5/09
Trt-Eval Interval	54 DAMP	54 DAMP	81 DAMP	81 DAMP	81 DAMP	81 DAMP	HARVEST

ARM Action Codes

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	17	18	19	20	21	22	23
12	Halex GT	4.39	L	3.6	pt/a	MP	98	98	90	100	97	97	230
12	Northstar	47.4	WG	2.5	oz/a	MP							
12	Activator 90		L	0.25	% v/v	MP							
12	N-Pak AMS		L	2.5	% v/v	MP							

LSD (P=.05)	6.5	5.1	5.5	8.4	7.0	7.9	15.9
Standard Deviation	3.8	3.0	3.2	5.0	4.1	4.7	9.4
CV	3.98	3.17	3.64	5.14	4.29	4.9	4.02