

# The Ohio State University

## Syngenta Residual Pigweed Control

Trial ID: SYN BG                      Location: Western Branch G-8   Trial Year: 2014  
 Protocol ID: 14SYN BG              Investigator: Dr. Mark M. Loux  
 Project ID:                              Study Director: Anthony Dobbels  
    Sponsor Contact: Dain Bruns, Syngenta

### Pest Description

- Pest 1 Type:** W   **Code:** SETFA   *Setaria faberi*  
**Common Name:** Giant foxtail
- Pest 2 Type:** W   **Code:** AMARE   *Amaranthus retroflexus*  
**Common Name:** Redroot pigweed
- Pest 3 Type:** W   **Code:** AMBTR   *Ambrosia trifida*  
**Common Name:** Giant ragweed
- 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
- Pest 7 Type:** W   **Code:** XANST   *Xanthium strumarium*  
**Common Name:** Heart-leaf cocklebur
- Pest 8 Type:** W   **Code:** ECHCG   *Echinochloa crus-galli*  
**Common Name:** Common barnyardgrass

### Site and Design

**Treated Plot Width:** 6.67 FT                      **Site Type:** FIELD   field  
**Treated Plot Length:** 30 FT                      **Experimental Unit:** 1   PLOT   plot  
**Treated Plot Area:** 200.1 FT<sup>2</sup>   **Treatments:** 12                      **Tillage Type:** CONTIL   conventional-till  
**Replications:** 3                                      **Study Design:** RACOB   Randomized Complete Block (RCB)

**No. Previous Crop Year**  
 1.   Corn                      2013

### Soil Description

**Description Name:** G-8 East  
    **% OM:** 1.7                      **Texture:** SIC silty clay  
    **pH:** 7                              **Soil Name:** Crosby  
    **CEC:** 15                              **Fert. Level:** M  
    **Soil Drainage:** F fair

### Application Description

	A	B	C
<b>Application Date:</b>	May-28-2014	Jun-26-2014	Jul-7-2014
<b>Appl. Start Time:</b>	11:00 AM	9:00 AM	8:45 AM
<b>Appl. Stop Time:</b>	11:30 AM	9:20 AM	9:00 AM
<b>Application Method:</b>	SPRAY	SPRAY	SPRAY
<b>Application Timing:</b>	PRE	POST	LPO
<b>Application Placement:</b>	BROSOIL	BROFOL	BROFOL
<b>Applied By:</b>	Ackley	Ackley	REEB
<b>Air Temperature, Unit:</b>	84.8 F	76 F	69 F
<b>% Relative Humidity:</b>	60	77	83.5
<b>Wind Velocity, Unit:</b>	3 MPH	2 MPH	2 MPH
<b>Wind Direction:</b>	SSW	NNW	SSW
<b>Dew Presence (Y/N):</b>	N no	Y yes	N no
<b>Soil Temperature, Unit:</b>	70 F	69 F	70 F
<b>Soil Moisture:</b>	DRY	WET	DRY
<b>% Cloud Cover:</b>	10	30	25
<b>Next Moisture Occurred On:</b>	Jun-2-2014	Jun-28-2014	Jul-7-2014
<b>Time to Next Moisture, Unit:</b>	5 DAY	2 DAY	8 HR

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## Pest Stage At Each Application

