

Ohio State University  
Horticulture and Crop Science

2012 Syngenta / DOW Corn Herbicide Treatments

Title No. 2:  
 Trial ID: 12CRNYLD1 Protocol ID: 12CRNYLD1  
 Location: Western Branch Big E Study Director: Anthony F. Dobbels  
 Project ID: Investigator: Dr. Mark M. Loux  
 Sponsor Contact: Dain Bruns, Syngenta, Brad Hopkins, DOW

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 °: 39.85794 N  
 State/Prov.: Ohio Longitude of LL Corner °: 83.67001 W  
 Postal Code: 45368  
 Country: USA

Crop Description

Crop 1: ZEAMX Zea mays Corn  
 Variety: Dekalb DKC 61-21 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: 56 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: AMBTR *Ambrosia trifida*  
 Common Name: Giant ragweed  
 Pest 3 Type: W Code: AMARE *Amaranthus retroflexus*  
 Common Name: Redroot pigweed  
 Pest 4 Type: W Code: AMBEL *Ambrosia artemisiifolia*  
 Common Name: Common ragweed  
 Pest 5 Type: W Code: CHEAL *Chenopodium album*  
 Common Name: Common lambsquarters  
 Pest 6 Type: W Code: ABUTH *Abutilon theophrasti*  
 Common Name: velvetleaf  
 Pest 7 Type: W Code: POLPY *Persicaria pensylvanica*  
 Common Name: Pennsylvania smartweed

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 FT<sup>2</sup> Tillage Type: CONTIL conventional-till  
 Replications: 4 Study Design: RACOB� Randomized Complete Block (RCB)  
 Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

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

Application Description

	A	B	C
Application Date:	Apr-19-2012	May-10-2012	May-23-2012
Time of Day:	1:30 P.M.	9:00am	9:00AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPO	POST
Application Placement:	BROSOL	BROFOL	BROFOL
Air Temperature, Unit:	76 F	53 F	69 F
% Relative Humidity:	48	55	67
Wind Velocity, Unit:	2 MPH	7 MPH	2 MPH
Wind Direction:	N	WNW	NNE
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	60 F	51 f	67 F
Soil Moisture:	GOOD	SLIWET	DRY
% Cloud Cover:	7	0	85
Next Rain Occurred On:	Apr-20-2012	May-31-2012	May-31-2012

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Crop Stage At Each Application

	A		B		C	
Crop 1 Code, BBCH Scale:	ZEAMX	BCOR	ZEAMX	BCOR	ZEAMX	BCOR
Stage Scale Used:	BBCH		BBCH		BBCH	
Stage Majority, Percent:	12	100	14	100		
Stage Minimum, Percent:	12	100				
Stage Maximum, Percent:	12	100				
Height, Unit:	3.5	in	12	IN		
Height Minimum, Maximum:	2	5	12	12		

Pest Stage At Each Application

	A		B		C	
Pest 1 Code, Type, Scale:	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent:	12	100	12	100		
Height, Unit:	0.25	in	1.5	IN		
Height Minimum, Maximum:	0.25	0.25	1	2		
Density, Unit:	84	m2	46	M2		
Pest 2 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:	13	100	11	100		
Height, Unit:	1.5	in	1.5	IN		
Height Minimum, Maximum:	1	2	1	2		
Density, Unit:	6	m2	40	M2		
Pest 3 Code, Type, Scale:	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent:	10	100	14	100		
Height, Unit:	0.25	in	0.75	IN		
Height Minimum, Maximum:	0.25	0.25	0.5	1		
Density, Unit:	159.6	m2	21	M2		
Pest 4 Code, Type, Scale:	AMBEL	W	AMBEL	W	AMBEL	W
Stage Majority, Percent:	12	100	14	100		
Height, Unit:	0.5	in	2	IN		
Height Minimum, Maximum:	0.5	0.5	1	3		
Density, Unit:	1	m2	5	M2		
Pest 5 Code, Type, Scale:	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent:	12	100	14	100		
Height, Unit:	0.25	in	1	IN		
Height Minimum, Maximum:	0.25	0.25	1	1		
Density, Unit:	2.66	m2	31	M2		
Pest 6 Code, Type, Scale:	ABUTH	W	ABUTH	W	ABUTH	W
Stage Majority, Percent:	10	100	14	100		
Height, Unit:	0.25	in	2	IN		
Height Minimum, Maximum:	0.25	0.25	2	2		
Density, Unit:	2.66	m2	3	M2		
Pest 7 Code, Type, Scale:	POLPY	W	POLPY	W	POLPY	W
Stage Majority, Percent:			12	100		
Height, Unit:			0.75	IN		
Height Minimum, Maximum:			0.5	1		
Density, Unit:			2	M2		

