

Ohio State University Horticulture and Crop Science

GET THE MOST OUT OF EVERY CORN ACRE

Title No. 2:

Trial ID: 11GMOECA
Location: WESTERN BRANCH F-8
Project ID: DEM-H-2011-US-C9F-I-01

Protocol ID: 11GMOECA
Study Director: Anthony F. Dobbels
Investigator: Dr. Mark M. Loux
Sponsor Contact: Caren Judge, BASF

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 °:** 39.8595 N
State/Prov.: Ohio **Longitude of LL Corner °:** -83.67529 W
Postal Code: 45368
Country: USA

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: Seed Consultants SC10HQ70
Description: RR/LL
BBCH Scale: BCOR **Planting Date:** May-31-2011
Planting Method: SEEDED seeded **Rate, Unit:** 32097 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM medium **Soil Temperature, Unit:** 72 F
Soil Moisture: SLIWET slightly wet **Emergence Date:** Jun-6-2011
Harvested Width, Unit: 5 FT **Harvested Length, Unit:** 30 FT

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 3 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: Velvetleaf

Pest 4 Type: W **Code:** IPOHE *Ipomoea hederacea*
Common Name: Ivyleaf morningglory

Pest 5 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters

Pest 6 Type: W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed

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:** CONTIL conventional-till
Replications: 6 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: G-6
% OM: 2.2 **Texture:** SIL silt loam
pH: 6.3 **Soil Name:** Crosby
CEC: 13.6 **Fert. Level:** G good
Soil Drainage: G good

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Application Description

	A	B	C
Application Date:	May-31-2011	Jun-17-2011	Jul-26-2011
Time of Day:	11:15 A.M.	9:00 A.M.	8:30 A.M.
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	V5	VT
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	Reeb	Dobbels	Dobbels
Air Temperature, Unit:	89.9 F	78.3 F	79 F
% Relative Humidity:	62.1	64	75
Wind Velocity, Unit:	3.8 MPH	1.1 MPH	1 MPH
Wind Direction:	SSW	W	W
Dew Presence (Y/N):	N no	N no	Y yes
Soil Temperature, Unit:	72 F	68 F	72 F
Soil Moisture:	GOOD	GOOD	WET
% Cloud Cover:	2	0	10
Next Rain Occurred On:	Jun-3-2011	Jun-19-2011	

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:		BBCH	BBCH
Stage Majority, Percent:		V5	R1 100
Height, Unit:		6 IN	99 IN
Height Minimum, Maximum:		6 7	98 101

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Stage Majority, Percent:		13	
Height, Unit:		2 IN	
Height Minimum, Maximum:		2 3	
Density, Unit:	30 M2	30 M2	30 M2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:		13	
Stage Minimum, Percent:		12	
Stage Maximum, Percent:		14	
Height, Unit:		2 IN	
Height Minimum, Maximum:		2 3	
Density, Unit:	3 M2	3 M2	3 M2
Pest 3 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:		12	
Height, Unit:		1 IN	
Height Minimum, Maximum:		1 1	
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W
Height, Unit:		1 IN	
Height Minimum, Maximum:		1 1	
Pest 5 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W
Density, Unit:	2 M2	2 M2	2 M2
Pest 6 Code, Type, Scale:	AMARE W	AMARE W	AMARE W
Density, Unit:	2 M2	2 M2	2 M2