	A	B	C
<b>Pest 1 Code, Type, Scale:</b>	SETFA W	SETFA W	SETFA W
<b>Stage Majority, Percent:</b>		13 100	
<b>Height, Unit:</b>		9 IN	
<b>Height Minimum, Maximum:</b>		8 12	
<b>Density, Unit:</b>		215 M2	
<b>Pest 2 Code, Type, Scale:</b>	AMARE W	AMARE W	AMARE W
<b>Stage Majority, Percent:</b>		14 90	
<b>Stage Minimum, Percent:</b>		14 90	
<b>Stage Maximum, Percent:</b>		16 10	
<b>Height, Unit:</b>		3 IN	
<b>Height Minimum, Maximum:</b>		2 4	
<b>Density, Unit:</b>		16 M2	
<b>Pest 3 Code, Type, Scale:</b>	AMBTR W	AMBTR W	AMBTR W
<b>Stage Majority, Percent:</b>		14 100	14 100
<b>Height, Unit:</b>		4 IN	3 IN
<b>Height Minimum, Maximum:</b>		3 4	3 5
<b>Density, Unit:</b>		8 M2	3 M2
<b>Pest 4 Code, Type, Scale:</b>	CHEAL W	CHEAL W	CHEAL W
<b>Stage Majority, Percent:</b>		18 100	
<b>Height, Unit:</b>		3 IN	
<b>Height Minimum, Maximum:</b>		2 4	
<b>Density, Unit:</b>		3 M2	
<b>Pest 5 Code, Type, Scale:</b>	ABUTH W	ABUTH W	ABUTH W
<b>Stage Majority, Percent:</b>		14 100	
<b>Height, Unit:</b>		4 IN	
<b>Height Minimum, Maximum:</b>		4 6	
<b>Density, Unit:</b>		0.33 M2	
<b>Pest 6 Code, Type, Scale:</b>	IPOHE W	IPOHE W	IPOHE W
<b>Stage Majority, Percent:</b>		12 90	13 100
<b>Stage Minimum, Percent:</b>		12 90	
<b>Stage Maximum, Percent:</b>		14 10	
<b>Height, Unit:</b>		4 IN	1 IN
<b>Height Minimum, Maximum:</b>		3 4	1 1.5
<b>Density, Unit:</b>		3 M2	3 M2
<b>Pest 7 Code, Type, Scale:</b>	XANST W	XANST W	XANST W
<b>Stage Majority, Percent:</b>		14 80	13 100
<b>Stage Minimum, Percent:</b>		14 80	
<b>Stage Maximum, Percent:</b>		16 20	
<b>Height, Unit:</b>		6 IN	2 IN
<b>Height Minimum, Maximum:</b>		4 6	2 2.5
<b>Density, Unit:</b>		0.25 M2	0.25 M2
<b>Pest 8 Code, Type, Scale:</b>	ECHCG W	ECHCG W	ECHCG W
<b>Stage Majority, Percent:</b>			14 100
<b>Height, Unit:</b>			4 IN
<b>Height Minimum, Maximum:</b>			3 4
<b>Density, Unit:</b>			1 M2

## Application Equipment

	A	B	C
<b>Appl. Equipment:</b>	6 FOOT BOOM	6 FOOT BOOM	6 FOOT BOOM
<b>Equipment Type:</b>	SPRBAC	SPRBAC	SPRBAC
<b>Operation Pressure, Unit:</b>	46 PSI	46 PSI	46 PSI
<b>Nozzle Type:</b>	AI XR	AI XR	AI XR
<b>Nozzle Size:</b>	110015	110015	110015
<b>Nozzle Spacing, Unit:</b>	18 IN	18 IN	18 IN
<b>Boom Length, Unit:</b>	6.67 FT	6.67 FT	6.67 FT
<b>Boom Height, Unit:</b>	20 IN	20 IN	20 IN
<b>Ground Speed, Unit:</b>	3 MPH	3 MPH	3 MPH
<b>Carrier:</b>	WATER	WATER	WATER
<b>Spray Volume, Unit:</b>	15 GPA	15 GPA	15 GPA
<b>Mix Size, Unit:</b>	1 Liters	1 Liters	1 Liters
<b>Propellant:</b>	CO2	CO2	CO2

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## Syngenta Residual Pigweed Control

Trial ID: SYNBG                      Location: Western Branch G-8   Trial Year: 2014  
 Protocol ID: 14SYNBG              Investigator: Dr. Mark M. Loux  
 Project ID:                              Study Director: Anthony Dobbels  
    Sponsor Contact: Dain Bruns, Syngenta

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	AMARE	ABUTH	IPOHE
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Amaranthus retrofractus	Abutilon theophrasti	Ipomoea hederifolia
Pest Name	Giant foxtail	Giant ragweed	Redroot pigweed	velvetleaf	ivyleaf morning glory
Rating Date	Jun-10-2014	Jun-10-2014	Jun-10-2014	Jun-10-2014	Jun-10-2014
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
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
ARM Action Codes			AA		
Number of Decimals	0	0	0	0	0

