

Soil-applied (PRE) weed control programs in corn

Trial ID: C09-19 Study Dir.: Burns, Craft
 Conducted: Campus C-27 Investigator: Erin Burns

Planting Date: May-15-2019 **Row Spacing:** 30 IN
Variety: DKC 48-56-RIB **No. of Reps:** 4
Population: 31500 S/A **% OM:** 2.5
Soil Type: SL sandy loam **pH:** 6.1
Plot Size: 10 X 35 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall chisel plowed: spring soil finished twice
Fertilizer: 300 lbs/A urea incorporated
 157 lbs/A 19-19-19 starter

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	ANGR	mainly foxtail species	Annual Grass
2	CHEAL	common lambsquarters	Chenopodium album
3	AMAPO	Powell amaranth	Amaranthus powellii
4	AMBEL	Common ragweed	Ambrosia artemisiifolia
5	ABUTH	velvetleaf	Abutilon theophrasti
Crop	Code	Common Name	
1	ZEAMX	Corn	

Application Description

Application Timing: A
Date Treated: PRE
 May-16-2019
Time Treated: 7:30 AM
% Cloud Cover: 50
Air Temp., Unit: 54 F
% Relative Humidity: 75.6
Wind Speed/Unit/Dir: 5 MPH SE
Soil Temp, Unit: 60 F
Leaf Moist/Dew Presence (Y/N):
Soil Moist: 4

Crop Stage at Each Application

Crop 1 Name: A
 ZEAMX
Height:
Stage: PRE

Weed Stage at Each Application

Weed 1 Name: A
 ANGR
Height:
Stage:
Weed 2 Name: CHEAL
Height:
Stage:
Weed 3 Name: AMAPO
Height:
Stage:
Weed 4 Name: AMBEL
Height:
Stage:
Weed 5 Name: ABUTH
Height:
Stage:

Weed Density

Date:	1	2	3	4	5
	May-16-2019	May-16-2019	May-16-2019	May-16-2019	May-16-2019
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Density:	16 FT2	2 FT2	1 FT2	1 FT2	1 FT2

Application Equipment

Appl	Sprayer Type	Ground Speed	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	Spray Volume	Carrier	Operation Pressure
A	CUB	3.8 MPH	AIXR	11003	22 "	20 "	100 "	19 GPA	WATER	30 PSI

Comments:

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Pest Code			ANGR	CHEAL	AMAPO	AMBEL	ABUTH		ANGR		
Crop Type, Code		ZEAMX	-					ZEAMX			
Rating Date		May-31-2019	May-31-2019	May-31-2019	May-31-2019	May-31-2019	May-31-2019	Jun-12-2019	Jun-12-2019		
Rating Type		injury	control	control	control	control	control	injury	control		
Rating Unit		percent	percent	percent	percent	percent	percent	percent	percent		
Trt-Eval Interval		15 DA-A	15 DA-A	15 DA-A	15 DA-A	15 DA-A	15 DA-A	27 DA-A	27 DA-A		
Trt No.	Treatment Name	Rate	Appl Code								
1	Corvus	5.6 fl oz/a	A	0.0	100.0	100.0	100.0	100.0	100.0	0.0	99.5
	1 Atrazine	1.1 lb/a	A								
2	Balance Flexx	5 fl oz/a	A	0.0	100.0	100.0	100.0	100.0	100.0	0.0	98.3
	2 Atrazine	1.1 lb/a	A								
3	Harness Xtra	2.6 qt/a	A	0.0	100.0	100.0	100.0	100.0	100.0	0.0	98.8
4	Corvus	4.5 fl oz/a	A	0.0	100.0	100.0	100.0	100.0	100.0	0.0	99.5
	4 Harness Xtra	1.8 qt/a	A								
5	Balance Flexx	4.5 fl oz/a	A	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0
	5 Harness Xtra	1.8 qt/a	A								
6	Untreated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Harness MAX	64 fl oz/a	A	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0
	7 Atrazine	1.1 lb/a	A								
8	Acuron	2.5 qt/a	A	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0
9	Lexar EZ	2.5 qt/a	A	0.0	100.0	100.0	100.0	100.0	100.0	0.0	99.0
10	Resicore	2.5 qt/a	A	0.0	100.0	100.0	100.0	100.0	100.0	0.0	99.5
	10 Atrazine	1.65 lb/a	A								
11	Corvus	3.3 fl oz/a	A	0.0	100.0	100.0	100.0	100.0	100.0	0.0	99.5
	11 Degree Xtra	2.4 qt/a	A								
12	Balance Flexx	4 fl oz/a	A	0.0	100.0	100.0	100.0	100.0	100.0	0.0	99.0
	12 Degree Xtra	2.4 qt/a	A								
LSD P=.05											1.95
Standard Deviation				0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35
CV				0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.49

