

Ohio State University
Horticulture and Crop Science

Corn Yield Advantage

Title No. 2:
 Trial ID: 12GMOECA Protocol ID: 12GMOECA
 Location: Western Branch BIG E Study Director: Anthony F. Dobbels
 Project ID: US-C9F-I-01.0 Investigator: Dr. Mark M. Loux
 Sponsor Contact: Caren Schmidt, BASF

General Trial Information

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

Trial Location

City: South Charleston Latitude of LL Corner °: 39.85739 N
 State/Prov.: Ohio Longitude of LL Corner °: 83.6701 W
 Postal Code: 45368
 Country: USA

Crop Description

Crop 1: ZEAMX Zea mays Corn
 Variety: Dekalb 61-21 RIB Description: RR/LL
 BBCH Scale: BCOR Planting Date: Apr-19-2012
 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: 75 F
 Soil Moisture: GOOD good Emergence Date: May-4-2012
 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: AMARE *Amaranthus retroflexus*
 Common Name: Redroot pigweed
 Pest 3 Type: W Code: AMBTR *Ambrosia trifida*
 Common Name: Giant ragweed
 Pest 4 Type: W Code: CHEAL *Chenopodium album*
 Common Name: Common lambsquarters
 Pest 5 Type: W Code: POLPY *Persicaria pensylvanica*
 Common Name: Pennsylvania smartweed
 Pest 6 Type: W Code: ABUTH *Abutilon theophrasti*
 Common Name: velvetleaf

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

Trial Initiation Comments:

Soil Description

Description Name: Big E
 % OM: 2.2 Texture: SICL silty clay loam
 pH: 6.1 Soil Name: Kokomo
 CEC: 14

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Application Description

	A	B	C	D
Application Date:	Apr-19-2012	May-23-2012	Jun-15-2012	Jul-5-2012
Time of Day:	1:30 P.M.	9:00am	9:00am	10:00 AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	12" CRN	V10	TASSEL
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL
Applied By:			Dobbels	Dobbels
Air Temperature, Unit:	76 F	69 F	76 F	80.2 F
% Relative Humidity:	48	67	65	74.2
Wind Velocity, Unit:	2 MPH	2 MPH	6 mph	3.3 MPH
Wind Direction:	N	NNE	SE	NNW
Dew Presence (Y/N):	N no	N no	N no	Y yes
Soil Temperature, Unit:	60 F	67 F	70 f	80 F
Soil Moisture:	GOOD	DRY	GOOD	GOOD
% Cloud Cover:	7	85	0	90
Next Rain Occurred On:	Apr-20-2012	May-31-2012	Jun-17-2012	Jul-15-2012

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	
Stage Majority, Percent:			14	100	39	100	59	100
Height, Unit:			12	in	36	in	110	IN
Height Minimum, Maximum:							110	120

Pest Stage At Each Application

	A		B		C		D	
Pest 1 Code, Type, Scale:	SETFA	W	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent:			13	100				
Height, Unit:			4	IN				
Height Minimum, Maximum:			1	8				
Density, Unit:				27.3 M2				
Pest 2 Code, Type, Scale:	AMARE	W	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent:			14	100				
Height, Unit:			2	IN				
Height Minimum, Maximum:			1	3				
Density, Unit:				10.4 M2				
Pest 3 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:			19	100				
Height, Unit:			6	IN				
Height Minimum, Maximum:			4	10				
Density, Unit:				61.3 M2				
Pest 4 Code, Type, Scale:	CHEAL	W	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent:			16	100				
Height, Unit:			2	IN				
Height Minimum, Maximum:			1	3				
Density, Unit:				26.6 M2				
Pest 5 Code, Type, Scale:	POLPY	W	POLPY	W	POLPY	W	POLPY	W
Stage Majority, Percent:			14	100				
Height, Unit:			1.5	IN				
Height Minimum, Maximum:			1	2				
Density, Unit:				2.6 M2				
Pest 6 Code, Type, Scale:	ABUTH	W	ABUTH	W	ABUTH	W	ABUTH	W
Stage Majority, Percent:			12	100				
Height, Unit:			2	IN				
Height Minimum, Maximum:			1	3				
Density, Unit:			1	M2				