Trt Treatment No. Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	1	2	3	4	5
1 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	50	63	95	43	40
1 Boundary	1.42 lb ai/a	1.75 pt/a			A					
1 Flexstar GT	1.85 lb ai/a	5.2 pt/a			B					
1 MSO	1 % v/v	19.2 oz/a			B					
1 N PAK AMS	2.5 % v/v	48 oz/a			B					
2 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	57	80	100	67	30
2 Boundary	1.42 lb ai/a	1.75 pt/a			A					
2 Prefix	1.65 lb ai/a	2.5 pt/a			B					
2 Touchdown Total	1.14 lb ae/a	35 oz/a			B					
2 N PAK AMS	2.5 % v/v	48 oz/a			B					
3 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	20	30	100	43	25
3 Boundary	1.42 lb ai/a	1.75 pt/a			A					
3 Flexstar GT	1.61 lb ai/a	4.5 pt/a			B					
3 Dual II Magnum	0.955 lb ai/a	1 pt/a			B					
3 MSO	1 % v/v	19.2 oz/a			B					
3 N PAK AMS	2.5 % v/v	48 oz/a			B					
4 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	50	60	100	60	25
4 Boundary	1.42 lb ai/a	1.75 pt/a			A					
4 Flexstar GT	1.61 lb ai/a	4.5 pt/a			B					
4 Dual II Magnum	0.955 lb ai/a	1 pt/a			B					
4 MSO	1 % v/v	19.2 oz/a			B					
4 N PAK AMS	2.5 % v/v	48 oz/a			B					
4 Cobra	0.156 lb ai/a	10 oz/a			C					
4 MSO	1 % v/v	19.2 oz/a			C					
4 N PAK AMS	2.5 % v/v	48 oz/a			C					
5 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	57	47	100	73	0
5 Boundary	1.42 lb ai/a	1.75 pt/a			A					
5 Sequence	1.97 lb ai/a	3 pt/a			B					
5 N PAK AMS	2.5 % v/v	3 pt/a			B					
5 Flexstar GT	1.61 lb ai/a	4.5 pt/a			C					
5 MSO	1 % v/v	19.2 oz/a			C					
5 N PAK AMS	2.5 % v/v	48 oz/a			C					
6 Spartan	0.125 lb ai/a	4 oz/a			A	43	43	70	43	10
6 Warrant	1.13 lb ai/a	3 pt/a			B					
6 Roundup PowerMax	1.13 lb ae/a	32 oz/a			B					
6 N PAK AMS	2.5 % v/v	48 oz/a			B					

t=Mean descriptions are reported in transformed data units, and are not de-transformed.  
 Missing data estimates are included in columns:Average=5,10,15,20

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	SETFA	AMBTR	AMARE	ABUTH	IPOHE					
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Amaranthus retrofractus	Abutilon theophrasti	Ipomoea hederifolia					
Pest Name	Giant foxtail	Giant ragweed	Redroot pigweed	velvetleaf	Ipomoea hederifolia					
Rating Date	Jun-10-2014	Jun-10-2014	Jun-10-2014	Jun-10-2014	Jun-10-2014					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%					
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					
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	13 DA-A	13 DA-A					
ARM Action Codes			AA							
Number of Decimals	0	0	0	0	0					
Trt Treatment No. Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	1	2	3	4	5
7 Envive 3.5 oz						63	77	100	87	50
7 Classic	0.02	lb ai/a	1.28	oz/a	A					
7 Valor SX	0.0625	lb ai/a	1.96	oz/a	A					
7 Thifensulfuron	0.0065	lb ai/a	0.208	oz/a	A					
7 Synchrony 0.375										
7 Classic	0.00503	lb ai/a	0.322	oz/a	B					
7 Thifensulfuron	0.00163	lb ai/a	0.052	oz/a	B					
7 Roundup PowerMax	1.13	lb ae/a	32	oz/a	B					
7 N PAK AMS	2.5	% v/v	48	oz/a	B					
8 Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	50	50	100	100	15
8 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
8 AAtrex	0.5	lb ai/a	1	pt/a	B					
8 NIS	0.25	% v/v	0.3	pt/a	B					
8 N PAK AMS	2.5	% v/v	3	pt/a	B					
9 Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	40	67	100	100	25
9 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
9 Status	0.0875	lb ai/a	2.5	oz/a	B					
9 NIS	0.25	% v/v	0.3	pt/a	B					
9 N PAK AMS	2.5	% v/v	3	pt/a	B					
10 Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	58	67	100	100	15
10 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
10 AAtrex	0.5	lb ai/a	1	pt/a	B					
10 NIS	0.25	% v/v	0.3	pt/a	B					
10 N PAK AMS	2.5	% v/v	3	pt/a	B					
10 Status	0.0875	lb ai/a	2.5	oz/a	C					
10 NIS	0.25	% v/v	0.3	pt/a	C					
10 N PAK AMS	2.5	% v/v	3	pt/a	C					
11 Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	57	57	100	89	25
11 Status	0.0875	lb ai/a	2.5	oz/a	B					
11 NIS	0.25	% v/v	0.3	pt/a	B					
11 N PAK AMS	2.5	% v/v	3	pt/a	B					
12 Harness Xtra 5.6	2.1	lb ai/a	1.5	qt/a	A	67	57	100	50	0
12 Roundup PowerMax	1.13	lb ae/a	32	oz/a	B					
12 Impact	0.0164	lb ai/a	0.75	oz/a	B					
12 N PAK AMS	2.5	% v/v	48	oz/a	B					
LSD (P=.05)						26.4	53.5	13.5t	32.9	47.1
Standard Deviation						15.6	31.6	8.0t	19.5	20.8
CV						30.61	54.44	9.25	27.28	96.08
Bartlett's X2						9.126	11.189	1.389	4.008	1.651
P(Bartlett's X2)						0.332	0.428	0.239	0.856	0.977
Skewness						-0.4059	-0.1207	-4.1178*	-0.485	0.0529
Kurtosis						-0.52	-1.1638	19.285*	-1.3413	-1.7853
Replicate F						0.739	3.481	1.395	2.938	5.538
Replicate Prob(F)						0.4892	0.0486	0.2688	0.0740	0.0431
Treatment F						1.894	0.603	4.695	4.306	1.014
Treatment Prob(F)						0.0974	0.8062	0.0010	0.0017	0.5001

