

Ohio State University Horticulture and Crop Science

2010/CORN/AUTHORITY/SULFENTRAZONE/FALL PROGRAMS/

Title No. 2:
 Trial ID: 11FALLCORN1 Protocol ID: 11FALLCORN1
 Location: WESTERN BRANCH F-9 W Study Director:
 Project ID: Investigator: Dr. Mark M. Loux
 Sponsor Contact:

General Trial Information

Study Director: Anthony F. Dobbels **Title:** Research Specialist
Investigator: Dr. Mark M. Loux **Title:** Professor

Trial Location

City: South Charleston **Latitude of LL Corner** °: 39.85886 N
State/Prov.: Ohio **Longitude of LL Corner** °: -83.67363 W
Postal Code: 45368
Country: USA

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: Dekalb DKC 61-21
BBCH Scale: BCOR
Planting Method: SEEDED seeded
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM medium
Soil Moisture: SLIWET slightly wet
Harvested Width, Unit: 5 FT

Description: RR
Planting Date: May-22-2011
Rate, Unit: 34237 S/A

Soil Temperature, Unit: 71 F
Emergence Date: Jun-1-2011
Harvested Length, Unit: 30 FT

Pest Description

- Pest 1 Type:** W **Code:** LAMPU *Lamium purpureum*
Common Name: Purple deadnettel
- Pest 2 Type:** W **Code:** STEME *Stellaria media*
Common Name: Common chickweed
- Pest 3 Type:** W **Code:** CAPBP *Capsella bursa-pastoris*
Common Name: Shepherd's purse
- Pest 4 Type:** W **Code:** ERICA *Conyza canadensis*
Common Name: Canada horseweed
- Pest 5 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed
- Pest 6 Type:** W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
- Pest 7 Type:** W **Code:** POLPY *Persicaria pensylvanica*
Common Name: Pennsylvania smartweed
- Pest 8 Type:** W **Code:** VERAG *Veronica agrestis*
Common Name: Field speedwell
- Pest 9 Type:** W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters
- Pest10 Type:** W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed
- Pest11 Type:** W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed
- Pest12 Type:** W **Code:** ABUTH *Abutilon theophrasti*
Common Name: Velvetleaf
- Pest13 Type:** W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida
- Pest14 Type:** W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass

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Site and Design
Plot Width, Unit: 6.67 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 200.1 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOB L Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description
Description Name: F-9 West
% OM: 2 **Texture:** SICL silty clay loam
pH: 6.1 **Soil Name:** Kokomo
CEC: 11.5 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	Dec-3-2010	May-24-2011	Jun-21-2011
Time of Day:	11:00 A.M	10:00 A.M	11:45 A.M
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	FALL	PRE	POST
Application Placement:	BROSOL	BROFOL	BROFOL
Applied By:		Reeb	Dobbels
Air Temperature, Unit:	33 F	69 F	87 F
% Relative Humidity:	72	62.5	70
Wind Velocity, Unit:	3 MPH	2 MPH	5 MPH
Wind Direction:	W	E	WSW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	34 F	61 F	74 F
Soil Moisture:	MOIST	WET	SLIWET
% Cloud Cover:	85	100	40
Next Rain Occurred On:	Dec-4-2010	May-25-2011	Jun-21-2011

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:			BBCH
Stage Majority, Percent:			16 100
Height, Unit:			20 IN
Height Minimum, Maximum:			20 21

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	LAMPU W	LAMPU W	LAMPU W
Stage Majority, Percent:	18 100		
Diameter, Unit:	4 IN		
Height, Unit:	2 IN		
Height Minimum, Maximum:	1 2		
Pest 2 Code, Type, Scale:	STEME W	STEME W	STEME W
Stage Majority, Percent:	19 100	69 100	
Diameter, Unit:	4 IN	14 IN	
Height, Unit:	1 IN	2 IN	
Height Minimum, Maximum:	1 2	1 3	
Pest 3 Code, Type, Scale:	CAPBP W	CAPBP W	CAPBP W
Stage Majority, Percent:		71 100	
Diameter, Unit:		6 IN	
Height, Unit:		9 IN	
Height Minimum, Maximum:		9 10	
Pest 4 Code, Type, Scale:	ERICA W	ERICA W	ERICA W
Stage Majority, Percent:		30 100	30 100
Diameter, Unit:		5 IN	6 IN
Height, Unit:		8 IN	10 IN
Height Minimum, Maximum:		6 9	8 10
Density, Unit:	24 M2	24 M2	24 M2
Pest 5 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W
Stage Majority, Percent:		16 100	19 100
Diameter, Unit:		6 IN	
Height, Unit:		10 IN	8 IN
Height Minimum, Maximum:		8 10	4 8
Density, Unit:	20 M2	20 M2	20 M2
Pest 6 Code, Type, Scale:	SETFA W	SETFA W	SETFA W

