

The Ohio State University

Syngent Burndown Trial Corn

Trial ID: 16NTC2 Location: Western Branch F-10 E Trial Year: 2016
 Protocol ID: 16NTC2 Investigator: Dr. Mark M. Loux
 Project ID: EHLCor04 Study Director: Anthony Dobbels
 Sponsor Contact: Dain Bruns, Syngenta

General Trial Information

Study Director: Anthony Dobbels
Investigator: Dr. Mark M. Loux

Trial Location

City: South Charleston **Country:** USA United States
State/Prov.: Ohio
Postal Code: 45368 **Climate Zone:** USWARM US Warm Continental

Latitude of LL Corner °: 39.85865 N
Longitude of LL Corner °: 83.67056 W
Altitude of LL Corner, Unit: 1091.00 FT

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Anthony Dobbels

Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: ZEAMX Zea mays
Variety: SCS1066AMX
Description: Seed Consultants RR/LL 106 RM

BBCH Scale: BCOR

Planting Rate, Unit: 32097 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Soil Temperature, Unit: 52 F
Soil Moisture: NORMAL normal, adequate
Seed Bed: MEDIUM medium

Planting Date: 4-20-2016
Planting Method: SEEDED seeded
Planting Equipment: FPP Finger Pickup Planter

Pest Description

Pest 1 Type: W **Code:** ERICA Erigeron canadensis
Common Name: Canada horseweed

Pest 2 Type: W **Code:** LAMPU Lamium purpureum
Common Name: Purple deadnettel

Pest 3 Type: W **Code:** LAMAM Lamium amplexicaule
Common Name: Henbit

Pest 4 Type: W **Code:** ERYRE Erysimum repandum
Common Name: Bushy wallflower

Pest 5 Type: W **Code:** TAROF Taraxacum officinale
Common Name: Common dandelion

Pest 6 Type: W **Code:** VERAR Veronica arvensis
Common Name: Corn speedwell

Pest 7 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 30 FT
Treated Plot Area: 200.1 FT2 **Treatments:** 6
Replications: 3

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: NOTILL no-till
Study Design: RACOB L Randomized Complete Block (RCB)

No. Previous Crop Year
 1. 3 2015

Soil Description

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

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Application Description

A

Application Date: 4-14-2016
 Appl. Start Time: 9:45 AM
 Appl. Stop Time: 10:00 AM
 Application Method: SPRAY
 Application Timing: 14 EPP
 Application Placement: BROFOL
 Applied By: Ackley
 Air Temperature, Unit: 48 F
 % Relative Humidity: 53
 Wind Velocity, Unit: 7 MPH
 Wind Direction: NNE
 Dew Presence (Y/N): N no
 Soil Temperature, Unit: 40 F
 Soil Moisture: NORMAL
 % Cloud Cover: 3
 Next Moisture Occurred On: 4-21-2016
 Time to Next Moisture, Unit: 7 DAY

Crop Stage At Each Application

A

Crop 1 Code, BBCH Scale: ZEAMX BCOR

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Pest Stage At Each Application

A

Pest 1 Code, Type, Scale: ERICA W
Stage Majority, Percent: 19 100
Diameter, Unit: 2 IN
Height, Unit: 1 IN
Height Minimum, Maximum: 0.5 1
Density, Unit: 9.33 M2

Pest 2 Code, Type, Scale: LAMPU W
Stage Majority, Percent: 69 100
Diameter, Unit: 6 IN
Height, Unit: 4 IN
Height Minimum, Maximum: 4 6
Density, Unit: 12 M2

Pest 3 Code, Type, Scale: LAMAM W
Stage Majority, Percent: 69 100
Diameter, Unit: 6 IN
Height, Unit: 4 IN
Height Minimum, Maximum: 4 6
Density, Unit: 4 M2

Pest 4 Code, Type, Scale: ERYRE W
Stage Majority, Percent: 51 90
Stage Minimum, Percent: 50 10
Stage Maximum, Percent: 51 90
Diameter, Unit: 6 IN
Height, Unit: 10 IN
Height Minimum, Maximum: 8 12
Density, Unit: 15 M2

