Ohio State University
Horticulture and Crop Science

Get the Most Out of Every Corn Acre

Title No. 2:
Trial ID: 10GMOECA
Location: WESTERN BRANCH BIG E
Project ID:

Protocol ID: 10GMOECA
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
State/Prov.: Ohio
Postal Code: 45368
Country: USA

Latitude of LL Corner °: 39.8573 N
Longitude of LL Corner °: 83.67001 W
Altitude of LL Corner, Unit: 1056.00 FT

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: SEED CONSULTANTS SC11HQ38
BBCH Scale: BCOR
Planting Method: SEEDED seeded
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM medium
Soil Moisture: DRY dry
Harvest Date: 9/14/10
Harvested Width, Unit: 5 FT
% Standard Moisture: 15.5
Weighing Equipment: Harvest Master 401

Description: RR/LL 113 RM
Planting Date: 4/30/10
Rate, Unit: 32097 S/A
Soil Temperature, Unit: 58 F
Emergence Date: 5/10/10
Harvest Equipment: MASSEY 8 XP
Harvested Length, Unit: 30 FT
Moisture Meter: Harvest Master Blade

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Site and Design

Plot Width, Unit: 10 FT
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2
Replications: 6

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: Big E South
% OM: 2.2
pH: 6.1
CEC: 14

Texture: SICL silty clay loam
Soil Name: Kokomo

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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	121 IN
Height Minimum, Maximum:		12 14	120 121

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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Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate Unit	Appl Code	16	17	18
	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					127 DE	127 DE	127 DE
1	UTC					23.6 b	27.9 ab	104.9 b
2	Guardsman Max	5	56	oz/a	A	56.6 a	24.8 b	260.5 a
2	Roundup PowerMax	4.5	22	oz/a	B			
2	NIS	100	4.8	oz/a				
2	N-PAK AMS	100	3	qt/a				
3	Integrity	5.57	16	oz/a	A	57.0 a	26.9 ab	255.4 a
3	Roundup PowerMax	4.5	22	oz/a	B			
3	NIS	100	4.8	oz/a				
3	N-PAK AMS	100	1.5	qt/a				
4	Integrity	5.57	16	oz/a	A	55.1 a	24.7 b	254.6 a
4	Roundup PowerMax	4.5	22	oz/a	B			
4	Status	56	2.5	oz/a				
4	N-PAK AMS	100	1.5	qt/a				
5	Integrity	5.57	16	oz/a	A	55.7 a	25.1 b	255.3 a
5	Roundup PowerMax	4.5	22	oz/a	B			
5	Headline	2.09	6	oz/a				
5	N-PAK AMS	100	1.5	qt/a				
6	Integrity	5.57	16	oz/a	A	58.4 a	28.8 a	255.2 a
6	Roundup PowerMax	4.5	22	oz/a	B			
6	NIS	100	4.8	oz/a				
6	N-PAK AMS	100	1.5	qt/a				
6	Headline Amp	1.68	10	oz/a	C			
6	NIS	100	4.8	oz/a				
7	Integrity	5.57	16	oz/a	A	60.6 a	29.6 a	261.1 a
7	Roundup PowerMax	4.5	22	oz/a	B			
7	Status	56	2.5	oz/a				
7	N-PAK AMS	100	1.5	qt/a				
7	Headline Amp	1.68	10	oz/a	C			
7	NIS	100	4.8	oz/a				
8	Integrity	5.57	16	oz/a	A	60.7 a	28.5 a	265.8 a
8	Roundup PowerMax	4.5	22	oz/a	B			
8	Headline	2.09	6	oz/a				
8	N-PAK AMS	100	1.5	qt/a				
8	Headline Amp	1.68	10	oz/a	C			
8	NIS	100	4.8	oz/a				
	LSD (P=.05)					6.01	3.37	24.35
	Standard Deviation					5.10	2.86	20.65
	CV					9.54	10.58	8.64
	Bartlett's X2					11.879	3.903	25.469
	P(Bartlett's X2)					0.105	0.791	0.001*
	Replicate F					1.666	3.844	1.900
	Replicate Prob(F)					0.1686	0.0070	0.1193
	Treatment F					34.609	2.804	41.561
	Treatment Prob(F)					0.0001	0.0199	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