

The Ohio State University

AMS alternatives with Touchdown Hi-tech + Dicamba for weed control

Trial ID: 13 BAREWIN Location: Western Branch Trial Year:
 Protocol ID: 13 BAREWIN Investigator: Dr. Mark M. Loux
 Project ID: 13 BAREWIN Study Director: Bryan Reeb
 Sponsor Contact: John Smith, Winfield Solutions

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:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters
- Pest 5 Type:** W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf
- Pest 6 Type:** W **Code:** IPOHE *Ipomoea hederacea*
Common Name: Ivyleaf morningglory

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 30 FT
Treated Plot Area: 200.1 FT² **Treatments:** 10
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: E-1
% OM: 3.6 **Texture:** SICL silty clay loam
pH: 6.8 **Soil Name:** Kokomo
CEC: 24.6 **Fert. Level:** G good
Soil Drainage: G good

Application Description

Application Date: Jun-20-2013
Appl. Start Time: 8:45 AM
Application Method: SPRAY
Application Placement: BROFOL
Applied By: REEB
Air Temperature, Unit: 71 F
% Relative Humidity: 65
Wind Velocity, Unit: 3 MPH
Wind Direction: ESE
Dew Presence (Y/N): N no
Soil Temperature, Unit: 64 F
Soil Moisture: MOIST
% Cloud Cover: 30
Next Moisture Occurred On: Jun-26-2013

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Pest Stage At Each Application

A

Pest 1 Code, Type, Scale: SETFA W
Stage Majority, Percent: 14 100
Height, Unit: 7 IN
Height Minimum, Maximum: 7 9
Density, Unit: 232 M2

Pest 2 Code, Type, Scale: AMBTR W
Stage Majority, Percent: 19 100
Height, Unit: 6 IN
Height Minimum, Maximum: 6 10
Density, Unit: 4 M2

Pest 3 Code, Type, Scale: AMARE W
Stage Majority, Percent: 19 75
Stage Minimum, Percent: 14 25
Stage Maximum, Percent: 19 75
Height, Unit: 1 IN
Height Minimum, Maximum: 1 5
Density, Unit: 96 M2

Pest 4 Code, Type, Scale: CHEAL W
Stage Majority, Percent: 19 100
Height, Unit: 5 IN
Height Minimum, Maximum: 5 5
Density, Unit: 16 M2

Pest 5 Code, Type, Scale: ABUTH W
Density, Unit: 2 M2

Pest 6 Code, Type, Scale: IPOHE W
Stage Majority, Percent: 14 100
Height, Unit: 3 IN
Height Minimum, Maximum: 3 3
Density, Unit: 4 M2

Application Equipment

A

Appl. Equipment: Backpack
Equipment Type: SPRBAC
Operation Pressure, Unit: 44 PSI
Nozzle Type: XR
Nozzle Size: 8001
Nozzle Spacing, Unit: 18 IN
Boom Length, Unit: 6 FT
Boom Height, Unit: 18 IN
Ground Speed, Unit: 3 MPH
Carrier: WATER
Spray Volume, Unit: 10 gal/ac
Mix Size, Unit: 1 Liters
Propellant: COMCO2