Application Equipment

	A	B	C
Appl. Equipment:	10 Foot Boom	10 Foot Boom	OVERHEAD
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	46 PSI	50 PSI
Nozzle Type:	TEEJET DG	TEEJET DG	TEEJET VS
Nozzle Size:	80015	80015	8001
Nozzle Spacing, Unit:	18 IN	18 IN	15 IN
Boom Length, Unit:	10 FT	10 FT	10 FT
Boom Height, Unit:	20 IN	20 IN	12 FT
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA	10 GAL/AC
Mix Size, Unit:	0.33 Gallons	0.33 Gallons	3 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	Nov-2-2011	Nov-2-2011	Nov-2-2011
Rating Type	YIELD	MOICON	YIELD
Rating Unit	LBS	%	BU
Number of Subsamples	1	1	1
Days After First/Last Applic.	155 99	155 99	155 99
Trt-Eval Interval	HARVEST	HARVEST	HARVEST
Plant-Eval Interval	155 DP-1	155 DP-1	155 DP-1
Days After Emergence	149 DE-1	149 DE-1	149 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	14	15	16
1	Roundup WeatherMax	0.77 lb	ae/a	22 oz/a		B	46.1 a	20.5 a	224.9 a
1	NIS	0.25 %	v/v	3.2 oz/a		B			
1	N-PAK AMS	5 %	v/v	2 qt/a		B			
2	Guardsman Max	1.88 lb	ai/a	48 oz/a		A	45.4 a	20.6 a	221.2 a
2	Roundup WeatherMax	0.77 lb	ae/a	22 oz/a		B			
2	NIS	0.25 %	v/v	3.2 oz/a		B			
2	N-PAK AMS	5 %	v/v	2 qt/a		B			
3	Verdict	0.78 lb	ai/a	18 oz/a		A	45.2 a	21.2 a	218.3 a
3	Roundup WeatherMax	0.77 lb	ae/a	22 oz/a		B			
3	NIS	0.25 %	v/v	3.2 oz/a		B			
3	N-PAK AMS	5 %	v/v	2 qt/a		B			
4	Verdict	0.78 lb	ai/a	18 oz/a		A	46.5 a	21.6 a	223.4 a
4	Roundup WeatherMax	0.77 lb	ae/a	22 oz/a		B			
4	NIS	0.25 %	v/v	3.2 oz/a		B			
4	N-PAK AMS	5 %	v/v	2 qt/a		B			
4	Headline AMP	0.131 lb	ai/a	10 oz/a		C			
4	NIS	0.25 %	v/v	3.2 oz/a		C			
5	Verdict	0.78 lb	ai/a	18 oz/a		A	47.2 a	20.7 a	229.9 a
5	Roundup WeatherMax	0.77 lb	ae/a	22 oz/a		B			
5	Headline	0.098 lb	ai/a	6 oz/a		B			
5	NIS	0.25 %	v/v	3.2 oz/a		B			
5	N-PAK AMS	5 %	v/v	2 qt/a		B			
6	Verdict	0.78 lb	ai/a	18 oz/a		A	46.1 a	20.6 a	224.9 a
6	Roundup WeatherMax	0.77 lb	ae/a	22 oz/a		B			
6	Headline	0.098 lb	ai/a	6 oz/a		B			
6	NIS	0.25 %	v/v	3.2 oz/a		B			
6	N-PAK AMS	5 %	v/v	2 qt/a		B			
6	Headline AMP	0.131 lb	ai/a	10 oz/a		C			
6	NIS	0.25 %	v/v	3.2 oz/a		C			

LSD (P=.05)	3.79	1.35	17.76
Standard Deviation	3.18	1.14	14.93
CV	6.91	5.45	6.67
Bartlett's X2	1.344	2.537	1.866
P(Bartlett's X2)	0.93	0.771	0.867
Replicate F	0.905	2.258	1.173

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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Number of Subsamples	1	1	1
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Days After Emergence	149 DE-1	149 DE-1	149 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1
Trt Treatment			
No. Name	Rate	Other Other	Appl
	Rate	Rate	Rate Unit Code
	14	15	16
Replicate Prob(F)	0.4931	0.0797	0.3499
Treatment F	0.331	0.933	0.411
Treatment Prob(F)	0.8896	0.4765	0.8367

Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

YIELD = yield

MOICON = moisture content

Rating Unit

% = percent

BU = bushel

Plant-Eval Interval

155 DP-1 = 1 May-31-2011

ARM Action Codes

TY1 = $5.185714 * [C14] * (100 - [C15]) / 84.5$

Means followed by same letter do not significantly differ (P=.05, LSD)

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