



# The Ohio State University

## Authority MTZ Corn Burndown Trial

Trial ID: 13NTC3  
Protocol ID: 13NTC3  
Project ID: SULF.COR.13.JPR.10

Location: WESTERN BRANCH F-10 E Trial Year:  
Investigator: Dr. Mark M. Loux  
Study Director: Anthony F. Dobbels  
Sponsor Contact: Joe Reed, FMC

**No. Previous Crop Year**  
1. Soybean 2012

No.	Date	Maintenance Product Name	Form Conc	Form Type	Form Rate	Maintenance Rate Unit	Maintenance Tank Mix
1.	Jun-26-2013	Roundup Weathermax	4.5	SL	22	OZ/A	no

**Soil Description**  
**Description Name:** F-10 East  
**% OM:** 3  
**pH:** 6  
**CEC:** 19.5  
**Texture:** SICL silty clay loam  
**Soil Name:** Kokomo  
**Fert. Level:** G good  
**Soil Drainage:** G good

**Application Description**

	A	B
<b>Application Date:</b>	Apr-27-2013	May-30-2013
<b>Appl. Start Time:</b>	12:15 PM	8:00 AM
<b>Appl. Stop Time:</b>	12:30 PM	8:30 AM
<b>Application Method:</b>	SPRAY	SPRAY
<b>Application Timing:</b>	PRE	POST
<b>Application Placement:</b>	BROFOL	BROFOL
<b>Applied By:</b>	Dobbels	REEB
<b>Air Temperature, Unit:</b>	65 F	72.5 F
<b>% Relative Humidity:</b>	42	69.1
<b>Wind Velocity, Unit:</b>	6.5 MPH	4.9 MPH
<b>Wind Direction:</b>	E	SSW
<b>Dew Presence (Y/N):</b>	N no	N no
<b>Soil Temperature, Unit:</b>	54 F	66 F
<b>Soil Moisture:</b>	SLIWET	DRY
<b>% Cloud Cover:</b>	50	30
<b>Next Moisture Occurred On:</b>	Apr-28-2013	May-31-2013
<b>Time to Next Moisture, Unit:</b>	1 DAY	1 DAY

**Crop Stage At Each Application**

	A	B
<b>Crop 1 Code, BBCH Scale:</b>	ZEAMX BCOR	ZEAMX BCOR
<b>Stage Scale Used:</b>		BBCH
<b>Stage Majority, Percent:</b>		V4 100
<b>Height, Unit:</b>		12 IN
<b>Height Minimum, Maximum:</b>		10 12

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### Pest Stage At Each Application

	A		B	
<b>Pest 1 Code, Type, Scale:</b>	STEME	W	STEME	W
<b>Stage Majority, Percent:</b>	67	100		
<b>Diameter, Unit:</b>	7	IN		
<b>Height, Unit:</b>	1	IN		
<b>Height Minimum, Maximum:</b>	0.5	1		
<b>Density, Unit:</b>	1.3	M2		
<b>Pest 2 Code, Type, Scale:</b>	LAMPU	W	LAMPU	W
<b>Stage Majority, Percent:</b>	67	100		
<b>Diameter, Unit:</b>	2	IN		
<b>Height, Unit:</b>	3	IN		
<b>Height Minimum, Maximum:</b>	2	3		
<b>Density, Unit:</b>	18.6	M2		
<b>Pest 3 Code, Type, Scale:</b>	ERYRE	W	ERYRE	W
<b>Stage Majority, Percent:</b>	59	90	67	100
<b>Diameter, Unit:</b>	3	IN		
<b>Height, Unit:</b>	3	IN	8	IN
<b>Height Minimum, Maximum:</b>	3	4	8	9
<b>Density, Unit:</b>	5.3	M2	3	M2
<b>Pest 4 Code, Type, Scale:</b>	CAPBP	W	CAPBP	W
<b>Stage Majority, Percent:</b>	67	100		
<b>Diameter, Unit:</b>	3	IN		
<b>Height, Unit:</b>	10	IN		
<b>Height Minimum, Maximum:</b>	10	12		
<b>Density, Unit:</b>	1.3	M2		
<b>Pest 5 Code, Type, Scale:</b>	VERAR	W	VERAR	W
<b>Stage Majority, Percent:</b>	19	100		
<b>Diameter, Unit:</b>	3	IN		
<b>Height, Unit:</b>	0.25	IN		
<b>Height Minimum, Maximum:</b>	0.25	0.5		
<b>Pest 6 Code, Type, Scale:</b>	ERPSS	W	ERPSS	W
<b>Stage Majority, Percent:</b>	69	100		
<b>Diameter, Unit:</b>	2	IN		
<b>Height, Unit:</b>	4	IN		
<b>Height Minimum, Maximum:</b>	2	4		
<b>Pest 7 Code, Type, Scale:</b>	AMBTR	W	AMBTR	W
<b>Stage Majority, Percent:</b>	08	100	19	100
<b>Diameter, Unit:</b>	2	IN		
<b>Height, Unit:</b>	0.5	IN	9	IN
<b>Height Minimum, Maximum:</b>	0.5	0.5	9	10
<b>Density, Unit:</b>	13.3	M2	8	M2
<b>Pest 8 Code, Type, Scale:</b>	SETFA	W	SETFA	W
<b>Stage Majority, Percent:</b>			13	100
<b>Height, Unit:</b>			6	IN
<b>Height Minimum, Maximum:</b>			6	7
<b>Density, Unit:</b>			279	M2
<b>Pest 9 Code, Type, Scale:</b>	ERICA	W	ERICA	W
<b>Stage Majority, Percent:</b>			19	100
<b>Height, Unit:</b>			6	IN
<b>Height Minimum, Maximum:</b>			4	8
<b>Density, Unit:</b>			14.6	M2
<b>Pest10 Code, Type, Scale:</b>	CHEAL	W	CHEAL	W
<b>Stage Majority, Percent:</b>			19	100
<b>Height, Unit:</b>			9	IN
<b>Height Minimum, Maximum:</b>			9	10
<b>Density, Unit:</b>			4	M2
<b>Pest11 Code, Type, Scale:</b>	AMBEL	W	AMBEL	W
<b>Stage Majority, Percent:</b>			18	100
<b>Height, Unit:</b>			2	IN
<b>Height Minimum, Maximum:</b>			2	6
<b>Density, Unit:</b>			0.25	M2