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Pest Scientific Name	Setaria faberi	Ambrosia trifida	Amaranthus retrofractus	Abutilon theophrasti	Ipomoea hederacea
Pest Name	Giant foxtail	Giant ragweed	Redroot pigweed	velvetleaf	ivyleaf morning glory
Rating Date	Jun-24-2014	Jun-24-2014	Jun-24-2014	Jun-24-2014	Jun-24-2014
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
SE Group No.	6	7	8	9	10
Days After First/Last Applic.	27 27	27 27	27 27	27 27	27 27
Trt-Eval Interval	27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A
ARM Action Codes			AA	AA	AS
Number of Decimals	0	0	0	0	0

Trt Treatment No. Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	6	7	8	9	10
1 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	0	0	0	0	0
1 Boundary	1.42 lb ai/a	1.75 pt/a			A					
1 Flexstar GT	1.85 lb ai/a	5.2 pt/a			B					
1 MSO	1 % v/v	19.2 oz/a			B					
1 N PAK AMS	2.5 % v/v	48 oz/a			B					
2 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	67	40	84	53	29
2 Boundary	1.42 lb ai/a	1.75 pt/a			A					
2 Prefix	1.65 lb ai/a	2.5 pt/a			B					
2 Touchdown Total	1.14 lb ae/a	35 oz/a			B					
2 N PAK AMS	2.5 % v/v	48 oz/a			B					
3 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	37	0	82	36	6
3 Boundary	1.42 lb ai/a	1.75 pt/a			A					
3 Flexstar GT	1.61 lb ai/a	4.5 pt/a			B					
3 Dual II Magnum	0.955 lb ai/a	1 pt/a			B					
3 MSO	1 % v/v	19.2 oz/a			B					
3 N PAK AMS	2.5 % v/v	48 oz/a			B					
4 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	53	20	96	43	15
4 Boundary	1.42 lb ai/a	1.75 pt/a			A					
4 Flexstar GT	1.61 lb ai/a	4.5 pt/a			B					
4 Dual II Magnum	0.955 lb ai/a	1 pt/a			B					
4 MSO	1 % v/v	19.2 oz/a			B					
4 N PAK AMS	2.5 % v/v	48 oz/a			B					
4 Cobra	0.156 lb ai/a	10 oz/a			C					
4 MSO	1 % v/v	19.2 oz/a			C					
4 N PAK AMS	2.5 % v/v	48 oz/a			C					
5 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	62	7	96	62	0
5 Boundary	1.42 lb ai/a	1.75 pt/a			A					
5 Sequence	1.97 lb ai/a	3 pt/a			B					
5 N PAK AMS	2.5 % v/v	3 pt/a			B					
5 Flexstar GT	1.61 lb ai/a	4.5 pt/a			C					
5 MSO	1 % v/v	19.2 oz/a			C					
5 N PAK AMS	2.5 % v/v	48 oz/a			C					
6 Spartan	0.125 lb ai/a	4 oz/a			A	13	7	87	39	3
6 Warrant	1.13 lb ai/a	3 pt/a			B					
6 Roundup PowerMax	1.13 lb ae/a	32 oz/a			B					
6 N PAK AMS	2.5 % v/v	48 oz/a			B					