Application Equipment

	A		B		C	
Appl. Equipment:	10 Foot Boom	10 Foot Boom	10 Foot Boom	10 Foot Boom	10 Foot Boom	10 Foot Boom
Equipment Type:	SPRBAC	SPRBAC	SPRBAC	SPRBAC	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	46 PSI	46 PSI	46 PSI	46 PSI	46 PSI
Nozzle Type:	AI XR	AI XR	TEEJET	DG		
Nozzle Size:	110015	110015	80015			
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN			
Boom Length, Unit:	10 FT	10 FT	10 FT			
Boom Height, Unit:	20 IN	20 IN	20 IN			
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH			
Carrier:	WATER	WATER	WATER			
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA			
Mix Size, Unit:	2 Liters	2 Liters	2 Liters			
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	Sep-19-2012	Sep-19-2012	Sep-19-2012	
Rating Type	YIELD	MOICON	YIELD	
Rating Unit	LBS	%	BU	
Sample Size, Unit	1 PLOT			
Collection Basis, Unit	150 YD2			
Number of Subsamples	1	1	1	
Rating Timing				
Days After First/Last Applic.	153 119	153 119	153 119	
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	23	24	25
1	Lumax EZ	3.25	qt/a	3.25	qt/a	PRE	A	52.8 ab	28.3 a	230.4 ab
1	Touchdown Total	32	oz/a	1	qt/a	POST	C			
1	N-PAK AMS	5	% v/v	3	qt/a	POST	C			
2	Lumax EZ	3.25	qt/a	3.25	qt/a	PRE	A	51.0 abc	25.4 abc	231.9 a
3	Halex GT	3.6	pt/a	1.8	qt/a	EPOST	B	44.5 cd	26.0 ab	200.6 bc
3	AAtrex	1	pt/a	0.5	qt/a	EPOST	B			
3	NIS	0.25	% v/v	4.8	oz/a	EPOST	B			
3	N-PAK AMS	2.5	% v/v	1.5	qt/a	EPOST	B			
4	Bicep II Magnum	1.4	qt/a	1.4	qt/a	PRE	A	54.2 a	25.1 abc	247.6 a
4	Touchdown Total	32	oz/a	1	qt/a	POST	C			
4	N-PAK AMS	2.5	% v/v	1.5	qt/a	POST	C			
5	Bicep II Magnum	1.4	qt/a	1.4	qt/a	PRE	A	50.1 abc	25.5 abc	228.1 ab
5	Halex GT	3.6	pt/a	1.8	qt/a	POST	C			
5	AAtrex	1	pt/a	0.5	qt/a	POST	C			
5	NIS	0.25	% v/v	4.8	oz/a	POST	C			
5	N-PAK AMS	2.5	% v/v	1.5	qt/a	POST	C			
6	Lexar EZ	1.5	qt/a	1.5	qt/a	PRE	A	52.8 ab	26.3 a	236.6 a
6	Halex GT	3.6	pt/a	1.8	qt/a	POST	C			
6	AAtrex	1	pt/a	0.5	qt/a	POST	C			
6	NIS	0.25	% v/v	4.8	oz/a	POST	C			
6	N-PAK AMS	2.5	% v/v	1.5	qt/a	POST	C			
7	Touchdown Total	32	oz/a	1	qt/a	POST	C	51.5 abc	27.0 a	229.0 ab
7	Callisto Xtra	20	oz/a	20	oz/a	POST	C			
7	N-PAK AMS	2.5	% v/v	1.5	qt/a	POST	C			
8	Armezon	0.5	oz/a	0.5	oz/a	POST	C	50.7 abc	25.4 abc	230.7 ab
8	Roundup PowerMax	0.75	lb ae/a	21.3	oz/a	POST	C			
8	N-PAK AMS	2.5	% v/v	1.5	qt/a	POST	C			
9	Keystone	3.85	lb ai/a	2.8	qt/a	PRE	A	46.3 bcd	22.7 bc	218.3 abc
9	Hornet	0.128	lb ai/a	3	oz/a	PRE	A			
10	Surestart	1.06	lb ai/a	2	pt/a	PRE	A	52.0 ab	25.4 abc	236.7 a
10	Durango DMA	0.75	lb ae/a	1.5	pt/a	POST	C			
10	N-PAK AMS	2.5	% v/v	1.5	qt/a	POST	C			
11	Surestart	1.06	lb ai/a	2	pt/a	EPOST	B	41.1 d	22.1 c	195.6 c
11	Durango DMA	0.75	lb ae/a	1.5	pt/a	EPOST	B			
11	N-PAK AMS	2.5	% v/v	1.5	qt/a	EPOST	B			
12	UTC							12.0 e	18.5 d	59.5 d
LSD (P=.05)								7.22	3.48	30.88
Standard Deviation								5.00	2.41	21.38
CV								10.74	9.72	10.08