

Comparison of two-pass weed control systems in corn

Trial ID: C03-18_Updated Study Dir.: Burns, Stiles, Powell, Craft
 Conducted: Campus T-17 Investigator: Erin Burns

Planting Date: May-29-2018 **Row Spacing:** 30 IN
Variety: P9840AM **No. of Reps:** 4
Population: 34600 seeds/A **% OM:** 3.7
Soil Type: LOAM **pH:** 6.2
Plot Size: 10 X 35 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall chisel plowed; spring soil finished twice
Fertilizer: 300lbs/A urea incorporated
 150lbs/A 19-19-19 starter

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	ANGR	mostly 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

	A	B
Application Timing:	PRE	POST
Date Treated:	Jun-1-2018	Jun-25-2018
Time Treated:	11:40 AM	2:15 PM
% Cloud Cover:	80	80
Air Temp., Unit:	85 F	78 F
% Relative Humidity:	48	53
Wind Speed/Unit/Dir:	4 MPH NE	5 MPH NE
Soil Temp, Unit:	75 F	78 F
Leaf Moist/Dew Presence (Y/N):	3	3
Soil Moist:	4	3

Crop Stage at Each Application

	A	B
Crop 1 Name:	ZEAMX	ZEAMX
Height:		
Stage:		V4-5

Weed Stage at Each Application

	A	B
Weed 1 Name:	ANGR	ANGR
Height:		3 IN
Stage:		6 L
Weed 2 Name:	CHEAL	CHEAL
Height:		1.5 IN
Stage:		9 L
Weed 3 Name:	AMAPO	AMAPO
Height:		2 IN
Stage:		7 L
Weed 4 Name:	AMBEL	AMBEL
Height:		3 IN
Stage:		12 L
Weed 5 Name:	ABUTH	ABUTH
Height:		4 IN
Stage:		9 L

Weed Density

	1	2	3	4	5
Date:	Jun-1-2018	Jun-1-2018	Jun-1-2018	Jun-1-2018	Jun-1-2018
Weed Name:	ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Density:	1 FT2	4 FT2	1 FT2	1 FT2	2 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
B	CUB	3.8 MPH	AIXR	11003	26 "	20 "	100 "	19 GPA	WATER	30 PSI

Comments:

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Pest Code				ANGR	CHEAL	AMAPO	AMBEL	ABUTH			
Crop Code				ZEAMX						ZEAMX	
Rating Date				Jun-26-2018	Jun-26-2018	Jun-26-2018	Jun-26-2018	Jun-26-2018	Jun-26-2018	Jul-9-2018	
Rating Type				injury	control	control	control	control	control	injury	
Rating Unit				percent	percent	percent	percent	percent	percent	percent	
Trt-Eval Interval				25 DA-A	25 DA-A	25 DA-A	25 DA-A	25 DA-A	25 DA-A	14 DA-B	
Trt No.	Treatment Name	Rate	Unit	Appl Code							
1	Corvus	4.5 fl oz/a		A	0.0	92.5	100.0	100.0	100.0	100.0	0.0
	1 Atrazine	1.65 lb/a		A							
	1 DiFlexx Duo	1.5 pt/a		B							
	1 Roundup PowerMax	32 fl oz/a		B							
	1 AMS	8.5 lb/100 gal		B							
2	Balance Flexx	4 fl oz/a		A	0.0	95.0	100.0	100.0	99.5	100.0	0.0
	2 Atrazine	1.65 lb/a		A							
	2 Capreno	3 fl oz/a		B							
	2 Roundup PowerMax	32 fl oz/a		B							
	2 AMS	8.5 lb/100 gal		B							
3	Corvus	4.5 fl oz/a		A	0.0	95.8	100.0	100.0	100.0	98.8	0.0
	3 Atrazine	1.65 lb/a		A							
	3 DiFlexx Duo	1.5 pt/a		B							
	3 Liberty	32 fl oz/a		B							
	3 AMS	8.5 lb/100 gal		B							
4	Balance Flexx	4 fl oz/a		A	0.0	76.3	100.0	100.0	100.0	99.5	0.0
	4 Atrazine	1.65 lb/a		A							
	4 Capreno	3 fl oz/a		B							
	4 Liberty	32 fl oz/a		B							
	4 AMS	8.5 lb/100 gal		B							
5	Dual II Magnum	1.33 pt/a		A	0.0	100.0	92.5	100.0	45.0	78.8	0.0
	5 DiFlexx Duo	1.5 pt/a		B							
	5 Liberty	32 fl oz/a		B							
	5 AMS	8.5 lb/100 gal		B							
6	Untreated				0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Dual II Magnum	1.33 pt/a		A	0.0	100.0	68.8	100.0	27.5	56.3	0.0
	7 Laudis	3 fl oz/a		B							
	7 Liberty	32 fl oz/a		B							
	7 Buctril	6 fl oz/a		B							
	7 AMS	8.5 lb/100 gal		B							
8	Harness Xtra	1.2 qt/a		A	0.0	98.8	100.0	100.0	87.5	88.8	0.0
	8 Yukon	4 oz/a		B							
	8 Roundup PowerMax	22 fl oz/a		B							
	8 Surfactant	0.125 % v/v		B							
	8 AMS	17 lb/100 gal		B							
9	Harness Xtra	1.2 qt/a		A	0.0	99.5	98.8	98.8	81.3	86.3	0.0
	9 Yukon	4 oz/a		B							
	9 Callisto	3 fl oz/a		B							
	9 Roundup PowerMax	22 fl oz/a		B							
	9 Surfactant	0.125 % v/v		B							
	9 AMS	17 lb/100 gal		B							
LSD	P=.05					15.13	11.44	1.22	17.68	15.63	
	Standard Deviation				0.00	10.37	7.84	0.83	12.11	10.71	0.00
	CV				0.0	12.31	9.28	0.94	17.01	13.61	0.0