Pest 5 Code, Type, Scale: TAROF W
Stage Majority, Percent: 63 80
Stage Minimum, Percent: 60 20
Stage Maximum, Percent: 63 80
Diameter, Unit: 6 IN
Height, Unit: 1 IN
Height Minimum, Maximum: 0.5 1
Density, Unit: 0.33 M2

Pest 6 Code, Type, Scale: VERAR W
Stage Majority, Percent: 69 100
Diameter, Unit: 7 IN
Height, Unit: 1 IN
Height Minimum, Maximum: 0.5 1
Density, Unit: 0.66 M2

Pest 7 Code, Type, Scale: AMBTR W
Stage Majority, Percent: 10 90
Stage Minimum, Percent: 10 90
Stage Maximum, Percent: 11 10
Diameter, Unit: 2 IN
Height, Unit: 1 IN
Height Minimum, Maximum: 0.5 1
Density, Unit: 10 M2

Application Equipment

A

Appl. Equipment: 6 FOOT BOOM
Equipment Type: SPRBAC
Operation Pressure, Unit: 46 PSI
Nozzle Type: AI XR
Nozzle Size: 110015
Nozzle Spacing, Unit: 18 IN
Boom Length, Unit: 10 FT
Boom Height, Unit: 20 IN
Ground Speed, Unit: 3 MPH
Carrier: WATER
Spray Volume, Unit: 15 GPA
Mix Size, Unit: 1 Liters
Propellant: CO2

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	LAMPU	ERYRE	ERICA	VERAG	TAROF			
Pest Scientific Name	Lamium purple>	Erysimum repa>	Erigeron canad>	Veronica agres>	Taraxacum offi>			
Pest Name	Purple deadnet>	Bushy wallflow>	Canada horsewe>	Field speedwell	Common dandel->			
Rating Date	4-27-2016	4-27-2016	4-27-2016	4-27-2016	4-27-2016			
Number of Subsamples	1	1	1	1	1			
SE Group No.	1	2	3	4	5			
Days After First/Last Applic.	13 13	13 13	13 13	13 13	13 13			
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	13 DA-A	13 DA-A			
Plant-Eval Interval	7 DP-1	7 DP-1	7 DP-1	7 DP-1	7 DP-1			
Number of Decimals	0	0	0	0	0			
Trt Treatment	Other Rate	Other Rate	Appl Unit Code	1*	2*	3*	4*	5*
1 Untreated Check				0 d	0 c	0 d	0 c	0 d
2 Touchdown Total	24 oz/a	A		30 c	57 b	40 c	50 b	50 c
N PAK AMS	2.5 % v/v	A						
3 Acuron	3 qt/a	A		98 a	90 a	85 ab	98 a	61 bc
NIS	0.25 % v/v	A						
N PAK AMS	2.5 % v/v	A						
4 Acuron	3 qt/a	A		93 ab	85 a	100 a	98 a	78 a
Touchdown Total	24 oz/a	A						
N PAK AMS	2.5 % v/v	A						
5 Acuron	3 qt/a	A		98 a	85 a	93 ab	100 a	74 ab
Gramoxone SL	2.5 pt/a	A						
NIS	0.3 pt/a	A						
6 Corvus	5.6 oz/a	A		85 b	65 b	65 bc	83 a	51 c
Atrazine	1 qt/a	A						
NIS	0.25 % v/v	A						
LSD P=.05				11.0	16.7	32.3	18.6	7.2
Standard Deviation				6.1	9.2	17.8	10.2	2.0
CV				8.97	14.47	27.8	14.24	8.35
Bartlett's X2				5.559	4.557	1.881	8.653	0.0
P(Bartlett's X2)				0.135	0.336	0.597	0.034*	.
Skewness				-0.8455	-1.2615*	-0.7077	-1.0982*	-0.5958
Kurtosis				-1.0751	0.2873	-1.0875	-0.2689	-1.3638
Replicate F				1.818	0.705	0.335	0.280	0.500
Replicate Prob(F)				0.2121	0.5171	0.7234	0.7615	0.6667
Treatment F				144.614	40.423	13.824	45.888	450.120
Treatment Prob(F)				0.0001	0.0001	0.0003	0.0001	0.0022

Means followed by same letter or symbol do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Due to missing data, larger LSD values (col. 5: >=7.2 and <=14.3) are used for mean comparisons of treatment pairs with missing data.