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Stage Majority, Percent:		13	90			
Stage Minimum, Percent:		12	10			
Stage Maximum, Percent:		13	90			
Height, Unit:	7	IN	4	IN		
Height Minimum, Maximum:	6	8	3	4		
Density, Unit:	141.33	M2	141.33	M2	141.33	M2
Pest 7 Code, Type, Scale:	POLPY	W	POLPY	W	POLPY	W
Diameter, Unit:	5	IN				
Height, Unit:	5	IN				
Height Minimum, Maximum:	5	6				
Density, Unit:	9.33	M2	9.33	M2	9.33	M2
Pest 8 Code, Type, Scale:	VERAG	W	VERAG	W	VERAG	W
Diameter, Unit:	1	IN				
Height, Unit:	6	IN				
Height Minimum, Maximum:	5	6				
Pest 9 Code, Type, Scale:	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent:		12	100			
Diameter, Unit:		2	IN			
Height, Unit:		4	IN			
Height Minimum, Maximum:		4	5			
Density, Unit:	1.33	M2	1.33	M2	1.33	M2
Pest10 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:			18	100		
Height, Unit:			8	IN		
Height Minimum, Maximum:			4	10		
Density, Unit:	8	M2	8	M2	8	M2
Pest11 Code, Type, Scale:	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent:			14	100		
Height, Unit:			3	IN		
Height Minimum, Maximum:			2	3		
Pest12 Code, Type, Scale:	ABUTH	W	ABUTH	W	ABUTH	W
Stage Majority, Percent:			14	100		
Height, Unit:			3	IN		
Height Minimum, Maximum:			2	3		
Density, Unit:	1.33	M2	1.33	M2	1.33	M2
Pest13 Code, Type, Scale:	SIDSP	W	SIDSP	W	SIDSP	W
Stage Majority, Percent:			14	100		
Height, Unit:			3	IN		
Height Minimum, Maximum:			2	3		
Pest14 Code, Type, Scale:	ECHCG	W	ECHCG	W	ECHCG	W
Density, Unit:	17.33	M2	17.33	M2	17.33	M2

Application Equipment

	A	B	C
Appl. Equipment:	6 foot boom	6 foot boom	10 Foot Boom
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operation Pressure, Unit:	53 PSI	46 PSI	46 PSI
Nozzle Type:	TEEJET DG	TEEJET DG	TEEJET DG
Nozzle Size:	8002	80015	80015
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN
Boom Length, Unit:	6 FT	6 FT	10 FT
Boom Height, Unit:	20 IN	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	20 GPA	15 GPA	15 GPA
Mix Size, Unit:	0.33 Gallons	0.33 Gallons	0.33 Gallons
Propellant:	CO2	CO2	CO2

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Code	ZEAMX	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn
Rating Date	Oct-26-2011	Oct-26-2011	Oct-26-2011
		2011	
Rating Type	YIELD	MOICON	YIELD
Rating Unit	LBS	%	BU
Number of Subsamples	1	1	1
Days After First/Last Applic.	327 127	327 127	327 127
Trt-Eval Interval	HARVEST	HARVEST	HARVEST
Plant-Eval Interval	157 DP-1	157 DP-1	157 DP-1
Days After Emergence	147 DE-1	147 DE-1	147 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt No.	Treatment Name	Rate	Unit	Appl Code	64	65	66
1	UNTREATED				7.9 b	24.1 a	37.0 b
2	AUTHORITY MTZ	14 oz/a	A		34.9 a	17.2 bc	177.4 a
	RAGE D-TECH	12 oz/a	A				
	COC	1 % v/v	A				
	AMMONIUM SULFATE	2.5 % v/v	A				
	ROUNDUP POWERMAX	32 oz/a	B				
	F9310-6	9 oz/a	B				
	AATREX	1.5 qt/a	B				
	AMMONIUM SULFATE	2.5 % v/v	B				
	CADET	0.5 oz/a	C				
	AATREX	2 pt/a	C				
	ROUNDUP POWERMAX	32 oz/a	C				
	COC	1 % v/v	C				
3	AUTHORITY MTZ	8 oz/a	A		32.8 a	16.6 c	167.4 a
	RAGE D-TECH	12 oz/a	A				
	COC	1 % v/v	A				
	AMMONIUM SULFATE	2.5 % v/v	A				
	ROUNDUP POWERMAX	32 oz/a	B				
	RAGE D-TECH	12 oz/a	B				
	DUAL II MAGNUM	1 pt/a	B				
	AATREX	1 pt/a	B				
	CADET	0.5 oz/a	C				
	AATREX	2 pt/a	C				
	ROUNDUP POWERMAX	32 oz/a	C				
	COC	1 % v/v	C				
4	AUTHORITY MTZ	8 oz/a	A		34.5 a	18.4 bc	173.2 a
	RAGE D-TECH	12 oz/a	A				
	BASIS	0.5 oz/a	A				
	COC	1 % v/v	A				
	AMMONIUM SULFATE	2.5 % v/v	A				
	ROUNDUP POWERMAX	32 oz/a	B				
	RAGE D-TECH	12 oz/a	B				
	DUAL II MAGNUM	1 pt/a	B				
	AATREX	1 pt/a	B				
	CADET	0.5 oz/a	C				
	AATREX	2 pt/a	C				
	ROUNDUP POWERMAX	32 oz/a	C				
	COC	1 % v/v	C				