Missing data estimates are included in columns: Average=25,26,28
 Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,10,11,13,19,23 because error mean square = 0.

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Pest Code		CHEAL	AMAPO	AMBEL	ABUTH	ZEAMX	ANGR	CHEAL	AMAPO	
Crop Type, Code										
Rating Date		Jun-12-2019	Jun-12-2019	Jun-12-2019	Jun-12-2019	Jun-27-2019	Jun-27-2019	Jun-27-2019	Jun-27-2019	
Rating Type		control	control	control	control	injury	control	control	control	
Rating Unit		percent	percent	percent	percent	percents	percent	percent	percent	
Trt-Eval Interval		27 DA-A	27 DA-A	27 DA-A	27 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A	
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	
		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit	
		Appl Code	Appl Code	Appl Code	Appl Code	Appl Code	Appl Code	Appl Code	Appl Code	
1	Corvus	5.6 fl oz/a	100.0	100.0	100.0	100.0	0.0	92.0	100.0	100.0
	1 Atrazine	1.1 lb/a								
2	Balance Flexx	5 fl oz/a	100.0	100.0	100.0	100.0	0.0	72.5	100.0	100.0
	2 Atrazine	1.1 lb/a								
3	Harness Xtra	2.6 qt/a	100.0	100.0	100.0	97.0	0.0	99.5	99.5	100.0
4	Corvus	4.5 fl oz/a	100.0	100.0	100.0	100.0	0.0	99.5	100.0	100.0
	4 Harness Xtra	1.8 qt/a								
5	Balance Flexx	4.5 fl oz/a	100.0	100.0	100.0	100.0	0.0	98.8	100.0	100.0
	5 Harness Xtra	1.8 qt/a								
6	Untreated		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Harness MAX	64 fl oz/a	100.0	100.0	100.0	100.0	0.0	99.5	100.0	100.0
	7 Atrazine	1.1 lb/a								
8	Acuron	2.5 qt/a	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0
9	Lexar EZ	2.5 qt/a	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0
10	Resicore	2.5 qt/a	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0
	10 Atrazine	1.65 lb/a								
11	Corvus	3.3 fl oz/a	100.0	100.0	100.0	100.0	0.0	99.0	100.0	100.0
	11 Degree Xtra	2.4 qt/a								
12	Balance Flexx	4 fl oz/a	100.0	100.0	100.0	100.0	0.0	100.0	100.0	99.5
	12 Degree Xtra	2.4 qt/a								
	LSD P=.05				1.02		5.22	0.42	0.42	
	Standard Deviation		0.00	0.00	0.00	0.71	0.00	3.63	0.29	0.29
	CV		0.0	0.0	0.0	0.77	0.0	4.11	0.32	0.32