* Adjusted means

Could not calculate LSD (% mean diff) for columns 6,7,9,10,11,13,15,16,17,20 because error mean square = 0.

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	LAMPU	ERYRE	ERICA	VERAG	TAROF			
Pest Scientific Name	Lamium purpure>	Erysimum repa>	Erigeron canad>	Veronica agres>	Taraxacum offi>			
Pest Name	Purple deadnet>	Bushy wallflow>	Canada horsewe>	Field speedwell	Common dandeli>			
Rating Date	5-12-2016	5-12-2016	5-12-2016	5-12-2016	5-12-2016			
Number of Subsamples	1	1	1	1	1			
SE Group No.	6	6	6	6	6			
Days After First/Last Applic.	28 28	28 28	28 28	28 28	28 28			
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A			
Plant-Eval Interval	22 DP-1	22 DP-1	22 DP-1	22 DP-1	22 DP-1			
Number of Decimals	0	0	0	0	0			
Trt Treatment	Other Rate	Other Rate	Appl Unit Code	6*	7*	8*	9*	10*
1 Untreated Check				0 c	0 b	0 c	0 b	0 b
2 Touchdown Total	24 oz/a	A		80 b	100 a	75 b	100 a	100 a
N PAK AMS	2.5 % v/v	A						
3 Acuron	3 qt/a	A		100 a	100 a	100 a	100 a	100 a
NIS	0.25 % v/v	A						
N PAK AMS	2.5 % v/v	A						
4 Acuron	3 qt/a	A		100 a	100 a	100 a	100 a	100 a
Touchdown Total	24 oz/a	A						
N PAK AMS	2.5 % v/v	A						
5 Acuron	3 qt/a	A		100 a	100 a	100 a	100 a	100 a
Gramoxone SL	2.5 pt/a	A						
NIS	0.3 pt/a	A						
6 Corvus	5.6 oz/a	A		100 a	100 a	90 a	100 a	100 a
Atrazine	1 qt/a	A						
NIS	0.25 % v/v	A						
LSD P=.05				.	.	12.8	.	.
Standard Deviation				0.0	0.0	7.0	0.0	0.0
CV				0.0	0.0	9.05	0.0	0.0
Bartlett's X2				0.0	0.0	2.417	0.0	0.0
P(Bartlett's X2)				.	.	0.12	.	.
Skewness				-1.7965*	-1.9558*	-1.6158*	-1.9558*	-1.9558*
Kurtosis				1.6363	2.04	1.1719	2.04	2.04
Replicate F				0.000	0.000	1.610	0.000	0.000
Replicate Prob(F)				1.0000	1.0000	0.2476	1.0000	1.0000
Treatment F				0.000	0.000	93.814	0.000	0.000
Treatment Prob(F)				1.0000	1.0000	0.0001	1.0000	1.0000

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	SENGL	LAMPU	ERYRE	ERICA	VERAG			
Pest Scientific Name	Senecio glabel>	Lamium purple>	Erysimum repa>	Erigeron canad>	Veronica agres>			
Pest Name	Cressleaf grou>	Purple deadnet>	Bushy wallflow>	Canada horsewe>	Field speedwell			
Rating Date	5-12-2016	5-26-2016	5-26-2016	5-26-2016	5-26-2016			
Number of Subsamples	1	1	1	1	1			
SE Group No.	6	7	7	7	7			
Days After First/Last Applic.	28 28	42 42	42 42	42 42	42 42			
Trt-Eval Interval	28 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A			
Plant-Eval Interval	22 DP-1	36 DP-1	36 DP-1	36 DP-1	36 DP-1			
Number of Decimals	0	0	0	0	0			
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	11*	12*	13*	14*	15*
1 Untreated Check				0 b	0 b	0 b	0 c	0 b
2 Touchdown Total	24 oz/a		A	100 a	93 a	100 a	57 b	100 a
N PAK AMS	2.5 % v/v		A					
3 Acuron	3 qt/a		A	100 a	100 a	100 a	100 a	100 a
NIS	0.25 % v/v		A					
N PAK AMS	2.5 % v/v		A					
4 Acuron	3 qt/a		A	100 a	100 a	100 a	100 a	100 a
Touchdown Total	24 oz/a		A					
N PAK AMS	2.5 % v/v		A					
5 Acuron	3 qt/a		A	100 a	100 a	100 a	100 a	100 a
Gramoxone SL	2.5 pt/a		A					
NIS	0.3 pt/a		A					
6 Corvus	5.6 oz/a		A	100 a	100 a	100 a	83 a	100 a
Atrazine	1 qt/a		A					
NIS	0.25 % v/v		A					
LSD P=.05					8.6		22.3	
Standard Deviation				0.0	4.7	0.0	12.2	0.0
CV				0.0	5.73	0.0	16.7	0.0
Bartlett's X2				0.0	0.0	0.0	1.427	0.0
P(Bartlett's X2)							0.232	
Skewness				-1.9558*	-1.8973*	-1.9558*	-1.1468*	-1.9558*
Kurtosis				2.04	1.8825	2.04	-0.1669	2.04
Replicate F				0.000	1.000	0.000	1.444	0.000
Replicate Prob(F)				1.0000	0.4019	1.0000	0.2811	1.0000
Treatment F				0.000	220.000	0.000	31.556	0.000
Treatment Prob(F)				1.0000	0.0001	1.0000	0.0001	1.0000

