

Ohio State University
Horticulture and Crop Science

2011/CORN/AUTHORITY/SULFENTRAZONE/FALL PROGRAMS/

Title No. 2:
Trial ID: 12FALLCORN1 Protocol ID: 12FALLCORN1
Location: WESTERN BRANCH F-9 E Study Director: Anthony F. Dobbels
Project ID: Investigator: Dr. Mark M. Loux
Sponsor Contact: Joe Reed, FMC

General Trial Information

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

Discipline: H herbicide
Trial Status: E established

Trial Location

City: South Charleston Latitude of LL Corner °: 39.85873 N
State/Prov.: Ohio Longitude of LL Corner °: 83.67159 W
Postal Code: 45368
Country: USA

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: Seed Consultants SCS 11HQ38 Description: RR/LL
BBCH Scale: BCOR Planting Date: Apr-30-2012
Planting Method: SEEDED seeded Rate, Unit: 32097 S/A
Depth, Unit: 1.75 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM medium Soil Temperature, Unit: 63 F
Soil Moisture: SLIWET slightly wet Emergence Date: May-9-2012
Harvest Date: Oct-23-2012 Harvest Equipment: MASSEY 8 XP
Harvested Width, Unit: 5 FT Harvested Length, Unit: 30 FT
% Standard Moisture: 15.5 Moisture Meter: HARVEST MASTER
Weighing Equipment: HARVEST MASTER 401

Pest Description

Pest 1 Type: W Code: STEME Stellaria media
Common Name: Common chickweed
Pest 2 Type: W Code: LAMPU Lamium purpureum
Common Name: Purple deadnettel
Pest 3 Type: W Code: TAROF Taraxacum officinale
Common Name: Common dandelion
Pest 4 Type: W Code: SENGL Senecio glabellus
Common Name: Cressleaf groundsel
Pest 5 Type: W Code: POLPY
Common Name: Pennsylvania smartweed
Pest 6 Type: W Code: AMBTR Ambrosia trifida
Common Name: Giant ragweed
Pest 7 Type: W Code: AMBEL Ambrosia artemisiifolia
Common Name: Common ragweed
Pest 8 Type: W Code: ERICA Conyza canadensis
Common Name: Canada horseweed
Pest 9 Type: W Code: VERAR Veronica arvensis
Common Name: Corn speedwell
Pest10 Type: W Code: SETFA Setaria faberi
Common Name: Giant foxtail

Site and Design

Plot Width, Unit: 10 FT Site Type: FIELD field
Plot Length, Unit: 30 FT Experimental Unit: 1 PLOT plot
Plot Area, Unit: 300 FT2 Tillage Type: NOTILL no-till
Replications: 3 Study Design: RACOB Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No. Previous Crop Year
1. Soybean 2011

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Soil Description

Description Name: F-9 East
 % OM: 2.8 Texture: SICL silty clay loam
 pH: 6.4 Soil Name: Kokomo
 CEC: 19.6 Fert. Level: G good
 Soil Drainage: G good

Application Description

	A	B	C
Application Date:	Nov-17-2011	May-2-2012	May-30-2012
Time of Day:	10:00 A.M	10:00AM	8:30AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	FALL	ATPLT	POST
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	McCormick		
Air Temperature, Unit:	38 F	71 F	70 F
% Relative Humidity:	49	81	74
Wind Velocity, Unit:	8 MPH	7 MPH	0 MPH
Wind Direction:	WSW	SSW	
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	41 F	60 F	65 F
Soil Moisture:	SLIWET	WET	DRY
% Cloud Cover:	7	0	0
Next Rain Occurred On:	Nov-21-2011	May-4-2012	Jun-1-2012

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:	14 100		
Height, Unit:	9 IN		
Height Minimum, Maximum:	8 9		

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Pest Stage At Each Application

