

REGIONAL COMPARISON OF CORN HERBICIDE SYSTEMS, 2010

Trial ID: C1010 Protocol ID: C1010
 Location: Campus Study Director: Andy Chomas
 Project ID: Investigator: Wesley Everman

General Trial Information

Study Director: Andy Chomas
Investigator: Wesley Everman

Personnel

Study Director: Andy Chomas
Investigator: Wesley Everman

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 46-61
BBCH Scale: BCOR
Planting Date: May-4-10
Rate, Unit: 30000 S/A
Row Spacing, Unit: 30 IN
Harvested Width, Unit: 5 FT **Harvested Length, Unit:** 35 FT

Pest Description

- Pest 1 Type:** W **Code:** ANGR
Common Name: annual grass
- Pest 2 Type:** W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters
- Pest 3 Type:** W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed
- Pest 4 Type:** W **Code:** AMBEL Ambrosia artemisiifolia
Common Name: Common ragweed
- Pest 5 Type:** W **Code:** ABUTH Abutilon theophrasti
Common Name: Velvetleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 35 FT
Plot Area, Unit: 350 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Trial Initiation Comments:
 Fall Chisel, Spring Field Cultivate X2

Soil Description

% OM: 3.8 **Texture:** L loam
pH: 6.0
Analyzed By:
 300 lbs/A 46-0-0, 125 lbs/A 19-19-19 in Row

Application Description

	A	B	C	D
Application Date:	May-4-10	Jun-4-10	Jun-10-10	Jun-14-10
Time of Day:	9:30 pm	9:50 am	7:45 pm	2:15 pm
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	MP	LP	8-12" WDS
Application Placement:	BROADC	BROADC	BROADC	BROADC
Air Temperature, Unit:	77 F	70 F	79 F	81 F
% Relative Humidity:	31	78	56	82
Wind Velocity, Unit:	7.5 MPH	2.5 MPH	3 MPH	2 MPH
Wind Direction:	SW	SW	NW	E
Soil Temperature, Unit:	65 F	70 F	70 F	68 F
Soil Moisture:	4	2	4	2
% Cloud Cover:	10	95	95	78

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Crop Stage At Each Application

	A		B		C		D	
Crop 1 Code, BBCH Scale:	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR
Stage Scale Used:	BBCH		BBCH		BBCH		BBCH	
Stage Majority, Percent:	V4		V5		V5		V6	
Stage Minimum, Percent:			V5		V6			
Stage Maximum, Percent:			V6					
Height, Unit:		10	IN		15	IN	22	IN
Height Minimum, Maximum:		6	12		13	17	21	22

Pest Stage At Each Application

	A		B		C		D	
Pest 1 Code, Type, Scale:	ANGR	W	ANGR	W	ANGR	W	ANGR	W
Stage Majority, Percent:	L5		L4		L6		L6	
Stage Minimum, Percent:	L2		L3		L3		L3	
Stage Maximum, Percent:	L7		L5		L7		L7	
Height, Unit:		6	IN		5	IN	18	IN
Height Minimum, Maximum:		3	7		4	6	16	19
Density, Unit:		10	FT2					
Pest 2 Code, Type, Scale:	CHEAL	W	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent:	L10		L6		L10		L10	
Stage Minimum, Percent:	L2		L4		L8		L8	
Stage Maximum, Percent:	L12		L10		L12		L12	
Height, Unit:		3	IN		2	IN	16	IN
Height Minimum, Maximum:		0.5	5		1	4	10	20
Density, Unit:		48	FT2					
Pest 3 Code, Type, Scale:	AMARE	W	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent:	L7		L6		L8		L8	
Stage Minimum, Percent:	L4				L6		L6	
Stage Maximum, Percent:	L9				L8		L8	
Height, Unit:		4	IN		2	IN	15	IN
Height Minimum, Maximum:		1	6		1	3	14	20
Density, Unit:		1	FT2					
Pest 4 Code, Type, Scale:	AMBEL	W	AMBEL	W	AMBEL	W	AMBEL	W
Stage Majority, Percent:	L6		L4		L8		L8	
Stage Minimum, Percent:	L4		L2		L6		L6	
Stage Maximum, Percent:	L8		L6		L10		L10	
Height, Unit:		5	IN		2	IN	17	IN
Height Minimum, Maximum:		4	6		1	4	17	20
Density, Unit:		15	IN					
Pest 5 Code, Type, Scale:	ABUTH	W	ABUTH	W	ABUTH	W	ABUTH	W
Stage Majority, Percent:	L4		L4		L5		L5	
Stage Minimum, Percent:	L3		L2		L4		L4	
Stage Maximum, Percent:	L4		L4		L6		L6	
Height, Unit:		2	IN		3	IN	18	IN
Height Minimum, Maximum:		2	4		1	3	17	18
Density, Unit:		1	FT2					

