

MSU Weed Science Research Program

Soil-applied (PRE) weed control programs in corn

Trial ID: C01-15 Study Dir.: Sprague and Powell  
 Conducted: Campus C-27 Investigator: Christy Sprague

Date Planted: Apr/28/2015 Row Spacing: 30 IN  
 Variety: Pioneer P9807 No. of Reps: 4  
 Population: 32,000 seeds/A % OM: 2.8  
 Soil Type: Sandy loam pH: 6.5  
 Plot Size: 10 X 35 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel plow; spring soil finish  
 Fertilizer: 300lb/A Urea - broadcast and incorporated; 150lb/A 19-19-19 starter

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	mainly foxtail species	SETARIA SP.
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	AMAPO	AMARANTH, POWELL	AMARANTHUS POWELLII S.WATS.
4.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
5.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

Application Description

**A**  
 Application Timing: PRE  
 Date Treated: Apr/29/2015  
 Time Treated: 12:40 PM  
 % Cloud Cover: 20  
 Air Temp., Unit: 68 F  
 % Relative Humidity: 40  
 Wind Speed/Unit/Dir: 6 mph  
 Soil Temp., Unit: 62 F  
 Soil/Leaf Surface M: 4 -  
 Soil Moist (1=w 5=d): 3

Crop Stage at Each Application

**A**  
 Crop Name: ZEAMX  
 Height (In.): -  
 Stage (L): -

Weed Stage at Each Application

**A**  
 Weed 1 Name: ANGR  
 Height (In.): -  
 Stage (L): -  
 Weed 2 Name: CHEAL  
 Height (In.): -  
 Stage (L): -  
 Weed 3 Name: AMAPO  
 Height (In.): -  
 Stage (L): -  
 Weed 4 Name: AMBEL  
 Height (In.): -  
 Stage (L): -  
 Weed 5 Name: ABUTH  
 Height (In.): -  
 Stage (L): -

Weed Density (plants/sq. ft.)

Date:	1	2	3	4	5
	Jun/09/2015	Jun/09/2015	Jun/09/2015	Jun/09/2015	Jun/09/2015
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Density:	5	24	2	1	<1

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	Cub	3.8	AIXR	11003	20"	20"	80"	19	Water	28

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	# Subsamples, Dec.	ZEAMX injury percent May/29/2015 30 DA-A 0	ANGR control percent May/29/2015 30 DA-A 0	CHEAL control percent May/29/2015 30 DA-A 0	AMAPO control percent May/29/2015 30 DA-A 0	AMBEL control percent May/29/2015 30 DA-A 0	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Acuron	3.44	L	3	qt/a	PRE	A	0	99	99	99	99
2	Acuron	3.44	L	3	qt/a	PRE	A	0	99	99	99	99
2	Atrazine	90	WG	0.83	lb/a	PRE	A					
3	Lumax EZ	3.67	L	2.7	qt/a	PRE	A	0	99	99	99	99
4	Lexar EZ	3.7	L	3	qt/a	PRE	A	0	99	99	99	99
5	Balance Flexx	2	L	4	fl oz/a	PRE	A	0	99	99	99	99
5	Dual II Magnum	7.64	L	1.33	pt/a	PRE	A					
6	Balance Flexx	2	L	4	fl oz/a	PRE	A	0	99	99	99	99
6	Bicep II Magnum	5.5	L	2	qt/a	PRE	A					
7	Untreated							0	0	0	0	0
8	Corvus	2.63	L	5.6	fl oz/a	PRE	A	0	99	99	99	99
9	Corvus	2.63	L	5.6	fl oz/a	PRE	A	0	99	99	99	99
9	Atrazine	90	WG	1.67	lb/a	PRE	A					
10	Zidua	85	WG	2.5	oz/a	PRE	A	0	99	99	99	99
10	Sharpen	2.85	L	3	fl oz/a	PRE	A					
11	Verdict	5.57	L	15	fl oz/a	PRE	A	0	99	99	99	99
11	Zidua	85	WG	2	oz/a	PRE	A					
11	Atrazine	90	WG	1.67	lb/a	PRE	A					
12	Degree Xtra	4	L	3	qt/a	PRE	A	0	99	99	99	99
12	Atrazine	90	WG	0.56	lb/a	PRE	A					
13	Harness Xtra	5.6	L	2.4	qt/a	PRE	A	0	99	99	99	99
14	Bicep II Magnum	5.5	L	2.1	qt/a	PRE	A	0	99	99	99	96
15	TripleFLEX II	4.16	L	3	pt/a	PRE	A	0	99	99	99	99
16	TripleFLEX II	4.16	L	3	pt/a	PRE	A	0	99	99	99	99
16	Atrazine	90	WG	1.67	lb/a	PRE	A					
LSD (P=.05)								0.0	0.0	0.0	0.0	1.9
CV								0.0	0.0	0.0	0.0	1.43

Means followed by same letter do not significantly differ (P=.05, LSD)