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Pest Name	Giant foxtail	Giant ragweed	Redroot pigweed	velvetleaf	Ivyleaf mornin
Rating Date	Jun-24-2014	Jun-24-2014	Jun-24-2014	Jun-24-2014	Jun-24-2014
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
SE Group No.	6	7	8	9	10
Days After First/Last Applic.	27 27	27 27	27 27	27 27	27 27
Trt-Eval Interval	27 DA-A	27 DA-A	27 DA-A	27 DA-A	27 DA-A
ARM Action Codes			AA	AA	AS
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	6	7	8	9	10
7	Envive 3.5 oz						30	70	93	99	50
	7 Classic	0.02	lb ai/a	1.28	oz/a	A					
	7 Valor SX	0.0625	lb ai/a	1.96	oz/a	A					
	7 Thifensulfuron	0.0065	lb ai/a	0.208	oz/a	A					
	7 Synchrony 0.375										
	7 Classic	0.00503	lb ai/a	0.322	oz/a	B					
	7 Thifensulfuron	0.00163	lb ai/a	0.052	oz/a	B					
	7 Roundup PowerMax	1.13	lb ae/a	32	oz/a	B					
	7 N PAK AMS	2.5	% v/v	48	oz/a	B					
8	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	63	53	99	100	20
	8 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
	8 AAtrex	0.5	lb ai/a	1	pt/a	B					
	8 NIS	0.25	% v/v	0.3	pt/a	B					
	8 N PAK AMS	2.5	% v/v	3	pt/a	B					
9	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	50	70	100	100	33
	9 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
	9 Status	0.0875	lb ai/a	2.5	oz/a	B					
	9 NIS	0.25	% v/v	0.3	pt/a	B					
	9 N PAK AMS	2.5	% v/v	3	pt/a	B					
10	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	60	80	100	100	33
	10 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
	10 AAtrex	0.5	lb ai/a	1	pt/a	B					
	10 NIS	0.25	% v/v	0.3	pt/a	B					
	10 N PAK AMS	2.5	% v/v	3	pt/a	B					
	10 Status	0.0875	lb ai/a	2.5	oz/a	C					
	10 NIS	0.25	% v/v	0.3	pt/a	C					
	10 N PAK AMS	2.5	% v/v	3	pt/a	C					
11	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	57	50	100	100	28
	11 Status	0.0875	lb ai/a	2.5	oz/a	B					
	11 NIS	0.25	% v/v	0.3	pt/a	B					
	11 N PAK AMS	2.5	% v/v	3	pt/a	B					
12	Harness Xtra 5.6	2.1	lb ai/a	1.5	qt/a	A	70	50	100	46	0
	12 Roundup PowerMax	1.13	lb ae/a	32	oz/a	B					
	12 Impact	0.0164	lb ai/a	0.75	oz/a	B					
	12 N PAK AMS	2.5	% v/v	48	oz/a	B					
LSD (P=.05)							22.3	51.0	22.0t	17.7t	4.4t
Standard Deviation							13.1	30.1	13.0t	10.4t	2.4t
CV							28.07	80.92	17.86	17.87	63.69
Bartlett's X2							6.317	8.562	10.394	6.263	3.763
P(Bartlett's X2)							0.788	0.479	0.238	0.509	0.709
Skewness							-0.5938	0.5664	-1.6651*	-0.3982	0.2195
Kurtosis							-0.5712	-1.2031	1.8064*	-1.0563	-1.1191
Replicate F							0.631	2.226	11.109	3.686	3.427
Replicate Prob(F)							0.5412	0.1317	0.0005	0.0416	0.0782
Treatment F							8.604	2.858	10.779	23.771	2.815
Treatment Prob(F)							0.0001	0.0173	0.0001	0.0001	0.0656

# The Ohio State University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	AMARE	ABUTH	IPOHE
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Amaranthus retrofractus	Abutilon theophrasti	Ipomoea hederacea
Pest Name	Giant foxtail	Giant ragweed	Redroot pigweed	velvetleaf	ivyleaf mornin
Rating Date	Jul-7-2014	Jul-7-2014	Jul-7-2014	Jul-7-2014	Jul-7-2014
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
SE Group No.	11	12	13	14	15
Days After First/Last Applic.	40 11	40 11	40 11	40 11	40 11
Trt-Eval Interval	11 DA-B	11 DA-B	11 DA-B	11 DA-B	11 DA-B
ARM Action Codes	ET11	AA	ET1		AA
Number of Decimals	0	0	0	0	0