Could not calculate LSD (% mean diff) for columns 1,7,8,9,10,11,13,14,15,16,17,18 because error mean square = 0.

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Pest Code			ANGR	CHEAL	AMAPO	AMBEL	ABUTH		ANGR	CHEAL	
Crop Code								ZEAMX			
Rating Date			Jul-9-2018	Jul-9-2018	Jul-9-2018	Jul-9-2018	Jul-9-2018	Aug-13-2018	Aug-13-2018	Aug-13-2018	
Rating Type			control	control	control	control	control	injury	control	control	
Rating Unit			percent	percent	percent	percent	percent	percent	percent	percent	
Trt-Eval Interval			14 DA-B	14 DA-B	14 DA-B	14 DA-B	14 DA-B	49 DA-B	49 DA-B	49 DA-B	
Trt No.	Treatment Name	Rate Unit	Appl Code								
1	Corvus	4.5 fl oz/a	A	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
1	Atrazine	1.65 lb/a	A								
1	DiFlexx Duo	1.5 pt/a	B								
1	Roundup PowerMax	32 fl oz/a	B								
1	AMS	8.5 lb/100 gal	B								
2	Balance Flexx	4 fl oz/a	A	100.0	100.0	100.0	100.0	99.5	0.0	100.0	100.0
2	Atrazine	1.65 lb/a	A								
2	Capreno	3 fl oz/a	B								
2	Roundup PowerMax	32 fl oz/a	B								
2	AMS	8.5 lb/100 gal	B								
3	Corvus	4.5 fl oz/a	A	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
3	Atrazine	1.65 lb/a	A								
3	DiFlexx Duo	1.5 pt/a	B								
3	Liberty	32 fl oz/a	B								
3	AMS	8.5 lb/100 gal	B								
4	Balance Flexx	4 fl oz/a	A	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
4	Atrazine	1.65 lb/a	A								
4	Capreno	3 fl oz/a	B								
4	Liberty	32 fl oz/a	B								
4	AMS	8.5 lb/100 gal	B								
5	Dual II Magnum	1.33 pt/a	A	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
5	DiFlexx Duo	1.5 pt/a	B								
5	Liberty	32 fl oz/a	B								
5	AMS	8.5 lb/100 gal	B								
6	Untreated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Dual II Magnum	1.33 pt/a	A	100.0	100.0	100.0	100.0	99.5	0.0	100.0	100.0
7	Laudis	3 fl oz/a	B								
7	Liberty	32 fl oz/a	B								
7	Buctril	6 fl oz/a	B								
7	AMS	8.5 lb/100 gal	B								
8	Harness Xtra	1.2 qt/a	A	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
8	Yukon	4 oz/a	B								
8	Roundup PowerMax	22 fl oz/a	B								
8	Surfactant	0.125 % v/v	B								
8	AMS	17 lb/100 gal	B								
9	Harness Xtra	1.2 qt/a	A	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
9	Yukon	4 oz/a	B								
9	Callisto	3 fl oz/a	B								
9	Roundup PowerMax	22 fl oz/a	B								
9	Surfactant	0.125 % v/v	B								
9	AMS	17 lb/100 gal	B								
LSD	P=.05			0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.00
	Standard Deviation			0.0	0.0	0.0	0.0	0.44	0.0	0.0	0.0
	CV			0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0