	A		B		C	
Pest 1 Code, Type, Scale:	STEME	W	STEME	W	STEME	W
Stage Majority, Percent:	19	100	65	100		
Diameter, Unit:	3	IN				
Height, Unit:	1	IN	8	IN		
Height Minimum, Maximum:	1	2	8	8		
Density, Unit:	2.66	m2	2.66	m2		
Pest 2 Code, Type, Scale:	LAMPU	W	LAMPU	W	LAMPU	W
Stage Majority, Percent:	14	90				
Stage Minimum, Percent:	12	10				
Stage Maximum, Percent:	14	90				
Diameter, Unit:	1	IN				
Height, Unit:	1	IN				
Height Minimum, Maximum:	1	2				
Density, Unit:	6.65	m2				
Pest 3 Code, Type, Scale:	TAROF	W	TAROF	W	TAROF	W
Stage Majority, Percent:	16	100				
Diameter, Unit:	4	IN				
Height, Unit:	0.5	IN				
Height Minimum, Maximum:	0.5	1				
Density, Unit:	1.33	m2				
Pest 4 Code, Type, Scale:	SENGL	W	SENGL	W	SENGL	W
Stage Majority, Percent:	18	100				
Diameter, Unit:	4	IN				
Height, Unit:	1	IN				
Height Minimum, Maximum:	1	1				
Density, Unit:	0.25	m2				
Pest 5 Code, Type, Scale:	POLPY	W	POLPY	W	POLPY	W
Stage Majority, Percent:			14	100	16	100
Height, Unit:			2	IN	3	IN
Height Minimum, Maximum:			2	2	2	4
Density, Unit:			46.55	m2	46.55	m2
Pest 6 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:			19	100	19	100
Height, Unit:			3	IN	13	IN
Height Minimum, Maximum:			3	4	12	14
Density, Unit:			8	m2	8	m2
Pest 7 Code, Type, Scale:	AMBEL	W	AMBEL	W	AMBEL	W
Stage Majority, Percent:			16	100	16	100
Height, Unit:			2	IN	3.5	IN
Height Minimum, Maximum:			2	2	3	4
Density, Unit:			34.58	m2	34.58	M2
Pest 8 Code, Type, Scale:	ERICA	W	ERICA	W	ERICA	W
Stage Majority, Percent:			14	100	19	100
Height, Unit:			1	IN	4.5	IN
Height Minimum, Maximum:			1	1	3	6
Density, Unit:			82.46	m2	82.46	M2
Pest 9 Code, Type, Scale:	VERAR	W	VERAR	W	VERAR	W
Stage Majority, Percent:			65	100		
Height, Unit:			6	IN		
Height Minimum, Maximum:			6	6		
Density, Unit:			8	m2		
Pest10 Code, Type, Scale:	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent:			12	100	16	100
Height, Unit:			1	IN	6	IN
Height Minimum, Maximum:			1	2	4	8
Density, Unit:			0.25	m2	0.25	M2

Application Equipment

	A	B	C
Appl. Equipment:	10 Foot Boom	10' AI XR	10' AI XR
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	46 PSI	46 PSI
Nozzle Type:	TEEJET DG	AI XR	AI XR
Nozzle Size:	80015	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN
Boom Length, Unit:	10 FT	10 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:	15 GPA	15 GPA	15 GPA
Mix Size, Unit:	0.33 Gallons	2 Liters	2 Liters
Propellant:	CO2	CO2	CO2

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Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	54	55	56
1	UNTREATED						25.9 f	22.6 a	122.8 f
2	AUTHORITY MTZ	12 oz/a	12 oz/a		FALL	A	43.5 bc	19.6 a	214.8 bc
2	AIM	1 oz/a	1 oz/a		FALL	A			
2	2,4-D ESTER	16 oz/a	16 oz/a		FALL	A			
2	COC	1 % v/v	1 % v/v		FALL	A			
2	AMMONIUM SULFATE	2.5 lb/a	2.5 lb/a		FALL	A			
2	ROUNDUP WEATHERMAX	32 oz/a	32 oz/a		PRE	B			
2	CADET	0.6 oz/a	0.6 oz/a		PRE	B			
2	NIS	0.25 % v/v	0.25 % v/v		PRE	B			
3	AUTHORITY MTZ	12 oz/a	12 oz/a		FALL	A	43.1 bc	19.9 a	212.0 bc
3	AIM	1 oz/a	1 oz/a		FALL	A			
3	WEEDMASTER	16 oz/a	16 oz/a		FALL	A			
3	COC	1 % v/v	1 % v/v		FALL	A			
3	AMMONIUM SULFATE	2.5 lb/a	2.5 lb/a		FALL	A			
3	ROUNDUP WEATHERMAX	32 oz/a	32 oz/a		PRE	B			
3	CADET	0.6 oz/a	0.6 oz/a		PRE	B			
3	NIS	0.25 % v/v	0.25 % v/v		PRE	B			
4	AUTHORITY MTZ	12 oz/a	12 oz/a		FALL	A	43.7 bc	20.1 a	214.5 bc
4	AIM	1 oz/a	1 oz/a		FALL	A			
4	SIMAZINE	16 oz/a	16 oz/a		FALL	A			
4	COC	1 % v/v	1 % v/v		FALL	A			
4	AMMONIUM SULFATE	2.5 lb/a	2.5 lb/a		FALL	A			
4	ROUNDUP WEATHERMAX	32 oz/a	32 oz/a		PRE	B			
4	CADET	0.6 oz/a	0.6 oz/a		PRE	B			
4	NIS	0.25 % v/v	0.25 % v/v		PRE	B			
5	AUTHORITY MTZ	12 oz/a	12 oz/a		FALL	A	52.6 a	18.0 a	264.9 a
5	AIM	1 oz/a	1 oz/a		FALL	A			
5	2,4-D ESTER	16 oz/a	16 oz/a		FALL	A			
5	COC	1 % v/v	1 % v/v		FALL	A			
5	AMMONIUM SULFATE	2.5 lb/a	2.5 lb/a		FALL	A			
5	F9310-6	8 oz/a	8 oz/a		PRE	B			
5	AATREX	16 oz/a	16 oz/a		PRE	B			
5	ROUNDUP WEATHERMAX	32 oz/a	32 oz/a		PRE	B			
6	AUTHORITY MTZ	12 oz/a	12 oz/a		FALL	A	49.1 ab	18.8 a	244.5 ab
6	AIM	1 oz/a	1 oz/a		FALL	A			
6	WEEDMASTER	16 oz/a	16 oz/a		FALL	A			
6	COC	1 % v/v	1 % v/v		FALL	A			
6	AMMONIUM SULFATE	2.5 lb/a	2.5 lb/a		FALL	A			