Application Equipment

	A	B	C	D
Appl. Equipment:	10 Foot Boom	10 Foot Boom	10 Foot Boom	6 foot boom
Equipment Type:	SPRBAC	SPRBAC	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	46 PSI	46 PSI	46 PSI
Nozzle Type:	AI XR	AI XR	AI XR	AI XR
Nozzle Size:	110015	110015	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN	18 IN
Boom Length, Unit:	10 FT	10 FT	10 FT	6 FT
Boom Height, Unit:	20 IN	20 IN	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA
Mix Size, Unit:	2 Liters	2 Liters	2 Liters	2 Liters
Propellant:	CO2	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		Sep-19-2012	Sep-19-2012	Sep-19-2012					
Rating Type		YIELD	MOICON	YIELD					
Rating Unit		LBS	%	BU					
Sample Size, Unit		1 PLOT		1 PLOT					
Collection Basis, Unit		150 YD2		150 YD2					
Number of Subsamples		1	1	1					
Rating Timing									
Days After First/Last Applic.		153 76	153 76	153 76					
Trt-Eval Interval									
Plant-Eval Interval		153 DP-1	153 DP-1	153 DP-1					
Days After Emergence		138 DE-1	138 DE-1	138 DE-1					
ARM Action Codes				TY1					
Number of Decimals		1	1	1					

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	17	18	19
1	Roundup PowerMax	0.77 lb ae/a		22 oz/a		12" CRN B		47.5 a	24.4 a	218.7 b
1	N-PAK AMS	5 % v/v		3 qt/a		12" CRN				
2	Guardsman Max	1.88 lb ai/a		48 oz/a		PRE A		49.5 a	21.2 b	237.7 a
2	Roundup PowerMax	0.77 lb ae/a		22 oz/a		12" CRN B				
2	N-PAK AMS	5 % v/v		3 qt/a		12" CRN				
3	Verdict	0.78 lb ai/a		18 oz/a		PRE A		48.8 a	22.6 b	230.6 a
3	Roundup PowerMax	0.77 lb ae/a		22 oz/a		12" CRN B				
3	N-PAK AMS	5 % v/v		3 qt/a		12" CRN				
4	Verdict	0.78 lb ai/a		18 oz/a		PRE A		50.3 a	22.6 b	237.5 a
4	Roundup PowerMax	0.77 lb ae/a		22 oz/a		12" CRN B				
4	N-PAK AMS	5 % v/v		3 qt/a		12" CRN				
4	Headline AMP	0.131 lb ai/a		10 oz/a		R-1 D				
4	Preference NIS	0.25 % v/v		1 qt/100 gal		R-1				
4	Interlock	4 oz/a		4 oz/a		R-1				
5	Verdict	0.78 lb ai/a		18 oz/a		PRE A		49.4 a	22.3 b	233.8 a
5	Roundup PowerMax	0.77 lb ae/a		22 oz/a		12" CRN B				
5	Headline SC	0.0975 lb ai/a		6 oz/a		12" CRN				
5	N-PAK AMS	5 % v/v		3 qt/a		12" CRN				
5	Headline AMP	0.131 lb ai/a		10 oz/a		R-1 D				
5	Preference NIS	0.25 % v/v		1 qt/100 gal		R-1				
5	Interlock	4 oz/a		4 oz/a		R-1				
6	Verdict	0.78 lb ai/a		18 oz/a		PRE A		49.7 a	21.7 b	237.5 a
6	Roundup PowerMax	0.77 lb ae/a		22 oz/a		12" CRN B				
6	Headline SC	0.0975 lb ai/a		6 oz/a		12" CRN				
6	N-PAK AMS	5 % v/v		3 qt/a		12" CRN				
6	Headline AMP	0.131 lb ai/a		10 oz/a		R-1 D				
6	AG-8050	0.5 % v/v		0.3 qt/a		R-1				
7	Verdict	0.78 lb ai/a		18 oz/a		PRE A		48.8 a	21.8 b	232.8 a
7	Roundup PowerMax	0.77 lb ae/a		22 oz/a		12" CRN B				
7	N-PAK AMS	5 % v/v		3 qt/a		12" CRN				
7	Headline SC	0.0975 lb ai/a		6 oz/a		V-10 C				
7	Headline AMP	0.131 lb ai/a		10 oz/a		R-1 D				
7	Preference NIS	0.25 % v/v		1 qt/100 gal		R-1				
7	Interlock	4 oz/a		4 oz/a		R-1				
	LSD (P=.05)							2.20	1.50	11.40
	Standard Deviation							1.86	1.27	9.67
	CV							3.79	5.68	4.16

Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

YIELD = yield

MOICON = moisture content

Rating Unit

% = percent

BU = bushel