Application Equipment

	B		C		D	
Equipment Type:	BKPK	CUB	CUB	CUB	CUB	CUB
Operating Pressure, Unit:	30	PSI	30	PSI	30	PSI
Nozzle Type:	FF	FF	FF	FF	FF	FF
Nozzle Size:	8003	8003	8003	8003	8003	8003
Nozzle Spacing, Unit:	20	IN	20	IN	20	IN
Boom Length, Unit:	100	IN	100	IN	100	IN
Boom Height, Unit:	18	IN	22	IN	29	IN
Ground Speed, Unit:	3.5	MPH	3.5	MPH	3.5	MPH
Carrier:	WATER	WATER	WATER	WATER	WATER	WATER
Spray Volume, Unit:	20	gal/ac	20	gal/ac	20	gal/ac
Mix Size, Unit:	1	gallons	1	gallons	1	gallons

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Pest Type	ZEAMX				W Weed	W Weed	W Weed	W Weed
Pest Code	ANGR	CHEAL	AMARE	AMBEL				
Crop Code	May-25-10	May-26-10	May-26-10	Jun-10-10	Jun-10-10	Jun-10-10	Jun-10-10	Jun-10-10
Rating Date	injury	count	count	injury	control	control	control	control
Rating Type	%	number	number	%	%	%	%	%
Rating Unit								
Trt-Eval Interval	21 DAPRE	22 DAPRE	22 DAPRE	AT LP	AT LP	AT LP	AT LP	AT LP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	1	2	3	4	5	6	7	8
18	Ammonium Sulfate	100	DF	2 %	w/w	LP								
19	SureStart	4.18	SE	1 qt/a		PRE	3	57	58	1	90	97	100	76
20	SureStart	4.18	SE	1 qt/a		PRE	3	61	60	0	95	96	100	74
20	Roundup PowerMAX	4.5	L	0.75 lb	ae/a	LP								
20	Ammonium Sulfate	100	DF	2 %	w/w	LP								
21	Halex GT	4.39	L	1.8 qt/a		MP	0	60	58	0	77	54	100	90
21	Ammonium Sulfate	100	DF	2 %	w/w	MP								
22	Roundup PowerMAX	4.5	L	0.75 lb	ae/a	MP	0	62	59	0	82	95	100	85
22	Ammonium Sulfate	100	DF	2 %	w/w	MP								
22	Roundup PowerMAX	4.5	L	0.75 lb	ae/a	LP								
22	Ammonium Sulfate	100	DF	2 %	w/w	LP								
23	Roundup PowerMAX	4.5	L	0.75 lb	ae/a	8-12"WDS	0	59	61	0	0	0	0	0
23	Ammonium Sulfate	100	DF	2 %	w/w	8-12"WDS								
24	Non-Treated						0	62	59	0	0	0	0	0
	LSD (P=.05)						2.1	4.3	5.5	1.0	7.2	4.1	1.5	5.4
	Standard Deviation						1.5	3.0	3.9	0.7	5.1	2.9	1.0	3.8
	CV						168.39	5.06	6.54	697.82	6.23	3.29	1.12	4.72