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### Application Equipment

	A	B
<b>Appl. Equipment:</b>	6 foot boom	
<b>Equipment Type:</b>	SPRBAC	
<b>Operation Pressure, Unit:</b>	46 PSI	
<b>Nozzle Type:</b>	AI XR	
<b>Nozzle Size:</b>	110015	
<b>Nozzle Spacing, Unit:</b>	18 IN	
<b>Boom Length, Unit:</b>	6 FT	
<b>Boom Height, Unit:</b>	20 IN	
<b>Ground Speed, Unit:</b>	3 MPH	
<b>Carrier:</b>	WATER	
<b>Spray Volume, Unit:</b>	15 GPA	
<b>Mix Size, Unit:</b>	1 Liters	
<b>Propellant:</b>	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	Oct-21-201	Oct-21-201	Oct-21-201
	3	3	3
Rating Type	YIELD	MOICON	YIELD
Rating Unit	LBS	5	BU
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit	150 FT2	150 FT2	150 FT2
Number of Subsamples	1	1	1
Rating Timing			
Days After First/Last Applic.	177 144	177 144	177 144
Trt-Eval Interval			
Plant-Eval Interval	177 DP-1	177 DP-1	177 DP-1
Days After Emergence	161 DE-1	161 DE-1	161 DE-1
ARM Action Codes			TY1
Number of Decimals	1	1	1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	21	22	23
1	UTC					43.8 a	20.8 a	212.8 a
2	Authority MTZ	5.5 oz/a		PRE	A	46.8 a	19.2 a	232.2 a
2	Gramoxone Inteon	1.5 pt/a		PRE	A			
2	NIS	4.8 oz/a		PRE	A			
2	N-PAK AMS	1.5 qt/a		PRE	A			
2	Anthem ATZ	32 oz/a		POST	B			
2	Atrazine	2 pt/a		POST	B			
2	Roundup PowerMax	32 oz/a		POST	B			
2	N-PAK AMS	1.5 qt/a		POST	B			
3	Authority MTZ	5.5 oz/a		PRE	A	47.0 a	19.6 a	231.9 a
3	Gramoxone Inteon	2 pt/a		PRE	A			
3	NIS	4.8 oz/a		PRE	A			
3	N-PAK AMS	1.5 qt/a		PRE	A			
3	Anthem ATZ	32 oz/a		POST	B			
3	Atrazine	2 pt/a		POST	B			
3	Roundup PowerMax	32 oz/a		POST	B			
3	N-PAK AMS	1.5 qt/a		POST	B			
4	Spartan	2.4 oz/a		PRE	A	47.4 a	18.7 a	236.3 a
4	Metribuzine	5 oz/a		PRE	A			
4	Gramoxone Inteon	1.5 pt/a		PRE	A			
4	NIS	4.8 oz/a		PRE	A			
4	N-PAK AMS	1.5 qt/a		PRE	A			
4	Anthem ATZ	32 oz/a		POST	B			
4	Atrazine	2 pt/a		POST	B			
4	Roundup PowerMax	32 oz/a		POST	B			
4	N-PAK AMS	1.5 qt/a		POST	B			
5	Spartan	2.4 oz/a		PRE	A	45.3 a	19.0 a	225.1 a
5	Metribuzine	5 oz/a		PRE	A			
5	Gramoxone Inteon	2 pt/a		PRE	A			
5	NIS	4.8 oz/a		PRE	A			
5	N-PAK AMS	1.5 qt/a		PRE	A			
5	Anthem ATZ	32 oz/a		POST	B			
5	Atrazine	2 pt/a		POST	B			
5	Roundup PowerMax	32 oz/a		POST	B			
5	N-PAK AMS	1.5 qt/a		POST	B			