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Pest Type	W Weed	W Weed	W Weed	W Weed					
Pest Code	TAROF	SENGL	SETFA	AMBTR					
Pest Scientific Name	Taraxacum offi>	Senecio glabel>	Setaria faberi	Ambrosia trifi>					
Pest Name	Common dandel>	Cressleaf grou>	Giant foxtail	Giant ragweed					
Rating Date	5-26-2016	5-26-2016	5-26-2016	5-26-2016					
Number of Subsamples	1	1	1	1 1					
SE Group No.	7	7	8	9 18					
Days After First/Last Applic.	42 42	42 42	42 42	42 42					
Trt-Eval Interval	42 DA-A	42 DA-A	42 DA-A	42 DA-A					
Plant-Eval Interval	36 DP-1	36 DP-1	36 DP-1	36 DP-1					
Number of Decimals	0	0	0	0					
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	16*	17*	18*	19*	20
1	Untreated Check				0 b	0 b	0 c	0 d	
2	Touchdown Total	24 oz/a	A		100 a	100 a	23 b	27 c	
	N PAK AMS	2.5 % v/v	A						
3	Acuron	3 qt/a	A		100 a	100 a	78 a	77 b	
	NIS	0.25 % v/v	A						
	N PAK AMS	2.5 % v/v	A						
4	Acuron	3 qt/a	A		100 a	100 a	82 a	92 a	
	Touchdown Total	24 oz/a	A						
	N PAK AMS	2.5 % v/v	A						
5	Acuron	3 qt/a	A		100 a	100 a	80 a	77 b	
	Gramoxone SL	2.5 pt/a	A						
	NIS	0.3 pt/a	A						
6	Corvus	5.6 oz/a	A		100 a	100 a	83 a	73 b	
	Atrazine	1 qt/a	A						
	NIS	0.25 % v/v	A						
	LSD P=.05				.	.	11.2	11.1	.
	Standard Deviation				0.0	0.0	6.2	6.1	.
	CV				0.0	0.0	10.68	10.65	.
	Bartlett's X2				0.0	0.0	3.394	4.036	.
	P(Bartlett's X2)				.	.	0.494	0.401	.
	Skewness				-1.9558*	-1.9558*	-0.8076	-0.7798	.
	Kurtosis				2.04	2.04	-1.1402	-0.9326	.
	Replicate F				0.000	0.000	3.759	0.095	
	Replicate Prob(F)				1.0000	1.0000	0.0606	0.9105	
	Treatment F				0.000	0.000	105.080	102.769	
	Treatment Prob(F)				1.0000	1.0000	0.0001	0.0001	

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Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

LAMPU, Lamium purpureum, = US
ERYRE, Erysimum repandum, = US
ERICA, Erigeron canadensis, = US
VERAG, Veronica agrestis, = US
TAROF, Taraxacum officinale, = US
SENGL, Senecio glabellus, = US
SETFA, Setaria faberi, = US
AMBTR, Ambrosia trifida, = US

Plant-Eval Interval

7 DP-1 = 1 ZEAMX 4-20-2016
22 DP-1 = 1 ZEAMX 4-20-2016
36 DP-1 = 1 ZEAMX 4-20-2016