

MSU Weed Science Research Program

WEED CONTROL IN CORN WITH DEFINE SC, 2006

Trial ID: C0906  
 Conducted: CAMPUS

Study Dir.:  
 Investigator: Christy Sprague

**Date Planted:** 5/5/2006                      **Row Spacing:** 30 IN  
**Variety:** NK33Z7                              **No. of Reps:** 3  
**Population:** 29,000 S/A                      **% OM:** 3.0  
**Soil Type:** silty clay loam                      **pH:** 6.0  
**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, REDROOT	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
<b>Application Timing:</b>	PRE	EP	MP
<b>Date Treated:</b>	5/5/2006	5/29/2006	6/2/2006
<b>Time Treated:</b>	12:45 pm	7:45 pm	2:00 pm
<b>% Cloud Cover:</b>	75	30	90
<b>Air Temp., Unit:</b>	70 F	88 F	80 F
<b>% Relative Humidity:</b>	47	50	38
<b>Wind Speed/Unit/Dir:</b>	8 mph	0 mph	3 mph NE
<b>Soil Temp., Unit:</b>	57.2 F	85 F	73.2 F
<b>Soil/Leaf Surface M:</b>	3 3	5 5	5 5
<b>Soil Moist (1=w 5=d):</b>	3	5	5

**Crop Stage at Each Application**

	A	B	C
<b>Crop Name:</b>	ZEAMX	ZEAMX	ZEAMX
<b>Height (In.):</b>		5-7 (5)	4-9 (8)
<b>Stage (L):</b>		V2-3 (3) 5L	V3-4 (4) 5L

**Weed Stage at Each Application**

	A	B	C
<b>Weed 1 Name:</b>	ANGR	ANGR	ANGR
<b>Height (In.):</b>		1-3 (1.5)	1-4.5 (3)
<b>Stage (L):</b>		2-4 (3)	2-4 (3)
<b>Weed 2 Name:</b>	CHEAL	CHEAL	CHEAL
<b>Height (In.):</b>		.25-2 (.5)	.25-7 (2)
<b>Stage (L):</b>		cot-8 (4)	cot-13 (6)
<b>Weed 3 Name:</b>	AMARE	AMARE	AMARE
<b>Height (In.):</b>		.25	.5-1.5 (1)
<b>Stage (L):</b>		cot	2-6 (5)
<b>Weed 4 Name:</b>	AMBEL	AMBEL	AMBEL
<b>Height (In.):</b>		.25-2 (1)	.5-4 (2)
<b>Stage (L):</b>		cot-4 (2)	2-6 (4)
<b>Weed 5 Name:</b>	ABUTH	ABUTH	ABUTH
<b>Height (In.):</b>		.25-1 (.5)	.5-2 (1)
<b>Stage (L):</b>		cot-2 (cot)	1-3 (2)

MSU Weed Science Research Program

WEED CONTROL IN CORN WITH DEFINE SC, 2006

Trial ID: C0906  
 Conducted: CAMPUS

Study Dir.:  
 Investigator: Christy Sprague

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

	1	2	3
<b>Date:</b>	5/5/2006	5/29/2006	6/2/2006
<b>Weed Name:</b>	ANGR	ANGR	ANGR
<b>Density:</b>		65	67
<b>Date:</b>	5/5/2006	5/29/2006	6/2/2006
<b>Weed Name:</b>	CHEAL	CHEAL	CHEAL
<b>Density:</b>		30	32
<b>Date:</b>	5/5/2006	5/29/2006	6/2/2006
<b>Weed Name:</b>	AMARE	AMARE	AMARE
<b>Density:</b>		1	3
<b>Date:</b>	5/5/2006	5/29/2006	6/2/2006
<b>Weed Name:</b>	AMBEL	AMBEL	AMBEL
<b>Density:</b>		16	15
<b>Date:</b>	5/5/2006	5/29/2006	6/2/2006
<b>Weed Name:</b>	ABUTH	ABUTH	ABUTH
<b>Density:</b>		<1	1

**Application Equipment**

	Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI	
<b>A</b>	cub	3.5	FF	8003	18"	20"	100"	20	H2O	30	
<b>B</b>	cub	3.5	FF	8003	20"	20"	100"	20	H2O	30	
<b>C</b>	cub	3.5	FF	8003	23"	20"	100"	20	H2O	30	



