

Ohio State University
Horticulture and Crop Science

Corn Yield Trial IV
Title No. 2: PYRX.COR.12.JPR.01(a)
Trial ID: 12CRNYLD4 Protocol ID: 12CRNYLD4
Location: Western Branch Big E Study Director: Anthony F. Dobbels
Project ID: Investigator: Dr. Mark M. Loux
Sponsor Contact: Joe Reed, FMC

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 °: 39.85757 N
State/Prov.: Ohio Longitude of LL Corner °: 83.67007 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: CHEAL Chenopodium album
Common Name: Common lambsquarters
Pest 4 Type: W Code: AMARE Amaranthus retroflexus
Common Name: Redroot pigweed
Pest 5 Type: W Code: ABUTH Abutilon theophrasti
Common Name: velvetleaf
Pest 6 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 FT2 Tillage Type: CONTIL conventional-till
Replications: 4 Study Design: RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No. Previous Crop Year
1. SOYBEAN 2011

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.	9:00 A.M.	9:00 A.M.
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPO	POST
Application Placement:	BROSOI	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-13-2012	May-29-2012

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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	14	100
Height, Unit:	2.5	IN	12	IN	12	IN
Height Minimum, Maximum:	2.5	3	9	13	9	13

Pest Stage At Each Application

	A		B		C	
Pest 1 Code, Type, Scale:	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent:	12	100	14	100	14	100
Height, Unit:	0.25	IN	1.5	IN	1.5	IN
Height Minimum, Maximum:	0.25	0.5	1	2	1	2
Density, Unit:	25	M2	25	M2	25	M2
Pest 2 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:	12	80	12	80	12	80
Stage Minimum, Percent:	12	80	12	80	12	80
Stage Maximum, Percent:	14	20	14	20	14	20
Height, Unit:	2	IN	2.5	IN	2.5	IN
Height Minimum, Maximum:	1	2	1	3	1	3
Density, Unit:	20	M2	20	M2	20	M2
Pest 3 Code, Type, Scale:	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent:	12	100	18	100	18	100
Height, Unit:	0.5	IN	2	IN	2	IN
Height Minimum, Maximum:	0.25	0.5	1	3	1	3
Density, Unit:	7	M2	7	M2	7	M2
Pest 4 Code, Type, Scale:	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent:	08	90	08	90	08	90
Stage Minimum, Percent:	08	90	08	90	08	90
Stage Maximum, Percent:	12	10	12	10	12	10
Height, Unit:	0.25	IN	0.25	IN	0.25	IN
Height Minimum, Maximum:	0.25	0.25	0.25	0.25	0.25	0.25
Density, Unit:	6	M2	6	M2	6	M2
Pest 5 Code, Type, Scale:	ABUTH	W	ABUTH	W	ABUTH	W
Stage Majority, Percent:	08	100	08	100	08	100
Height, Unit:	0.25	IN	0.25	IN	0.25	IN
Height Minimum, Maximum:	0.25	0.25	0.25	0.25	0.25	0.25
Density, Unit:	2	M2	2	M2	2	M2
Pest 6 Code, Type, Scale:	POLPY	W	POLPY	W	POLPY	W
Stage Majority, Percent:	11	90	11	90	11	90
Stage Minimum, Percent:	11	90	11	90	11	90
Stage Maximum, Percent:	12	10	12	10	12	10
Height, Unit:	0.5	IN	0.5	IN	0.5	IN
Height Minimum, Maximum:	0.5	1	0.5	1	0.5	1
Density, Unit:	1	M2	1	M2	1	M2

Application Equipment

	A	B	C
Appl. Equipment:	10 Foot Boom	10 Foot Boom	10 Foot Boom
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	46 PSI	46 PSI
Nozzle Type:	AI XR	AI XR	AI XR
Nozzle Size:	110015	110015	110015
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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Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	29	30	31
1	UNTREATED						33.1 d	26.1 a	149.7 d
2	ANTHEM ATZ	32 fl oz/a	32 fl oz/a		PRE	A	51.2 a	28.1 a	223.7 a
2	ROUNDUP POWERMAX	32 fl oz/a	32 fl oz/a		POST	C			
3	ANTHEM ATZ	48 fl oz/a	48 fl oz/a		PRE	A	48.4 a	29.5 a	207.8 abc
3	ROUNDUP POWERMAX	32 fl oz/a	32 fl oz/a		POST	C			
4	ANTHEM	8 fl oz/a	8 fl oz/a		PRE	A	51.8 a	28.9 a	225.0 a
4	HORNET	3 oz/a	3 oz/a		PRE	A			
4	ROUNDUP POWERMAX	32 fl oz/a	32 fl oz/a		POST	C			
5	ANTHEM ATZ	32 fl oz/a	32 fl oz/a		PRE	A	51.9 a	29.0 a	225.4 a
5	HORNET	3 oz/a	3 oz/a		PRE	A			
5	ROUNDUP POWERMAX	32 fl oz/a	32 fl oz/a		POST	C			
6	ANTHEM	8 fl oz/a	8 fl oz/a		PRE	A	49.2 a	28.6 a	213.4 ab
6	IMPACT HERBICIDE	0.75 oz/a	0.75 oz/a		POST	C			
6	AATREX	8 fl oz/a	8 fl oz/a		POST	C			
6	ROUNDUP POWERMAX	32 fl oz/a	32 fl oz/a		POST	C			
7	ANTHEM ATZ	32 fl oz/a	32 fl oz/a		PRE	A	47.2 ab	27.4 a	208.6 abc
7	IMPACT HERBICIDE	0.75 oz/a	0.75 oz/a		POST	C			
7	AATREX	8 fl oz/a	8 fl oz/a		POST	C			
7	ROUNDUP POWERMAX	32 fl oz/a	32 fl oz/a		POST	C			
8	ANTHEM ATZ	32 fl oz/a	32 fl oz/a		PRE	A	52.0 a	27.4 a	230.3 a
8	SHARPEN	2 fl oz/a	2 fl oz/a		PRE	A			
8	ROUNDUP POWERMAX	32 fl oz/a	32 fl oz/a		POST	C			
9	SURESTART	32 fl oz/a	32 fl oz/a		PRE	A	49.6 a	30.2 a	211.0 ab
9	ROUNDUP POWERMAX	32 fl oz/a	32 fl oz/a		POST	C			
10	ANTHEM ATZ	32 fl oz/a	32 fl oz/a		EPO	B	39.0 cd	24.6 a	179.4 cd
10	ROUNDUP POWERMAX	32 fl oz/a	32 fl oz/a		EPO	B			
11	ANTHEM ATZ	32 fl oz/a	32 fl oz/a		EPO	B	41.0 c	25.1 a	187.6 bc
11	HORNET	3 oz/a	3 oz/a		EPO	B			
11	ROUNDUP POWERMAX	32 fl oz/a	32 fl oz/a		EPO	B			
12	CADET	0.6 oz/a	0.6 oz/a		EPO	B	41.8 bc	26.8 a	187.1 bc
12	HORNET	3 oz/a	3 oz/a		EPO	B			
12	AATREX	48 fl oz/a	48 fl oz/a		EPO	B			
12	ROUNDUP POWERMAX	32 fl oz/a	32 fl oz/a		EPO	B			
LSD (P=.05)							6.10	4.98	30.15
Standard Deviation							4.23	3.45	20.88
CV							9.12	12.49	10.23