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Weed Code								ABUTH		ANGR	CHEAL	AMAPO
Crop Code								control	ZEAMX	control	control	control
Rating Data Type								percent	injury	percent	percent	percent
Rating Unit								May/29/2015	percent	Jun/30/2015	Jun/30/2015	Jun/30/2015
Rating Date								30 DA-A	62 DA-A	62 DA-A	62 DA-A	62 DA-A
Trt-Eval Interval								0	0	0	0	0
# Subsamples, Dec.								0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code					
1	Acuron	3.44	L	3	qt/a	PRE	A	99	0	99	99	99
2	Acuron	3.44	L	3	qt/a	PRE	A	99	1	99	99	99
2	Atrazine	90	WG	0.83	lb/a	PRE	A					
3	Lumax EZ	3.67	L	2.7	qt/a	PRE	A	99	0	99	99	99
4	Lexar EZ	3.7	L	3	qt/a	PRE	A	99	2	99	99	99
5	Balance Flexx	2	L	4	fl oz/a	PRE	A	99	2	99	99	99
5	Dual II Magnum	7.64	L	1.33	pt/a	PRE	A					
6	Balance Flexx	2	L	4	fl oz/a	PRE	A	99	1	99	99	99
6	Bicep II Magnum	5.5	L	2	qt/a	PRE	A					
7	Untreated							0	0	0	0	0
8	Corvus	2.63	L	5.6	fl oz/a	PRE	A	99	11	98	99	99
9	Corvus	2.63	L	5.6	fl oz/a	PRE	A	99	8	98	99	99
9	Atrazine	90	WG	1.67	lb/a	PRE	A					
10	Zidua	85	WG	2.5	oz/a	PRE	A	99	10	99	99	99
10	Sharpen	2.85	L	3	fl oz/a	PRE	A					
11	Verdict	5.57	L	15	fl oz/a	PRE	A	99	9	99	98	99
11	Zidua	85	WG	2	oz/a	PRE	A					
11	Atrazine	90	WG	1.67	lb/a	PRE	A					
12	Degree Xtra	4	L	3	qt/a	PRE	A	96	0	99	88	99
12	Atrazine	90	WG	0.56	lb/a	PRE	A					
13	Harness Xtra	5.6	L	2.4	qt/a	PRE	A	95	2	99	96	99
14	Bicep II Magnum	5.5	L	2.1	qt/a	PRE	A	94	0	99	85	95
15	TripleFLEX II	4.16	L	3	pt/a	PRE	A	99	12	99	99	98
16	TripleFLEX II	4.16	L	3	pt/a	PRE	A	99	10	99	99	99
16	Atrazine	90	WG	1.67	lb/a	PRE	A					
LSD (P=.05)								2.5	4.1	1.1	3.9	2.5
CV								1.94	68.94	0.79	3.02	1.9

Means followed by same letter do not significantly differ (P=.05, LSD)

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Weed Code								AMBEL	ABUTH	ZEAMX	ZEAMX
Crop Code								control	control	moisture	yield
Rating Data Type								percent	percent	percent	bu/acre
Rating Unit								Jun/30/2015	Jun/30/2015	Oct/16/2015	Oct/16/2015
Rating Date								62 DA-A	62 DA-A	170 DA-A	at 15% M
Trt-Eval Interval								0	0	1	0
# Subsamples, Dec.								0	0	1	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Grow Stg	Appl Code				
1	Acuron	3.44	L	3	qt/a	PRE	A	99	99	18.4	213
2	Acuron	3.44	L	3	qt/a	PRE	A	99	99	18.1	217
2	Atrazine	90	WG	0.83	lb/a	PRE	A				
3	Lumax EZ	3.67	L	2.7	qt/a	PRE	A	99	99	17.9	221
4	Lexar EZ	3.7	L	3	qt/a	PRE	A	96	98	17.1	223
5	Balance Flexx	2	L	4	fl oz/a	PRE	A	98	99	17.4	241
5	Dual II Magnum	7.64	L	1.33	pt/a	PRE	A				
6	Balance Flexx	2	L	4	fl oz/a	PRE	A	99	99	17.2	221
6	Bicep II Magnum	5.5	L	2	qt/a	PRE	A				
7	Untreated							0	0	19.0	100
8	Corvus	2.63	L	5.6	fl oz/a	PRE	A	99	98	18.6	216
9	Corvus	2.63	L	5.6	fl oz/a	PRE	A	99	99	18.2	221
9	Atrazine	90	WG	1.67	lb/a	PRE	A				
10	Zidua	85	WG	2.5	oz/a	PRE	A	98	99	17.7	211
10	Sharpen	2.85	L	3	fl oz/a	PRE	A				
11	Verdict	5.57	L	15	fl oz/a	PRE	A	98	99	18.1	223
11	Zidua	85	WG	2	oz/a	PRE	A				
11	Atrazine	90	WG	1.67	lb/a	PRE	A				
12	Degree Xtra	4	L	3	qt/a	PRE	A	82	63	17.7	223
12	Atrazine	90	WG	0.56	lb/a	PRE	A				
13	Harness Xtra	5.6	L	2.4	qt/a	PRE	A	87	64	17.0	216
14	Bicep II Magnum	5.5	L	2.1	qt/a	PRE	A	74	64	17.4	218
15	TripleFLEX II	4.16	L	3	pt/a	PRE	A	91	99	18.5	214
16	TripleFLEX II	4.16	L	3	pt/a	PRE	A	94	99	18.0	223
16	Atrazine	90	WG	1.67	lb/a	PRE	A				
LSD (P=.05)								6.0	2.5	1.24	17.2
CV								4.8	2.06	4.87	5.66

Means followed by same letter do not significantly differ (P=.05, LSD)