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Description	BAREGROUND BAREGROUND BAREGROUND BAREGROUND BAREGROUND BAREGROUND							
	Jul-1-2013	Jul-1-2013	Jul-1-2013	Jul-1-2013	Jul-18-2013	Jul-18-2013		
Rating Date	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Type	%	%	%	%	%	%		
Rating Unit	11 11	11 11	11 11	11 11	28 28	28 28		
Days After First/Last Applic.	11 DA-A	11 DA-A	11 DA-A	11 DA-A	28 DA-A	28 DA-A		
Trt-Eval Interval	SETFA	AMBTR	CHEAL	AMARE	SETFA	AMBTR		
Pest Code								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
1 Touchdown Hi-Tech	0.273 lb ae/a	A	55.0	73.8	60.0	55.0	50.0	100.0
1 Sterling Blue	0.125 lb ai/a	A						
2 Touchdown Hi-Tech	0.273 lb ae/a	A	66.3	71.3	67.5	70.0	60.0	83.8
2 Sterling Blue	0.125 lb ai/a	A						
2 N-pak ams	2.5 % v/v	A						
3 Touchdown Hi-Tech	0.273 lb ae/a	A	90.0	72.5	95.0	83.8	66.3	86.3
3 Sterling Blue	0.125 lb ai/a	A						
3 Class Act NG	2.5 % v/v	A						
4 Touchdown Hi-Tech	0.273 lb ae/a	A	87.5	75.0	93.8	78.8	68.8	96.3
4 Sterling Blue	0.125 lb ai/a	A						
4 Class Act NG	1.25 % v/v	A						
5 Touchdown Hi-Tech	0.273 lb ae/a	A	88.8	73.8	88.8	76.3	66.3	93.8
5 Sterling Blue	0.125 lb ai/a	A						
5 AG 08034	2 % v/v	A						
6 Touchdown Hi-Tech	0.273 lb ae/a	A	81.3	70.0	87.5	66.3	66.3	97.5
6 Sterling Blue	0.125 lb ai/a	A						
6 AG 08034	1 % v/v	A						
7 Touchdown Hi-Tech	0.273 lb ae/a	A	67.5	72.5	71.3	68.8	61.3	97.5
7 Sterling Blue	0.125 lb ai/a	A						
7 AG 07043	1 % v/v	A						
8 Touchdown Hi-Tech	0.273 lb ae/a	A	86.3	70.0	90.0	72.5	65.0	96.3
8 Sterling Blue	0.125 lb ai/a	A						
8 AG 11011	1 % v/v	A						
9 Touchdown Hi-Tech	0.273 lb ae/a	A	87.5	70.0	86.3	75.0	62.5	95.0
9 Sterling Blue	0.125 lb ai/a	A						
9 AG 11011	1.25 % v/v	A						
10 UTC			0.0	0.0	0.0	0.0	0.0	0.0
LSD (P=.05)			9.45	7.80	9.59	8.25	10.58	13.56
Standard Deviation			6.51	5.33	6.61	5.68	7.30	9.34
CV			9.17	8.22	8.93	8.79	12.88	11.04
Bartlett's X2			5.83	7.992	6.906	4.276	2.227	9.662
P(Bartlett's X2)			0.666	0.092	0.439	0.831	0.946	0.209
Skewness			-1.7885*	-2.3681*	-1.7719*	-2.054*	-1.9541*	-2.3211*
Kurtosis			2.5047*	4.3539*	2.4511*	3.5798*	3.2508*	4.2039*
Replicate F			0.825	0.608	6.064	2.032	3.018	1.668
Replicate Prob(F)			0.4914	0.6167	0.0027	0.1330	0.0471	0.1973
Treatment F			72.210	73.491	74.835	71.400	31.841	41.719
Treatment Prob(F)			0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Missing data estimates are included in columns: Average=2

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Description	BAREGROUND BAREGROUND	
	Jul-18-2013	Jul-18-2013
Rating Date		
Rating Type	CONTRO	CONTRO
Rating Unit	%	%
Days After First/Last Applic.	28 28	28 28
Trt-Eval Interval	28 DA-A	28 DA-A
Pest Code	CHEAL	AMARE

Trt No.	Treatment Name	Rate	Unit	Appl Code	7	8
1	Touchdown Hi-Tech	0.273 lb	ae/a	A	65.0	66.3
1	Sterling Blue	0.125 lb	ai/a	A		
2	Touchdown Hi-Tech	0.273 lb	ae/a	A	65.0	63.8
2	Sterling Blue	0.125 lb	ai/a	A		
2	N-pak ams	2.5 %	v/v	A		
3	Touchdown Hi-Tech	0.273 lb	ae/a	A	100.0	63.8
3	Sterling Blue	0.125 lb	ai/a	A		
3	Class Act NG	2.5 %	v/v	A		
4	Touchdown Hi-Tech	0.273 lb	ae/a	A	100.0	65.0
4	Sterling Blue	0.125 lb	ai/a	A		
4	Class Act NG	1.25 %	v/v	A		
5	Touchdown Hi-Tech	0.273 lb	ae/a	A	98.8	60.0
5	Sterling Blue	0.125 lb	ai/a	A		
5	AG 08034	2 %	v/v	A		
6	Touchdown Hi-Tech	0.273 lb	ae/a	A	97.5	60.0
6	Sterling Blue	0.125 lb	ai/a	A		
6	AG 08034	1 %	v/v	A		
7	Touchdown Hi-Tech	0.273 lb	ae/a	A	87.5	63.8
7	Sterling Blue	0.125 lb	ai/a	A		
7	AG 07043	1 %	v/v	A		
8	Touchdown Hi-Tech	0.273 lb	ae/a	A	100.0	67.5
8	Sterling Blue	0.125 lb	ai/a	A		
8	AG 11011	1 %	v/v	A		
9	Touchdown Hi-Tech	0.273 lb	ae/a	A	100.0	65.0
9	Sterling Blue	0.125 lb	ai/a	A		
9	AG 11011	1.25 %	v/v	A		
10	UTC				0.0	0.0
LSD (P=.05)					7.37	14.97
Standard Deviation					5.08	10.32
CV					6.24	17.95
Bartlett's X2					7.887	4.091
P(Bartlett's X2)					0.096	0.849
Skewness					-1.861*	-1.6577*
Kurtosis					2.5815*	2.4267*
Replicate F					1.574	4.617
Replicate Prob(F)					0.2186	0.0098
Treatment F					157.477	15.548
Treatment Prob(F)					0.0001	0.0001

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Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Pest Code

SETFA, *Setaria faberi*, = US

AMBTR, *Ambrosia trifida*, = US

CHEAL, *Chenopodium album*, = US

AMARE, *Amaranthus retroflexus*, = US