Trt Treatment No. Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	11	12	13	14	15
1 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	100	100	99	100	100
1 Boundary	1.42 lb ai/a	1.75 pt/a			A					
1 Flexstar GT	1.85 lb ai/a	5.2 pt/a			B					
1 MSO	1 % v/v	19.2 oz/a			B					
1 N PAK AMS	2.5 % v/v	48 oz/a			B					
2 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	100	91	100	100	97
2 Boundary	1.42 lb ai/a	1.75 pt/a			A					
2 Prefix	1.65 lb ai/a	2.5 pt/a			B					
2 Touchdown Total	1.14 lb ae/a	35 oz/a			B					
2 N PAK AMS	2.5 % v/v	48 oz/a			B					
3 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	100	98	100	100	95
3 Boundary	1.42 lb ai/a	1.75 pt/a			A					
3 Flexstar GT	1.61 lb ai/a	4.5 pt/a			B					
3 Dual II Magnum	0.955 lb ai/a	1 pt/a			B					
3 MSO	1 % v/v	19.2 oz/a			B					
3 N PAK AMS	2.5 % v/v	48 oz/a			B					
4 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	100	72	100	100	81
4 Boundary	1.42 lb ai/a	1.75 pt/a			A					
4 Flexstar GT	1.61 lb ai/a	4.5 pt/a			B					
4 Dual II Magnum	0.955 lb ai/a	1 pt/a			B					
4 MSO	1 % v/v	19.2 oz/a			B					
4 N PAK AMS	2.5 % v/v	48 oz/a			B					
4 Cobra	0.156 lb ai/a	10 oz/a			C					
4 MSO	1 % v/v	19.2 oz/a			C					
4 N PAK AMS	2.5 % v/v	48 oz/a			C					
5 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	100	63	100	97	70
5 Boundary	1.42 lb ai/a	1.75 pt/a			A					
5 Sequence	1.97 lb ai/a	3 pt/a			B					
5 N PAK AMS	2.5 % v/v	3 pt/a			B					
5 Flexstar GT	1.61 lb ai/a	4.5 pt/a			C					
5 MSO	1 % v/v	19.2 oz/a			C					
5 N PAK AMS	2.5 % v/v	48 oz/a			C					
6 Spartan	0.125 lb ai/a	4 oz/a			A	100	70	100	97	95
6 Warrant	1.13 lb ai/a	3 pt/a			B					
6 Roundup PowerMax	1.13 lb ae/a	32 oz/a			B					
6 N PAK AMS	2.5 % v/v	48 oz/a			B					

