

The Ohio State University

AG13063 Comparison and Performance with Rounup PowerMax and Sterling Blue

Trial ID: 16WINCORN Location: Western Branch E-1 Trial Year: 2016
 Protocol ID: 16WINCORN Investigator: Dr. Mark M. Loux
 Project ID: Study Director: Anthony Dobbels
 Sponsor Contact: John Smith, Winfield

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 °: 39.85931 N
Longitude of LL Corner °: 83.66843 W
Altitude of LL Corner, Unit: 1087.00 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 Corn
Variety: DKC61-54RIB
Description: Dekalb Brand 111 day RM

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

Planting Date: 4-20-2016
Planting Method: SEEDED seeded
Planting Equipment: FPP Finger Pickup Planter
Emergence Date: 5-1-2016

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

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 10
Replications: 3
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOBL Randomized Complete Block (RCB)

No. Previous Crop Year
 1. Soybean 2015

Soil Description

Description Name: E-1
% OM: 3.5 **Texture:** SICL silty clay loam
pH: 6.6 **Soil Name:** Kokomo
CEC: 22 **Fert. Level:** G good
Soil Drainage: G good

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Application Description

A
 Application Date: 5-27-2016
 Appl. Start Time: 10:00 AM
 Appl. Stop Time: 10:15 AM
 Application Method: SPRAY
 Application Timing: POST
 Application Placement: BROFOL
 Applied By: Dobbels
 Air Temperature, Unit: 85 F
 % Relative Humidity: 50
 Wind Velocity, Unit: 8 MPH
 Wind Direction: S
 Dew Presence (Y/N): N no
 Soil Temperature, Unit: 67 F
 Soil Moisture: NORMAL
 % Cloud Cover: 1
 Next Moisture Occurred On: 5-29-2016
 Time to Next Moisture, Unit: 2 day

Crop Stage At Each Application

A
 Crop 1 Code, BBCH Scale: ZEAMX BCOR
 Stage Scale Used: BBCH
 Stage Majority, Percent: V4 100
 Height, Unit: 8 IN
 Height Minimum, Maximum: 8 10

Pest Stage At Each Application

A
 Pest 1 Code, Type, Scale: SETFA W
 Stage Majority, Percent: 16 100
 Height, Unit: 5 IN
 Height Minimum, Maximum: 4 6
 Density, Unit: 1307.4 m2
 Pest 2 Code, Type, Scale: AMBTR W
 Stage Majority, Percent: 16 100
 Height, Unit: 6 IN
 Height Minimum, Maximum: 4 8
 Density, Unit: 12 m2
 Pest 3 Code, Type, Scale: CHEAL W
 Stage Majority, Percent: 16 100
 Height, Unit: 3 IN
 Height Minimum, Maximum: 2 4
 Density, Unit: 55.86 m2
 Pest 4 Code, Type, Scale: AMARE W
 Stage Majority, Percent: 12 100
 Height, Unit: 3 IN
 Height Minimum, Maximum: 2 4
 Density, Unit: 5.3 m2
 Pest 5 Code, Type, Scale: ABUTH W
 Stage Majority, Percent: 12 100
 Height, Unit: 2 IN
 Height Minimum, Maximum: 1 3
 Density, Unit: 21.3 m2