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	ZEAMX
Pest Code	ABUTH	ANGR	CHEAL	AMARE	AMBEL	ABUTH		
Crop Code								
Rating Date	Jun-10-10	Jul-1-10	Jul-1-10	Jul-1-10	Jul-1-10	Jul-1-10	Jul-1-10	Oct-6-10
Rating Type	control	control	control	control	control	control	control	yield
Rating Unit	%	%	%	%	%	%	%	bu/ac
Trt-Eval Interval	AT LP	21 DALP	21 DALP	21 DALP	21 DALP	21 DALP	21 DALP	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	9	10	11	12	13	14	15
1	Harness Xtra 5.6	5.6 L		1.5 qt/a		PRE	79	89	91	100	91	74	232
2	Harness Xtra 5.6	5.6 L		1.5 qt/a		PRE	74	99	99	100	92	83	236
2	Roundup PowerMAX	4.5 L		0.75 lb ae/a		LP							
2	Ammonium Sulfate	100 DF		2 % w/w		LP							
3	Harness Xtra 5.6	5.6 L		2.6 qt/a		PRE	79	96	98	100	97	75	236
4	Harness Xtra 5.6	5.6 L		2.6 qt/a		PRE	84	99	98	100	98	100	224
4	Roundup PowerMAX	4.5 L		0.75 lb ae/a		LP							
4	Ammonium Sulfate	100 DF		2 % w/w		LP							
5	Atrazine	4 L		2 qt/a		PRE	73	29	99	100	96	80	192
6	Atrazine	4 L		2 qt/a		PRE	75	99	94	100	99	100	238
6	Roundup PowerMAX	4.5 L		0.75 lb ae/a		LP							
6	Ammonium Sulfate	100 DF		2 % w/w		LP							
7	Integrity	5.6 L		16 fl oz/a		PRE	91	90	83	99	51	86	197
8	Integrity	5.6 L		16 fl oz/a		PRE	94	99	94	100	99	100	240
8	Roundup PowerMAX	4.5 L		0.75 lb ae/a		LP							
8	Ammonium Sulfate	100 DF		2 % w/w		LP							
9	Corvus	2.6 SC		5.6 fl oz/a		PRE	100	91	99	100	99	100	231
10	Corvus	2.6 SC		5.6 fl oz/a		PRE	100	97	100	100	100	100	234
10	Roundup PowerMAX	4.5 L		0.75 lb ae/a		LP							
10	Ammonium Sulfate	100 DF		2 % w/w		LP							
11	Balance FLEXX	2 SC		5 fl oz/a		PRE	99	91	98	96	99	100	222
12	Balance FLEXX	2 SC		5 fl oz/a		PRE	100	100	100	100	100	100	227
12	Roundup PowerMAX	4.5 L		0.75 lb ae/a		LP							
12	Ammonium Sulfate	100 DF		2 % w/w		LP							
13	Guardsman Max	5 L		2 qt/a		PRE	80	96	94	100	92	70	222
14	Guardsman Max	5 L		2 qt/a		PRE	81	98	97	100	97	100	233
14	Roundup PowerMAX	4.5 L		0.75 lb ae/a		LP							
14	Ammonium Sulfate	100 DF		2 % w/w		LP							
15	Lumax	3.94 SE		3 qt/a		PRE	100	96	99	100	95	100	228
16	Lumax	3.94 SE		3 qt/a		PRE	100	100	100	100	99	100	231
16	Roundup PowerMAX	4.5 L		0.75 lb ae/a		LP							
16	Ammonium Sulfate	100 DF		2 % w/w		LP							
17	Harness Xtra 5.6	5.6 L		1.5 qt/a		PRE	98	87	99	100	90	100	224
17	Hornet WDG	68.5 DG		3 oz/a		PRE							
18	Harness Xtra 5.6	5.6 L		1.5 qt/a		PRE	97	99	99	100	99	100	225
18	Hornet WDG	68.5 DG		3 oz/a		PRE							
18	Roundup PowerMAX	4.5 L		0.75 lb ae/a		LP							

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Pest Code	ABUTH	ANGR	CHEAL	AMARE	AMBEL	ABUTH							
Crop Code													
Rating Date	Jun-10-10	Jul-1-10	Jul-1-10	Jul-1-10	Jul-1-10	Jul-1-10	Jul-1-10	Oct-6-10					
Rating Type	control	control	control	control	control	control	control	yield					
Rating Unit	%	%	%	%	%	%	%	bu/ac					
Trt-Eval Interval	AT LP	21 DALP	21 DALP	21 DALP	21 DALP	21 DALP	21 DALP	HARVEST					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	9	10	11	12	13	14	15
18	Ammonium Sulfate	100	DF	2 %	w/w	LP							
19	SureStart	4.18	SE	1 qt/a		PRE	98	91	98	100	46	96	206
20	SureStart	4.18	SE	1 qt/a		PRE	98	99	96	100	98	100	233
20	Roundup PowerMAX	4.5	L	0.75 lb	ae/a	LP							
20	Ammonium Sulfate	100	DF	2 %	w/w	LP							
21	Halex GT	4.39	L	1.8 qt/a		MP	97	100	100	100	100	100	227
21	Ammonium Sulfate	100	DF	2 %	w/w	MP							
22	Roundup PowerMAX	4.5	L	0.75 lb	ae/a	MP	97	99	100	100	100	100	236
22	Ammonium Sulfate	100	DF	2 %	w/w	MP							
22	Roundup PowerMAX	4.5	L	0.75 lb	ae/a	LP							
22	Ammonium Sulfate	100	DF	2 %	w/w	LP							
23	Roundup PowerMAX	4.5	L	0.75 lb	ae/a	8-12"WDS	0	95	70	96	100	95	203
23	Ammonium Sulfate	100	DF	2 %	w/w	8-12"WDS							
24	Non-Treated						0	0	0	0	0	0	40
	LSD (P=.05)						8.1	6.6	4.5	1.8	9.4	16.7	15.2
	Standard Deviation						5.8	4.7	3.2	1.2	6.6	11.8	10.7
	CV						6.94	5.24	3.5	1.3	7.45	13.11	4.94