MSU Weed Science Research Program

WEED CONTROL IN CORN WITH DEFINE SC, 2006

Trial ID: C0906  
 Conducted: CAMPUS

Study Dir.:  
 Investigator: Christy Sprague

Weed Code								ANGR	CHEAL	AMARE	AMBEL	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								6/3/2006	6/3/2006	6/3/2006	6/3/2006	6/3/2006	6/9/2006	6/9/2006	6/9/2006	
Trt-Eval Interval								AT MP	AT MP	AT MP	AT MP	AT MP	7 DAMP	7 DAMP	7 DAMP	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7	8	9	
14	Define SC	4	SC	20	fl oz/a	PRE	0	99	88	97	71	74	0	100	100	
14	Buctril/ATR	3	L	2	pt/a	MP										
15	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	0	98	100	100	82	85	0	99	100	
15	Roundup OriginalMax	4.5	L	22	fl oz/a	MP										
15	Ammonium Sulfate		DF	3	lb/a	MP										
LSD (P=.05)							0.0	1.5	4.5	3.8	5.4	9.5	2.3	4.3	0.8	
Standard Deviation							0.0	0.8	2.5	2.2	3.0	5.3	1.4	2.6	0.5	
CV							0.0	0.82	2.66	2.17	3.47	6.16	33.22	3.26	0.54	



MSU Weed Science Research Program

WEED CONTROL IN CORN WITH DEFINE SC, 2006

Trial ID: C0906  
 Conducted: CAMPUS

Study Dir.:  
 Investigator: Christy Sprague

Weed Code				AMARE	AMBEL	ABUTH		ZEAMX	ANGR	CHEAL	AMARE	AMBEL		
Crop Code				control	control	control		injury	control	control	control	control		
Rating Data Type				percent	percent	percent		percent	percent	percent	percent	percent		
Rating Unit				6/9/2006	6/9/2006	6/9/2006		6/16/2006	6/16/2006	6/16/2006	6/16/2006	6/16/2006		
Rating Date				7 DAMP	7 DAMP	7 DAMP		14 DAMP	14 DAMP	14 DAMP	14 DAMP	14 DAMP		
Trt-Eval Interval				7 DAMP	7 DAMP	7 DAMP		14 DAMP	14 DAMP	14 DAMP	14 DAMP	14 DAMP		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	10	11	12	13	14	15	16	17
14	Define SC	4	SC	20	fl oz/a	PRE	100	100	99	1	100	100	100	100
14	Buctril/ATR	3	L	2	pt/a	MP								
15	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	97	95	99	0	97	100	100	100
15	Roundup OriginalMax	4.5	L	22	fl oz/a	MP								
15	Ammonium Sulfate		DF	3	lb/a	MP								
LSD (P=.05)							2.0	5.0	4.5	3.1	2.3	0.5	0.0	3.7
Standard Deviation							1.2	3.0	2.7	1.9	1.4	0.3	0.0	2.2
CV							1.28	3.41	3.14	73.19	1.54	0.35	0.0	2.46



MSU Weed Science Research Program

WEED CONTROL IN CORN WITH DEFINE SC, 2006

Trial ID: C0906  
 Conducted: CAMPUS

Study Dir.:  
 Investigator: Christy Sprague

Weed Code		ABUTH		ZEAMX		ANGR		CHEAL		AMARE		AMBEL		ABUTH		ANGR	
Crop Code																	
Rating Data Type		control		injury		control		control		control		control		control		control	
Rating Unit		percent		percent		percent		percent		percent		percent		percent		percent	
Rating Date		6/16/2006		6/29/2006		6/29/2006		6/29/2006		6/29/2006		6/29/2006		6/29/2006		7/25/2006	
Trt-Eval Interval		14 DAMP		27 DAMP		27 DAMP		27 DAMP		27 DAMP		27 DAMP		27 DAMP		53 DAMP	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	18	19	20	21	22	23	24	25			
14	Define SC	4	SC	20	fl oz/a	PRE	99	0	98	100	100	100	100	99			
14	Buctril/ATR	3	L	2	pt/a	MP											
15	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	98	0	86	99	100	100	94	79			
15	Roundup OriginalMax	4.5	L	22	fl oz/a	MP											
15	Ammonium Sulfate		DF	3	lb/a	MP											
LSD (P=.05)							5.1	4.0	7.8	0.8	0.7	6.1	6.1	8.9			
Standard Deviation							3.0	2.4	4.7	0.5	0.4	3.6	3.6	5.3			
CV							3.48	103.51	5.56	0.48	0.48	3.94	4.25	6.69			



