

MSU Weed Science Research Program

POSTEMERGENCE TIMING IN HERBICIDE RESISTANT CORN, 2007

Trial ID: C0207  
 Conducted: CAMPUS

Study Dir.:  
 Investigator: James Kells

**Date Planted:** 5/7/07                      **Row Spacing:** 30 IN  
**Variety:** Pioneer 38B86                      **No. of Reps:** 3  
**Population:** 29,500 S/A                      **% OM:** 3.3  
**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
<b>Application Timing:</b>	Pre	4 IN WD	6 IN WD	9 IN WD
<b>Date Treated:</b>	5/7/07	5/30/07	6/1/07	6/6/07
<b>Time Treated:</b>	7:43 PM	10:30AM	4:45PM	4:00PM
<b>% Cloud Cover:</b>	30	90	40	20
<b>Air Temp., Unit:</b>	74 F	82 F	83 F	77 F
<b>% Relative Humidity:</b>	37	48	55	40
<b>Wind Speed/Unit/Dir:</b>	4 mph SE	1 mph SW	4 mph S	5 mph SW
<b>Soil Temp., Unit:</b>	62 F	67.5 F	76 F	74 F
<b>Soil/Leaf Surface M:</b>	5 5	5 5	5 5	5 5
<b>Soil Moist (1=w 5=d):</b>	5	3	4	2

**Crop Stage at Each Application**

	A	B	C	D
<b>Crop Name:</b>	ZEAMX	ZEAMX	ZEAMX	ZEAMX
<b>Height (In.):</b>		6-8(8)	8-12(10)	10-15(13)
<b>Stage (L):</b>		V3 5L	V3-5(4)7L	V4-5(5)8L

**Weed Stage at Each Application**

	A	B	C	D
<b>Weed 1 Name:</b>	ANGR	ANGR	ANGR	ANGR
<b>Height (In.):</b>		.5-5(3.5)	2-8(6)	9-12(10)
<b>Stage (L):</b>		2-5(4)	2-6(5)	2-6(5)
<b>Weed 2 Name:</b>	CHEAL	CHEAL	CHEAL	CHEAL
<b>Height (In.):</b>		.3-2(1)	.5-4(1.5)	1-6(4)
<b>Stage (L):</b>		Cot-6(4)	Cot-9(6)	2-12(10)
<b>Weed 3 Name:</b>	AMARE	AMARE	AMARE	AMARE
<b>Height (In.):</b>		.5-1.5(.8)	.5-6(3)	1-5(4)
<b>Stage (L):</b>		1-7(5)	Cot-12(7)	2-14(12)
<b>Weed 4 Name:</b>	ABUTH	ABUTH	ABUTH	ABUTH
<b>Height (In.):</b>		.5-2(2)	.5-2.5(2)	.5-5(2)
<b>Stage (L):</b>		Cot-4(3)	Cot-5(3)	Cot-5(3)

**Weed Density (plants/sq. ft.)**

	1	2	3	4
<b>Date:</b>	5/7/07	5/30/07	6/1/07	6/6/07
<b>Weed Name:</b>	ANGR	ANGR	ANGR	ANGR
<b>Density:</b>		12		12
<b>Date:</b>	5/7/07	5/30/07	6/1/07	6/6/07
<b>Weed Name:</b>	CHEAL	CHEAL	CHEAL	CHEAL
<b>Density:</b>		60		67
<b>Date:</b>	5/7/07	5/30/07	6/1/07	6/6/07
<b>Weed Name:</b>	AMARE	AMARE	AMARE	AMARE
<b>Density:</b>		1		1
<b>Date:</b>	5/7/07	5/30/07	6/1/07	6/6/07
<b>Weed Name:</b>	ABUTH	ABUTH	ABUTH	ABUTH
<b>Density:</b>		2		1

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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	18"	20"	100"	20	WATER	30
B	CUB	3.5	FF	8003	23"	20"	100"	20	WATER	30
C	CUB	3.5	FF	8003	24"	20"	100"	20	WATER	30
D	CUB	3.5	FF	8003	27"	20"	100"	20	WATER	30



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Study Dir.:  
 Investigator: Christy Sprague

Weed Code	ANGR	CHEAL	AMARE	ABUTH	ANGR	CHEAL	AMARE	ABUTH
Crop Code								
Rating Data Type	control	control	control	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent	percent
Rating Date	6/15/07	6/15/07	6/15/07	6/15/07	7/6/07	7/6/07	7/6/07	7/6/07
Trt-Eval Interval	10 DALP	10 DALP	10 DALP	10 DALP	30 DALP	30 DALP	30 DALP	30 DALP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7	8
19	Harness Xtra 5.6	5.6	L	1.0	qt/a	PRE	100	100	100	97	95	96	98	98
19	Liberty	1.67	L	0.42	lb ae/a	6 IN WDS								
19	Ammonium Sulfate		DF	8.5	lb/100 gal	6 IN WDS								
20	Harness Xtra 5.6	5.6	L	1.0	qt/a	PRE	100	100	100	99	98	98	100	98
20	Liberty	1.67	L	0.42	lb ae/a	9 IN WDS								
20	Ammonium Sulfate		DF	8.5	lb/100 gal	9 IN WDS								
LSD (P=.05)							3.6	5.3	1.1	4.4	5.5	5.6	3.0	3.0
Standard Deviation							2.2	3.2	0.6	2.7	3.3	3.4	1.8	1.8
CV							2.32	3.56	0.68	2.88	3.69	3.86	1.91	1.96