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Code	ZEAMX	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn
Rating Date	Oct-26-2011	Oct-26-2011	Oct-26-2011
		2011	
Rating Type	YIELD	MOICON	YIELD
Rating Unit	LBS	%	BU
Number of Subsamples	1	1	1
Days After First/Last Applic.	327 127	327 127	327 127
Trt-Eval Interval	HARVEST	HARVEST	HARVEST
Plant-Eval Interval	157 DP-1	157 DP-1	157 DP-1
Days After Emergence	147 DE-1	147 DE-1	147 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt	Treatment	Rate	Appl	64	65	66
No.	Name	Rate	Unit Code			
5	AUTHORITY MTZ	8 oz/a	A	39.9 a	17.8 bc	201.8 a
	RAGE D-TECH	12 oz/a	A			
	RESOLVE SG	0.5 oz/a	A			
	Rimsulfuron	0.5 oz/a	A			
	Isoxadifen-Ethyl	0.125 oz/a	A			
	COC	1 % v/v	A			
	AMMONIUM SULFATE	2.5 % v/v	A			
	ROUNDUP POWERMAX	32 oz/a	B			
	RAGE D-TECH	12 oz/a	B			
	DUAL II MAGNUM	1 pt/a	B			
	AATREX	1 pt/a	B			
	CADET	0.5 oz/a	C			
	AATREX	2 pt/a	C			
	ROUNDUP POWERMAX	32 oz/a	C			
	COC	1 % v/v	C			
6	AUTHORITY MTZ	8 oz/a	A	39.8 a	19.5 b	196.8 a
	RAGE D-TECH	12 oz/a	A			
	EXPRESS SG	0.1 oz/a	A			
	COC	1 % v/v	A			
	AMMONIUM SULFATE	2.5 % v/v	A			
	ROUNDUP POWERMAX	32 oz/a	B			
	RAGE D-TECH	12 oz/a	B			
	DUAL II MAGNUM	1 pt/a	B			
	AATREX	1 pt/a	B			
	CADET	0.5 oz/a	C			
	AATREX	2 pt/a	C			
	ROUNDUP POWERMAX	32 oz/a	C			
	COC	1 % v/v	C			
7	AUTUMN	0.3 oz/a	A	38.5 a	16.7 c	196.6 a
	RAGE D-TECH	12 oz/a	A			
	COC	1 % v/v	A			
	ROUNDUP POWERMAX	32 oz/a	B			
	RAGE D-TECH	12 oz/a	B			
	DUAL II MAGNUM	1 pt/a	B			
	AATREX	1 pt/a	B			
	CADET	0.5 oz/a	C			
	AATREX	2 pt/a	C			
	ROUNDUP POWERMAX	32 oz/a	C			
	COC	1 % v/v	C			

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Code	ZEAMX	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn
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Rating Type	YIELD	MOICON	YIELD
Rating Unit	LBS	%	BU
Number of Subsamples	1	1	1
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Trt-Eval Interval	HARVEST	HARVEST	HARVEST
Plant-Eval Interval	157 DP-1	157 DP-1	157 DP-1
Days After Emergence	147 DE-1	147 DE-1	147 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt Treatment No. Name	Rate	Unit	Appl Code	64	65	66
8 SIMAZINE	2 qt/a	A		39.1 a	17.9 bc	196.9 a
RAGE D-TECH	12 oz/a	A				
COC	1 % v/v	A				
AUTHORITY MTZ	5.5 oz/a	B				
DUAL MAGNUM	16 oz/a	B				
ROUNDUP POWERMAX	32 oz/a	B				
CADET	0.5 oz/a	C				
AATREX	2 pt/a	C				
ROUNDUP POWERMAX	32 oz/a	C				
COC	1 % v/v	C				
LSD (P=.05)				7.34	2.59	37.35
Standard Deviation				4.16	1.47	21.18
CV				12.45	7.94	12.58
Bartlett's X2				7.084	10.711	5.818
P(Bartlett's X2)				0.42	0.152	0.561
Replicate F				1.720	0.805	1.652
Replicate Prob(F)				0.2174	0.4684	0.2295
Treatment F				19.682	8.136	19.977
Treatment Prob(F)				0.0001	0.0007	0.0001

Crop Code
 ZEAMX, BCOR, Zea mays, = US
Rating Type
 YIELD = yield
 MOICON = moisture content
Rating Unit
 % = percent
 BU = bushel
Plant-Eval Interval
 157 DP-1 = 1 May-22-2011
ARM Action Codes
 TY1 = 5.185714*[64]*(100-[65])/84.5

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