MSU Weed Science Research Program

WEED CONTROL IN CORN WITH DEFINE SC, 2006

Trial ID: C0906  
 Conducted: CAMPUS

Study Dir.:  
 Investigator: Christy Sprague

Weed Code	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX
Crop Code					
Rating Data Type	control	control	control	control	yield
Rating Unit	percent	percent	percent	percent	bu/ac
Rating Date	7/25/2006	7/25/2006	7/25/2006	7/25/2006	10/29/2006
Trt-Eval Interval	53 DAMP	53 DAMP	53 DAMP	53 DAMP	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	26	27	28	29	30
1	Untreated						0	0	0	0	35
2	Define SC	4	SC	20	fl oz/a	PRE	100	100	95	98	185
2	Python	80	DG	1	oz/a	PRE					
2	Atrazine	4	L	1.5	qt/a	PRE					
3	Define SC	4	SC	20	fl oz/a	PRE	100	100	93	75	180
3	Atrazine	4	L	1.5	qt/a	PRE					
4	Define SC	4	SC	15	fl oz/a	PRE	100	100	88	78	185
4	Prowl H2O	3.8	L	2	pt/a	PRE					
4	Atrazine	4	L	1.5	qt/a	PRE					
5	Define SC	4	SC	10	fl oz/a	EP	100	100	100	97	181
5	Atrazine	4	L	1.5	qt/a	EP					
5	Option	35	WG	1.5	oz/a	EP					
5	MSO		L	1.5	pt/a	EP					
5	28% Nitrogen		L	1.5	qt/a	EP					
6	Define SC	4	SC	10	fl oz/a	PRE	100	100	100	79	183
6	Atrazine	4	L	1.5	qt/a	PRE					
6	Equip	32	WG	1.5	oz/a	EP					
6	MSO		L	1.5	pt/a	EP					
6	28% Nitrogen		L	1.5	qt/a	EP					
7	Define SC	4	SC	10	fl oz/a	MP	100	100	100	99	190
7	Atrazine	4	L	1.5	qt/a	MP					
7	Equip	32	WG	1.5	oz/a	MP					
7	MSO		L	1.5	pt/a	MP					
7	28% Nitrogen		L	1.5	qt/a	MP					
8	Define SC	4	SC	10	fl oz/a	MP	100	100	100	98	190
8	Atrazine	4	L	1.5	qt/a	MP					
8	Option	35	WG	1.5	oz/a	MP					
8	MSO		L	1.5	pt/a	MP					
8	28% Nitrogen		L	1.5	qt/a	MP					
9	Define SC	4	SC	15	fl oz/a	PRE	100	100	100	100	194
9	Liberty	1.67	L	32	fl oz/a	MP					
9	Atrazine	4	L	1	qt/a	MP					
9	Ammonium Sulfate		DF	3	lb/a	MP					
10	Liberty	1.67	L	32	fl oz/a	EP	100	100	100	75	195
10	Define SC	4	SC	15	fl oz/a	EP					
10	Atrazine	4	L	1	qt/a	EP					
10	Ammonium Sulfate		DF	3	lb/a	EP					
11	Liberty	1.67	L	32	fl oz/a	MP	100	100	100	100	172
11	Define SC	4	SC	15	fl oz/a	MP					
11	Atrazine	4	L	1	qt/a	MP					
11	Ammonium Sulfate		DF	3	lb/a	MP					
12	Define SC	4	SC	10	fl oz/a	MP	100	100	100	95	186
12	Option	35	WG	1.5	oz/a	MP					
12	Distinct	70	DF	4	oz/a	MP					
12	MSO		L	1.5	pt/a	MP					
12	28% Nitrogen		L	1.5	qt/a	MP					
13	Option	35	WG	1.5	oz/a	MP	100	100	100	93	184
13	Distinct	70	DF	4	oz/a	MP					
13	MSO		L	1.5	pt/a	MP					
13	28% Nitrogen		L	1.5	qt/a	MP					

MSU Weed Science Research Program

WEED CONTROL IN CORN WITH DEFINE SC, 2006

Trial ID: C0906  
 Conducted: CAMPUS

Study Dir.:  
 Investigator: Christy Sprague

Weed Code	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX
Crop Code					
Rating Data Type	control	control	control	control	yield
Rating Unit	percent	percent	percent	percent	bu/ac
Rating Date	7/25/2006	7/25/2006	7/25/2006	7/25/2006	10/29/2006
Trt-Eval Interval	53 DAMP	53 DAMP	53 DAMP	53 DAMP	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	26	27	28	29	30
14	Define SC	4	SC	20	fl oz/a	PRE	100	100	100	100	180
14	Buctril/ATR	3	L	2	pt/a	MP					
15	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	100	100	95	90	190
15	Roundup OriginalMax	4.5	L	22	fl oz/a	MP					
15	Ammonium Sulfate		DF	3	lb/a	MP					
LSD (P=.05)							0.0	0.0	3.6	8.8	19.1
Standard Deviation							0.0	0.0	2.1	5.3	11.4
CV							0.0	0.0	2.35	6.18	6.52