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Trial ID: C0207  
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 Investigator: Christy Sprague

Weed Code  
 Crop Code  
 Rating Data Type Zeamx  
 Rating Unit yield  
 Rating Date bu/ac  
 10/3/07  
 Trt-Eval Interval HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Yield
1	Weed Free					9	206
2	Touchdown Total	4.17	L	0.75	lb ae/a	4 IN WDS	205
2	Ammonium Sulfate		DF	2	% w/w	4 IN WDS	
3	Touchdown Total	4.17	L	0.75	lb ae/a	6 IN WDS	198
3	Ammonium Sulfate		DF	2	% w/w	6 IN WDS	
4	Touchdown Total	4.17	L	0.75	lb ae/a	9 IN WDS	202
4	Ammonium Sulfate		DF	2	% w/w	9 IN WDS	
5	Touchdown Total	4.17	L	0.75	lb ae/a	4 IN WDS	209
5	Harness Xtra 5.6	5.6	L	1.0	qt/a	4 IN WDS	
5	Ammonium Sulfate		DF	2	% w/w	4 IN WDS	
6	Touchdown Total	4.17	L	0.75	lb ae/a	6 IN WDS	199
6	Harness Xtra 5.6	5.6	L	1.0	qt/a	6 IN WDS	
6	Ammonium Sulfate		DF	2	% w/w	6 IN WDS	
7	Touchdown Total	4.17	L	0.75	lb ae/a	9 IN WDS	197
7	Harness Xtra 5.6	5.6	L	1.0	qt/a	9 IN WDS	
7	Ammonium Sulfate		DF	2	% w/w	9 IN WDS	
8	Harness Xtra 5.6	5.6	L	1.0	qt/a	PRE	193
8	Touchdown Total	4.17	L	0.75	lb ae/a	4 IN WDS	
8	Ammonium Sulfate		DF	2	% w/w	4 IN WDS	
9	Harness Xtra 5.6	5.6	L	1.0	qt/a	PRE	198
9	Touchdown Total	4.17	L	0.75	lb ae/a	6 IN WDS	
9	Ammonium Sulfate		DF	2	% w/w	6 IN WDS	
10	Harness Xtra 5.6	5.6	L	1.0	qt/a	PRE	208
10	Touchdown Total	4.17	L	0.75	lb ae/a	9 IN WDS	
10	Ammonium Sulfate		DF	2	% w/w	9 IN WDS	
11	Weedy						102
12	Liberty	1.67	L	0.42	lb ae/a	4 IN WDS	195
12	Ammonium Sulfate		DF	8.5	lb/100 gal	4 IN WDS	
13	Liberty	1.67	L	0.42	lb ae/a	6 IN WDS	201
13	Ammonium Sulfate		DF	8.5	lb/100 gal	6 IN WDS	
14	Liberty	1.67	L	0.42	lb ae/a	9 IN WDS	199
14	Ammonium Sulfate		DF	8.5	lb/100 gal	9 IN WDS	
15	Liberty	1.67	L	0.42	lb ae/a	4 IN WDS	189
15	Harness Xtra 5.6	5.6	L	1.0	qt/a	4 IN WDS	
15	Ammonium Sulfate		DF	8.5	lb/100 gal	4 IN WDS	
16	Liberty	1.67	L	0.42	lb ae/a	6 IN WDS	192
16	Harness Xtra 5.6	5.6	L	1.0	qt/a	6 IN WDS	
16	Ammonium Sulfate		DF	8.5	lb/100 gal	6 IN WDS	
17	Liberty	1.67	L	0.42	lb ae/a	9 IN WDS	196
17	Harness Xtra 5.6	5.6	L	1.0	qt/a	9 IN WDS	
17	Ammonium Sulfate		DF	8.5	lb/100 gal	9 IN WDS	
18	Harness Xtra 5.6	5.6	L	1.0	qt/a	PRE	190
18	Liberty	1.67	L	0.42	lb ae/a	4 IN WDS	
18	Ammonium Sulfate		DF	8.5	lb/100 gal	4 IN WDS	

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Weed Code  
 Crop Code Zeamx  
 Rating Data Type yield  
 Rating Unit bu/ac  
 Rating Date 10/3/07  
 Trt-Eval Interval HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	
19	Harness Xtra 5.6	5.6	L	1.0	qt/a	PRE	197
19	Liberty	1.67	L	0.42	lb ae/a	6 IN WDS	
19	Ammonium Sulfate		DF	8.5	lb/100 gal	6 IN WDS	
20	Harness Xtra 5.6	5.6	L	1.0	qt/a	PRE	191
20	Liberty	1.67	L	0.42	lb ae/a	9 IN WDS	
20	Ammonium Sulfate		DF	8.5	lb/100 gal	9 IN WDS	

LSD (P=.05)	17.9
Standard Deviation	10.8
CV	5.61