

Ohio State University Horticulture and Crop Science

Get the Most Out of Every Corn Acre

Title No. 2:
 Trial ID: 10GMOECA Protocol ID: 10GMOECA
 Location: WESTERN BRANCH BIG E Study Director: Anthony F. Dobbels
 Project ID: 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 °:** 39.85767 N
State/Prov.: Ohio **Longitude of LL Corner °:** 83.66992 W
Postal Code: 45368 **Altitude of LL Corner, Unit:** 1096.00 FT
Country: USA

Personnel

Study Director: Anthony F. Dobbels **Title:** Research Specialist
Affiliation: The Ohio State University
Address: 7721 South Charleston Pike
Location: South Charleston OH
Postal Code: 45368 **E-mail:** dobbels.1@osu.edu
Investigator: Dr. Mark M. Loux **Title:** Professor
Affiliation: The Ohio State University
Address: 222 Kottman Hall, 2021 Coffey Road
Location: Columbus OH
Postal Code: 43210 **E-mail:** loux.1@osu.edu

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DEKALKB DKC 60-51 **Description:** RR
BBCH Scale: BCOR **Planting Date:** 4/30/10
Planting Method: SEEDED seeded **Rate, Unit:** 49000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM medium **Soil Temperature, Unit:** 58 F
Soil Moisture: DRY dry
Harvest Date: 9/14/10 **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:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

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: Big E South
% 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
Application Date:	5/1/10	5/31/10	7/8/10
Time of Day:	5:00 A.M.	10:00 A.M.	8:45 A.M.
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	POST	VT
Application Placement:	BROSOI	BROFO	BROFO
Applied By:	Dobbels	Loux	Dobbels
Air Temperature, Unit:	66 F	78 F	82 F
% Relative Humidity:	60	72	73
Wind Velocity, Unit:	7 MPH	6 MPH	0 MPH
Wind Direction:	W	ESE	
Dew Presence (Y/N):	N no	N no	Y yes
Soil Temperature, Unit:	58 F	74 F	75 F
Soil Moisture:	DRY	DRY	DRY
% Cloud Cover:	100	15	0
Next Rain Occurred On:	5/1/10	6/2/10	7/8/10

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:			16	100	63	100
Height, Unit:			13	IN	115	IN
Height Minimum, Maximum:			12	14	113	115

Pest Stage At Each Application

	A		B		C	
Pest 1 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:			14	100		
Height, Unit:			3	IN		
Height Minimum, Maximum:			2	4		
Density, Unit:			2	M2		

Application Equipment

	A	B	C
Appl. Equipment:	Tractor	BACKPACK	OVERHEAD
Equipment Type:	SPTRMO	SPRBAC	SPRBAC
Operating Pressure, Unit:	32 PSI	53 PSI	58 PSI
Nozzle Type:	DG	TEEJET DG	TEEJET VS
Nozzle Size:	11002	11002	8001
Nozzle Spacing, Unit:	20 IN	18 IN	15 IN
Boom Length, Unit:	15 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:	20 GAL/AC	20 GAL/AC	15 GAL/AC
Mix Size, Unit:	10 gallons	3 Liters	3 gallons
Propellant:	PUMROL	CO2	CO2
Tank Mix (Y/N):	N no		

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Crop Code				ZEAMX	ZEAMX	ZEAMX
Rating Date				9/14/10	9/14/10	9/14/10
Rating Type				YIELD	MOICON	YIELD
Rating Unit				LBS	%	BU
Trt-Eval Interval						
Plant-Eval Interval				137 DP-1	137 DP-1	137 DP-1
Days After Emergence						

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	16	17	18
1	UTC					21.3 b	17.8 a	101.8 b
2	Guardsman Max	5	56 oz/a		A	59.3 a	21.7 a	285.2 a
2	Roundup PowerMax	4.5	22 oz/a		B			
2	NIS	100	6.4 oz/a					
2	N-PAK AMS	100	4 qt/a					
3	Integrity	5.57	16 oz/a		A	60.0 a	21.7 a	288.5 a
3	Roundup PowerMax	4.5	22 oz/a		B			
3	NIS	100	6.4 oz/a					
3	N-PAK AMS	100	2 qt/a					
4	Integrity	5.57	16 oz/a		A	60.7 a	22.2 a	289.7 a
4	Roundup PowerMax	4.5	22 oz/a		B			
4	Status	56	2.5 oz/a					
4	N-PAK AMS	100	2 qt/a					
5	Integrity	5.57	16 oz/a		A	60.1 a	21.3 a	290.1 a
5	Roundup PowerMax	4.5	22 oz/a		B			
5	Headline	2.09	6 oz/a					
5	N-PAK AMS	100	2 qt/a					
6	Integrity	5.57	16 oz/a		A	60.9 a	22.2 a	290.5 a
6	Roundup PowerMax	4.5	22 oz/a		B			
6	NIS	100	6.4 oz/a					
6	N-PAK AMS	100	2 qt/a					
6	Headline Amp	1.68	10 oz/a		C			
6	NIS	100	6.4 oz/a					
7	Integrity	5.57	16 oz/a		A	59.5 a	22.2 a	283.7 a
7	Roundup PowerMax	4.5	22 oz/a		B			
7	Status	56	2.5 oz/a					
7	N-PAK AMS	100	2 qt/a					
7	Headline Amp	1.68	10 oz/a		C			
7	NIS	100	6.4 oz/a					
8	Integrity	5.57	16 oz/a		A	60.8 a	22.2 a	290.5 a
8	Roundup PowerMax	4.5	22 oz/a		B			
8	Headline	2.09	6 oz/a					
8	N-PAK AMS	100	2 qt/a					
8	Headline Amp	1.68	10 oz/a		C			
8	NIS	100	6.4 oz/a					
LSD (P=.05)						9.19	4.69	44.20
Standard Deviation						7.80	3.97	37.49
CV						14.09	18.57	14.15
Bartlett's X2						76.726	37.504	84.504
P(Bartlett's X2)						0.001*	0.001*	0.001*
Replicate F						0.992	1.006	1.079
Replicate Prob(F)						0.4366	0.4290	0.3889
Treatment F						18.692	0.852	18.590
Treatment Prob(F)						0.0001	0.5528	0.0001

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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Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

YIELD = yield

MOICON = moisture content

Rating Unit

% = percent

BU = bushel

Plant-Eval Interval

137 DP-1 = 1 4/30/10

ARM Action Codes

TY1 = $5.185714 * [C16] * (100 - [C17]) / 84.5$