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Pest Code		AMBEL	ABUTH		ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Crop Type, Code				ZEAMX					
Rating Date		Jun-27-2019	Jun-27-2019	Jul-11-2019	Jul-11-2019	Jul-11-2019	Jul-11-2019	Jul-11-2019	Jul-11-2019
Rating Type		control	control	injury	control	control	control	control	control
Rating Unit		percent	percent	percent	percent	percent	percent	percent	percent
Trt-Eval Interval		42 DA-A	42 DA-A	56 DA-A	56 DA-A	56 DA-A	56 DA-A	56 DA-A	56 DA-A
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
		Appl Code	Appl Code	Appl Code	Appl Code	Appl Code	Appl Code	Appl Code	Appl Code
1	Corvus	5.6 fl oz/a	100.0	100.0	0.0	83.8	100.0	100.0	100.0
	1 Atrazine	1.1 lb/a							
2	Balance Flexx	5 fl oz/a	100.0	100.0	0.0	71.3	100.0	100.0	100.0
	2 Atrazine	1.1 lb/a							
3	Harness Xtra	2.6 qt/a	100.0	99.5	0.0	91.3	99.5	97.5	100.0
4	Corvus	4.5 fl oz/a	100.0	100.0	0.0	97.5	100.0	100.0	99.5
	4 Harness Xtra	1.8 qt/a							
5	Balance Flexx	4.5 fl oz/a	100.0	100.0	0.0	98.8	100.0	100.0	100.0
	5 Harness Xtra	1.8 qt/a							
6	Untreated		0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Harness MAX	64 fl oz/a	99.5	100.0	0.0	98.3	100.0	100.0	100.0
	7 Atrazine	1.1 lb/a							
8	Acuron	2.5 qt/a	100.0	99.5	0.0	99.5	100.0	100.0	100.0
9	Lexar EZ	2.5 qt/a	99.5	100.0	0.0	99.0	99.5	100.0	100.0
10	Resicore	2.5 qt/a	100.0	100.0	0.0	98.8	100.0	100.0	100.0
	10 Atrazine	1.65 lb/a							
11	Corvus	3.3 fl oz/a	100.0	100.0	0.0	98.3	100.0	100.0	100.0
	11 Degree Xtra	2.4 qt/a							
12	Balance Flexx	4 fl oz/a	100.0	100.0	0.0	98.3	100.0	100.0	100.0
	12 Degree Xtra	2.4 qt/a							
	LSD P=.05		0.56	0.60	.	5.74	0.60	2.08	.
	Standard Deviation		0.39	0.41	0.00	3.99	0.41	1.44	0.00
	CV		0.43	0.45	0.0	4.63	0.45	1.58	0.0

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Pest Code						
Crop Type, Code		ZEAMX	ZEAMX	ZEAMX		
Rating Date		Oct-15-2019	Oct-15-2019	Oct-15-2019		
Rating Type		test weight	moisture	YIELD		
Rating Unit		lbs/bu	percent	BU		
Trt-Eval Interval		152 DA-A	152 DA-A	at 15% M		
Trt No.	Treatment Name	Rate	Appl			
		Rate Unit	Code			
1	Corvus	5.6 fl oz/a	A	53.83	24.15	207.0
1	Atrazine	1.1 lb/a	A			
2	Balance Flexx	5 fl oz/a	A	53.15	24.98	220.3
2	Atrazine	1.1 lb/a	A			
3	Harness Xtra	2.6 qt/a	A	54.53	22.60	206.6
4	Corvus	4.5 fl oz/a	A	53.38	24.68	202.9
4	Harness Xtra	1.8 qt/a	A			
5	Balance Flexx	4.5 fl oz/a	A	54.43	22.63	196.9
5	Harness Xtra	1.8 qt/a	A			
6	Untreated			53.28	23.88	155.1
7	Harness MAX	64 fl oz/a	A	53.75	22.78	206.6
7	Atrazine	1.1 lb/a	A			
8	Acuron	2.5 qt/a	A	53.35	23.58	221.4
9	Lexar EZ	2.5 qt/a	A	54.60	23.05	218.1
10	Resicore	2.5 qt/a	A	53.43	24.28	218.7
10	Atrazine	1.65 lb/a	A			
11	Corvus	3.3 fl oz/a	A	53.93	23.33	210.1
11	Degree Xtra	2.4 qt/a	A			
12	Balance Flexx	4 fl oz/a	A	53.20	23.78	207.6
12	Degree Xtra	2.4 qt/a	A			
LSD P=.05				1.273	1.841	18.64
Standard Deviation				0.884	1.278	12.94
CV				1.64	5.41	6.28

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 Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,10,11,13,19,23 because error mean square = 0.