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Crop Code									
Rating Date			Aug-13-2018	Aug-13-2018	Aug-13-2018	Oct-25-2018	Oct-25-2018	Oct-25-2018	Oct-25-2018
Rating Type			control	control	control	test wieght	moisture		YIELD
Rating Unit			percent	percent	percent	lbs/bu	percent		BU
Trt-Eval Interval			49 DA-B	49 DA-B	49 DA-B	122 DA-B	122 DA-B		at 15% M
Trt No.	Treatment Name	Rate Unit	Rate	Rate	Rate	Rate	Rate	Rate	Rate
1	Corvus	4.5 fl oz/a	A	100.0	100.0	100.0	51.9	21.6	236.8
1	Atrazine	1.65 lb/a	A						
1	DiFlexx Duo	1.5 pt/a	B						
1	Roundup PowerMax	32 fl oz/a	B						
1	AMS	8.5 lb/100 gal	B						
2	Balance Flexx	4 fl oz/a	A	100.0	100.0	100.0	52.2	21.0	235.8
2	Atrazine	1.65 lb/a	A						
2	Capreno	3 fl oz/a	B						
2	Roundup PowerMax	32 fl oz/a	B						
2	AMS	8.5 lb/100 gal	B						
3	Corvus	4.5 fl oz/a	A	100.0	100.0	100.0	50.9	22.1	226.4
3	Atrazine	1.65 lb/a	A						
3	DiFlexx Duo	1.5 pt/a	B						
3	Liberty	32 fl oz/a	B						
3	AMS	8.5 lb/100 gal	B						
4	Balance Flexx	4 fl oz/a	A	100.0	100.0	100.0	51.8	21.4	233.4
4	Atrazine	1.65 lb/a	A						
4	Capreno	3 fl oz/a	B						
4	Liberty	32 fl oz/a	B						
4	AMS	8.5 lb/100 gal	B						
5	Dual II Magnum	1.33 pt/a	A	100.0	100.0	100.0	51.4	22.1	224.7
5	DiFlexx Duo	1.5 pt/a	B						
5	Liberty	32 fl oz/a	B						
5	AMS	8.5 lb/100 gal	B						
6	Untreated			0.0	0.0	0.0	51.4	22.2	177.6
7	Dual II Magnum	1.33 pt/a	A	100.0	100.0	100.0	51.8	21.8	233.0
7	Laudis	3 fl oz/a	B						
7	Liberty	32 fl oz/a	B						
7	Buctril	6 fl oz/a	B						
7	AMS	8.5 lb/100 gal	B						
8	Harness Xtra	1.2 qt/a	A	100.0	100.0	100.0	51.3	21.7	235.9
8	Yukon	4 oz/a	B						
8	Roundup PowerMax	22 fl oz/a	B						
8	Surfactant	0.125 % v/v	B						
8	AMS	17 lb/100 gal	B						
9	Harness Xtra	1.2 qt/a	A	100.0	100.0	100.0	51.5	22.0	231.2
9	Yukon	4 oz/a	B						
9	Callisto	3 fl oz/a	B						
9	Roundup PowerMax	22 fl oz/a	B						
9	Surfactant	0.125 % v/v	B						
9	AMS	17 lb/100 gal	B						
LSD	P=.05			.	.	.	0.82	1.11	7.98
	Standard Deviation			0.00	0.00	0.00	0.56	0.76	5.47
	CV			0.0	0.0	0.0	1.09	3.51	2.42

Could not calculate LSD (% mean diff) for columns 1,7,8,9,10,11,13,14,15,16,17,18 because error mean square = 0.