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-23-201	Oct-23-201	Oct-23-2012						
Rating Type	2	2							
Rating Unit	YIELD	MOICON	YIELD						
Number of Subsamples	LBS	%	BU						
Rating Timing	1	1	1						
Days After First/Last Applic.	341 146	341 146	341 146						
Trt-Eval Interval									
Plant-Eval Interval	176 DP-1	176 DP-1	176 DP-1						
Days After Emergence	167 DE-1	167 DE-1	167 DE-1						
ARM Action Codes			TY1						
Number of Decimals	1	1	1						
Trt No.	Treatment Name	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	54	55	56
6	F9310-6	8 oz/a	8 oz/a		PRE	B			
6	AATREX	16 oz/a	16 oz/a		PRE	B			
6	ROUNDUP WEATHERMAX	32 oz/a	32 oz/a		PRE	B			
7	AUTHORITY MTZ	12 oz/a	12 oz/a		FALL	A	51.8 a	19.1 a	257.0 a
7	AIM	1 oz/a	1 oz/a		FALL	A			
7	SIMAZINE	16 oz/a	16 oz/a		FALL	A			
7	COC	1 % v/v	1 % v/v		FALL	A			
7	AMMONIUM SULFATE	2.5 lb/a	2.5 lb/a		FALL	A			
7	F9310-6	8 oz/a	8 oz/a		PRE	B			
7	AATREX	16 oz/a	16 oz/a		PRE	B			
7	ROUNDUP WEATHERMAX	32 oz/a	32 oz/a		PRE	B			
8	AUTHORITY MTZ	12 oz/a	12 oz/a		FALL	A	42.2 cd	20.1 a	207.2 cd
8	AIM	1 oz/a	1 oz/a		FALL	A			
8	2,4-D ESTER	16 oz/a	16 oz/a		FALL	A			
8	COC	1 % v/v	1 % v/v		FALL	A			
8	AMMONIUM SULFATE	2.5 lb/a	2.5 lb/a		FALL	A			
8	F9310-6	8 oz/a	8 oz/a		POST	C			
8	AATREX	16 oz/a	16 oz/a		POST	C			
8	ROUNDUP WEATHERMAX	32 oz/a	32 oz/a		POST	C			
9	AUTHORITY MTZ	12 oz/a	12 oz/a		FALL	A	32.8 e	23.1 a	154.6 ef
9	AIM	1 oz/a	1 oz/a		FALL	A			
9	WEEDMASTER	16 oz/a	16 oz/a		FALL	A			
9	COC	1 % v/v	1 % v/v		FALL	A			
9	AMMONIUM SULFATE	2.5 lb/a	2.5 lb/a		FALL	A			
9	F9310-6	8 oz/a	8 oz/a		POST	C			
9	AATREX	16 oz/a	16 oz/a		POST	C			
9	ROUNDUP WEATHERMAX	32 oz/a	32 oz/a		POST	C			
10	AUTHORITY MTZ	12 oz/a	12 oz/a		FALL	A	36.5 de	23.1 a	173.0 de
10	AIM	1 oz/a	1 oz/a		FALL	A			
10	SIMAZINE	16 oz/a	16 oz/a		FALL	A			
10	COC	1 % v/v	1 % v/v		FALL	A			
10	AMMONIUM SULFATE	2.5 lb/a	2.5 lb/a		FALL	A			
10	F9310-6	8 oz/a	8 oz/a		POST	C			
10	AATREX	16 oz/a	16 oz/a		POST	C			
10	ROUNDUP WEATHERMAX	32 oz/a	32 oz/a		POST	C			
LSD (P=.05)							6.46	3.91	35.21
Standard Deviation							3.76	2.28	20.52
CV							8.94	11.15	9.94

Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

YIELD = yield

MOICON = moisture content

Rating Unit

% = percent

BU = bushel

Plant-Eval Interval

176 DP-1 = 1 ZEAMX Apr-30-2012

ARM Action Codes