# The Ohio State University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	AMARE	ABUTH	IPOHE
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Amaranthus retrofractus	Abutilon theophrasti	Ipomoea hederifolia
Pest Name	Giant foxtail	Giant ragweed	Redroot pigweed	velvetleaf	Ivyleaf mornin
Rating Date	Jul-7-2014	Jul-7-2014	Jul-7-2014	Jul-7-2014	Jul-7-2014
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
SE Group No.	11	12	13	14	15
Days After First/Last Applic.	40 11	40 11	40 11	40 11	40 11
Trt-Eval Interval	11 DA-B	11 DA-B	11 DA-B	11 DA-B	11 DA-B
ARM Action Codes	ET11	AA	ET1		AA
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	11	12	13	14	15
7	Envive 3.5 oz						100	96	100	99	100
	7 Classic	0.02	lb ai/a	1.28	oz/a	A					
	7 Valor SX	0.0625	lb ai/a	1.96	oz/a	A					
	7 Thifensulfuron	0.0065	lb ai/a	0.208	oz/a	A					
	7 Synchrony 0.375										
	7 Classic	0.00503	lb ai/a	0.322	oz/a	B					
	7 Thifensulfuron	0.00163	lb ai/a	0.052	oz/a	B					
	7 Roundup PowerMax	1.13	lb ae/a	32	oz/a	B					
	7 N PAK AMS	2.5	% v/v	48	oz/a	B					
8	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	100	99	100	100	95
	8 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
	8 AAtrex	0.5	lb ai/a	1	pt/a	B					
	8 NIS	0.25	% v/v	0.3	pt/a	B					
	8 N PAK AMS	2.5	% v/v	3	pt/a	B					
9	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	100	99	100	100	97
	9 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
	9 Status	0.0875	lb ai/a	2.5	oz/a	B					
	9 NIS	0.25	% v/v	0.3	pt/a	B					
	9 N PAK AMS	2.5	% v/v	3	pt/a	B					
10	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	100	99	100	100	99
	10 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
	10 AAtrex	0.5	lb ai/a	1	pt/a	B					
	10 NIS	0.25	% v/v	0.3	pt/a	B					
	10 N PAK AMS	2.5	% v/v	3	pt/a	B					
	10 Status	0.0875	lb ai/a	2.5	oz/a	C					
	10 NIS	0.25	% v/v	0.3	pt/a	C					
	10 N PAK AMS	2.5	% v/v	3	pt/a	C					
11	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	43	95	100	100	77
	11 Status	0.0875	lb ai/a	2.5	oz/a	B					
	11 NIS	0.25	% v/v	0.3	pt/a	B					
	11 N PAK AMS	2.5	% v/v	3	pt/a	B					
12	Harness Xtra 5.6	2.1	lb ai/a	1.5	qt/a	A	100	98	100	98	60
	12 Roundup PowerMax	1.13	lb ae/a	32	oz/a	B					
	12 Impact	0.0164	lb ai/a	0.75	oz/a	B					
	12 N PAK AMS	2.5	% v/v	48	oz/a	B					
LSD (P=.05)							5.6	15.9t	0.6	1.9	14.8t
Standard Deviation							3.3	9.4t	0.3	1.1	8.0t
CV							3.5	12.51	0.33	1.15	10.85
Bartlett's X2							0.0	6.497	0.0	1.201	1.826
P(Bartlett's X2)							.	0.772	.	0.753	0.969
Skewness							-3.3233*	-0.5747	-6.0*	-1.8839*	-0.6134
Kurtosis							10.0694*	-0.9573	36.0*	2.2836*	-0.4932
Replicate F							1.000	0.901	1.000	1.303	2.666
Replicate Prob(F)							0.3840	0.4208	0.3840	0.2919	0.1233
Treatment F							72.250	5.281	1.000	3.930	7.641
Treatment Prob(F)							0.0001	0.0005	0.4767	0.0031	0.0025



# The Ohio State University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	SETFA	AMBTR	AMARE	ABUTH	IPOHE					
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Amaranthus retrofractus	Abutilon theophrasti	Ipomoea hederacea					
Pest Name	Giant foxtail	Giant ragweed	Redroot pigweed	velvetleaf	ivyleaf mornin					
Rating Date	Jul-22-2014	Jul-22-2014	Jul-22-2014	Jul-22-2014	Jul-22-2014					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1					
SE Group No.	16	17	18	19	20					
Days After First/Last Applic.	55 15	55 15	55 15	55 15	55 15					
Trt-Eval Interval	26 DA-B	26 DA-B	26 DA-B	26 DA-B	26 DA-B					
ARM Action Codes	ER1	AA		AA						
Number of Decimals	0	0	0	0	0					
Trt Treatment No. Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	16	17	18	19	20
1 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	98	100	80	98	93
1 Boundary	1.42 lb ai/a	1.75 pt/a			A					
1 Flexstar GT	1.85 lb ai/a	5.2 pt/a			B					
1 MSO	1 % v/v	19.2 oz/a			B					
1 N PAK AMS	2.5 % v/v	48 oz/a			B					
2 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	99	99	94	84	70
2 Boundary	1.42 lb ai/a	1.75 pt/a			A					
2 Prefix	1.65 lb ai/a	2.5 pt/a			B					
2 Touchdown Total	1.14 lb ae/a	35 oz/a			B					
2 N PAK AMS	2.5 % v/v	48 oz/a			B					
3 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	96	99	95	93	45
3 Boundary	1.42 lb ai/a	1.75 pt/a			A					
3 Flexstar GT	1.61 lb ai/a	4.5 pt/a			B					
3 Dual II Magnum	0.955 lb ai/a	1 pt/a			B					
3 MSO	1 % v/v	19.2 oz/a			B					
3 N PAK AMS	2.5 % v/v	48 oz/a			B					
4 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	98	100	100	98	55
4 Boundary	1.42 lb ai/a	1.75 pt/a			A					
4 Flexstar GT	1.61 lb ai/a	4.5 pt/a			B					
4 Dual II Magnum	0.955 lb ai/a	1 pt/a			B					
4 MSO	1 % v/v	19.2 oz/a			B					
4 N PAK AMS	2.5 % v/v	48 oz/a			B					
4 Cobra	0.156 lb ai/a	10 oz/a			C					
4 MSO	1 % v/v	19.2 oz/a			C					
4 N PAK AMS	2.5 % v/v	48 oz/a			C					
5 2,4-D Ester	0.5 lb ai/a	1 pt/a			A	98	99	100	100	60
5 Boundary	1.42 lb ai/a	1.75 pt/a			A					
5 Sequence	1.97 lb ai/a	3 pt/a			B					
5 N PAK AMS	2.5 % v/v	3 pt/a			B					
5 Flexstar GT	1.61 lb ai/a	4.5 pt/a			C					
5 MSO	1 % v/v	19.2 oz/a			C					
5 N PAK AMS	2.5 % v/v	48 oz/a			C					
6 Spartan	0.125 lb ai/a	4 oz/a			A	96	92	97	89	73
6 Warrant	1.13 lb ai/a	3 pt/a			B					
6 Roundup PowerMax	1.13 lb ae/a	32 oz/a			B					
6 N PAK AMS	2.5 % v/v	48 oz/a			B					