Application Equipment

A
 Appl. Equipment: 6 Foot TTI
 Equipment Type: SPRBAC
 Operation Pressure, Unit: 46 PSI
 Nozzle Type: TTI
 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	SETFA		AMBTR		ABUTH		CHEAL		SETFA	
Pest Name	Giant foxtail		Giant ragweed		velvetleaf		Common lambsqu>		Giant foxtail	
Crop Code	ZEAMX				ZEAMX					
Crop Name	Corn				Corn					
Rating Date	6-10-2016	6-10-2016	6-10-2016	6-10-2016	6-10-2016	6-24-2016	6-24-2016	6-24-2016	6-24-2016	
Rating Type	PHYGEN		CONTRO		CONTRO		CONTRO		CONTRO	
Rating Unit	%		%		%		%		%	
Number of Subsamples	1		1		1		1		1	
Days After First/Last Applic.	14	14	14	14	14	14	14	28	28	28
Trt-Eval Interval	14 DA-A		14 DA-A		14 DA-A		14 DA-A		28 DA-A	
Number of Decimals	0		0		0		0		0	
Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	1*	2*	3*	4*	5*	6*	7*
1 Roundup PowerMax	22 oz/a		A	0 -	100 a	87 bc	93 a	100 a	0 -	100 a
Sterling Blue	16 oz/a		A							
2 Roundup PowerMax	11 oz/a		A	0 -	100 a	94 ab	92 ab	100 a	0 -	100 a
Sterling Blue	8 oz/a		A							
3 Roundup PowerMax	11 oz/a		A	0 -	100 a	86 c	97 a	97 a	0 -	100 a
Sterling Blue	8 oz/a		A							
N PAK AMS	2.5 % v/v		A							
4 Roundup PowerMax	11 oz/a		A	0 -	100 a	94 ab	89 ab	100 a	0 -	100 a
Sterling Blue	8 oz/a		A							
Class Act Flex	1 % v/v		A							
5 Roundup PowerMax	11 oz/a		A	0 -	100 a	99 a	90 ab	95 a	0 -	100 a
Sterling Blue	8 oz/a		A							
AG13063	0.5 % v/v		A							
6 Roundup PowerMax	11 oz/a		A	0 -	100 a	87 bc	87 ab	100 a	0 -	100 a
Sterling Blue	8 oz/a		A							
AG13063	0.75 % v/v		A							
7 Roundup PowerMax	11 oz/a		A	0 -	100 a	95 ab	88 ab	100 a	0 -	100 a
Sterling Blue	8 oz/a		A							
AG13063	1 % v/v		A							
8 Roundup PowerMax	11 oz/a		A	0 -	100 a	90 bc	88 ab	99 a	0 -	100 a
Sterling Blue	8 oz/a		A							
AG13063	1.25 % v/v		A							
9 Roundup PowerMax	11 oz/a		A	0 -	100 a	94 ab	82 b	95 a	0 -	100 a
Sterling Blue	8 oz/a		A							
AG13063	1.5 % v/v		A							
10 Untreated				0 -	0 b	0 d	0 c	0 b	0 -	0 b
LSD P=.05				.	.	8.0	11.6	6.5	.	.
Standard Deviation				0.0	0.0	4.7	6.7	3.8	0.0	0.0
CV				0.0	0.0	5.68	8.71	4.25	0.0	0.0
Bartlett's X2				0.0	0.0	13.405	3.778	7.202	0.0	0.0
P(Bartlett's X2)				.	.	0.099	0.877	0.066	.	.
Skewness				.	-2.8091*	-2.6167*	-2.4381*	-2.7244*	.	-2.8091*
Kurtosis				.	6.3081*	5.6422*	4.9129*	5.9796*	.	6.3081*
Replicate F				0.000	0.000	0.056	2.298	3.013	0.000	0.000
Replicate Prob(F)				1.0000	1.0000	0.9457	0.1308	0.0744	1.0000	1.0000
Treatment F				0.000	0.000	117.276	53.403	206.281	0.000	0.000
Treatment Prob(F)				1.0000	1.0000	0.0001	0.0001	0.0001	1.0000	1.0000

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. 4: >=11.6 and <=13.1) are used for mean comparisons of treatment pairs with missing data.
 * Adjusted means
 Could not calculate LSD (% mean diff) for columns 1,2,6,7 because error mean square = 0.

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Pest Type	W Weed	W Weed	W Weed
Pest Code	AMBTR	CHEAL	ABUTH
Pest Name	Giant ragweed	Common lambsqu	velvetleaf
Crop Code			
Crop Name			
Rating Date	7-8-2016	7-8-2016	7-8-2016
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	42 42	42 42	42 42
Trt-Eval Interval	42 DA-A	42 DA-A	42 DA-A
Number of Decimals	0	0	0
Trt Treatment	Other Other	Appl	
No. Name	Rate Rate	Unit Code	14* 15* 16*
1 Roundup PowerMax	22 oz/a	A	87 ab
Sterling Blue	16 oz/a	A	94 a
2 Roundup PowerMax	11 oz/a	A	85 b
Sterling Blue	8 oz/a	A	94 a
3 Roundup PowerMax	11 oz/a	A	88 ab
Sterling Blue	8 oz/a	A	83 b
N PAK AMS	2.5 % v/v	A	76 ab
4 Roundup PowerMax	11 oz/a	A	83 b
Sterling Blue	8 oz/a	A	93 ab
Class Act Flex	1 % v/v	A	73 ab
5 Roundup PowerMax	11 oz/a	A	96 a
Sterling Blue	8 oz/a	A	93 ab
AG13063	0.5 % v/v	A	82 ab
6 Roundup PowerMax	11 oz/a	A	82 b
Sterling Blue	8 oz/a	A	93 ab
AG13063	0.75 % v/v	A	80 ab
7 Roundup PowerMax	11 oz/a	A	83 b
Sterling Blue	8 oz/a	A	90 ab
AG13063	1 % v/v	A	73 ab
8 Roundup PowerMax	11 oz/a	A	85 b
Sterling Blue	8 oz/a	A	95 a
AG13063	1.25 % v/v	A	77 ab
9 Roundup PowerMax	11 oz/a	A	83 b
Sterling Blue	8 oz/a	A	96 a
AG13063	1.5 % v/v	A	88 a
10 Untreated			0 c
LSD P=.05			11.4 10.3 16.3
Standard Deviation			6.7 6.0 9.5
CV			8.62 7.22 14.24
Bartlett's X2			14.909 4.839 8.157
P(Bartlett's X2)			0.061 0.775 0.418
Skewness			-2.4508* -2.561* -1.8735*
Kurtosis			5.1129* 5.4241* 3.2003*
Replicate F			2.298 2.649 5.510
Replicate Prob(F)			0.1292 0.0981 0.0143
Treatment F			50.938 72.109 20.678
Treatment Prob(F)			0.0001 0.0001 0.0001

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Pest Type

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

Pest Code

SETFA, Setaria faberi, = US
AMBTR, Ambrosia trifida, = US
ABUTH, Abutilon theophrasti, = US
CHEAL, Chenopodium album, = US
ECHCG, Echinochloa crus-galli, = US

Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

PHYGEN = phytotoxicity - general / injury
CONTRO = control / burndown or knockdown

Rating Unit

% = percent