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 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-21-201	Oct-21-201	Oct-21-201
		3	3	3
Rating Type		YIELD	MOICON	YIELD
Rating Unit		LBS	5	BU
Sample Size, Unit	1	PLOT	1 PLOT	1 PLOT
Collection Basis, Unit	150	FT2	150 FT2	150 FT2
Number of Subsamples		1	1	1
Rating Timing				
Days After First/Last Applic.		177 144	177 144	177 144
Trt-Eval Interval				
Plant-Eval Interval		177 DP-1	177 DP-1	177 DP-1
Days After Emergence		161 DE-1	161 DE-1	161 DE-1
ARM Action Codes				TY1
Number of Decimals		1	1	1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	21	22	23
6	Spartan	1.6 oz/a		PRE	A	43.9 a	20.1 a	215.0 a
6	Metribuzine	5 oz/a		PRE	A			
6	Gramoxone Inteon	1.5 pt/a		PRE	A			
6	NIS	4.8 oz/a		PRE	A			
6	N-PAK AMS	1.5 qt/a		PRE	A			
6	Anthem ATZ	32 oz/a		POST	B			
6	Atrazine	2 pt/a		POST	B			
6	Roundup PowerMax	32 oz/a		POST	B			
6	N-PAK AMS	1.5 qt/a		POST	B			
7	Spartan	1.6 oz/a		PRE	A	45.2 a	19.2 a	223.8 a
7	Metribuzine	5 oz/a		PRE	A			
7	Gramoxone Inteon	2 pt/a		PRE	A			
7	NIS	4.8 oz/a		PRE	A			
7	N-PAK AMS	1.5 qt/a		PRE	A			
7	Anthem ATZ	32 oz/a		POST	B			
7	Atrazine	2 pt/a		POST	B			
7	Roundup PowerMax	32 oz/a		POST	B			
7	N-PAK AMS	1.5 qt/a		POST	B			
8	Spartan	1.6 oz/a		PRE	A	48.0 a	18.6 a	239.5 a
8	Metribuzine	5 oz/a		PRE	A			
8	Gramoxone Inteon	2 pt/a		PRE	A			
8	2,4-D	1 pt/a		PRE	A			
8	NIS	4.8 oz/a		PRE	A			
8	N-PAK AMS	1.5 qt/a		PRE	A			
8	Anthem ATZ	32 oz/a		POST	B			
8	Atrazine	2 pt/a		POST	B			
8	Roundup PowerMax	32 oz/a		POST	B			
8	N-PAK AMS	1.5 qt/a		POST	B			
LSD (P=.05)						4.05	3.22	25.07
Standard Deviation						2.31	1.84	14.32
CV						5.03	9.47	6.3
Bartlett's X2						4.903	7.528	6.022
P(Bartlett's X2)						0.672	0.376	0.537
Skewness						0.3061	-0.4578	-0.0467
Kurtosis						-0.5802	-0.7389	-0.8189
Replicate F						4.817	1.706	1.763
Replicate Prob(F)						0.0256	0.2173	0.2075
Treatment F						1.448	0.498	1.365
Treatment Prob(F)						0.2628	0.8210	0.2929

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Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

YIELD = yield

MOICON = moisture content

Rating Unit

BU = bushel

PLOT = total plot

FT2 = square foot

Plant-Eval Interval

177 DP-1 = 1 ZEAMX Apr-27-2013

ARM Action Codes

TY1 =  $5.185714 * [21] * (100 - [22]) / 84.5$