# The Ohio State University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	AMARE	ABUTH	IPOHE
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Amaranthus retrofractus	Abutilon theophrasti	Ipomoea hederifolia
Pest Name	Giant foxtail	Giant ragweed	Redroot pigweed	velvetleaf	Ivyleaf mornin
Rating Date	Jul-22-2014	Jul-22-2014	Jul-22-2014	Jul-22-2014	Jul-22-2014
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
SE Group No.	16	17	18	19	20
Days After First/Last Applic.	55 15	55 15	55 15	55 15	55 15
Trt-Eval Interval	26 DA-B	26 DA-B	26 DA-B	26 DA-B	26 DA-B
ARM Action Codes	ER1	AA		AA	
Number of Decimals	0	0	0	0	0

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	16	17	18	19	20
7	Envive 3.5 oz						91	92	92	99	100
	7 Classic	0.02	lb ai/a	1.28	oz/a	A					
	7 Valor SX	0.0625	lb ai/a	1.96	oz/a	A					
	7 Thifensulfuron	0.0065	lb ai/a	0.208	oz/a	A					
	7 Synchrony 0.375										
	7 Classic	0.00503	lb ai/a	0.322	oz/a	B					
	7 Thifensulfuron	0.00163	lb ai/a	0.052	oz/a	B					
	7 Roundup PowerMax	1.13	lb ae/a	32	oz/a	B					
	7 N PAK AMS	2.5	% v/v	48	oz/a	B					
8	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	98	100	100	100	70
	8 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
	8 AAtrex	0.5	lb ai/a	1	pt/a	B					
	8 NIS	0.25	% v/v	0.3	pt/a	B					
	8 N PAK AMS	2.5	% v/v	3	pt/a	B					
9	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	100	98	100	100	60
	9 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
	9 Status	0.0875	lb ai/a	2.5	oz/a	B					
	9 NIS	0.25	% v/v	0.3	pt/a	B					
	9 N PAK AMS	2.5	% v/v	3	pt/a	B					
10	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	99	99	100	100	58
	10 Halex GT	1.97	lb ai/a	3.6	pt/a	B					
	10 AAtrex	0.5	lb ai/a	1	pt/a	B					
	10 NIS	0.25	% v/v	0.3	pt/a	B					
	10 N PAK AMS	2.5	% v/v	3	pt/a	B					
	10 Status	0.0875	lb ai/a	2.5	oz/a	C					
	10 NIS	0.25	% v/v	0.3	pt/a	C					
	10 N PAK AMS	2.5	% v/v	3	pt/a	C					
11	Lexar EZ	2.31	lb ai/a	2.5	qt/a	A	33	100	93	100	65
	11 Status	0.0875	lb ai/a	2.5	oz/a	B					
	11 NIS	0.25	% v/v	0.3	pt/a	B					
	11 N PAK AMS	2.5	% v/v	3	pt/a	B					
12	Harness Xtra 5.6	2.1	lb ai/a	1.5	qt/a	A	75	96	47	95	30
	12 Roundup PowerMax	1.13	lb ae/a	32	oz/a	B					
	12 Impact	0.0164	lb ai/a	0.75	oz/a	B					
	12 N PAK AMS	2.5	% v/v	48	oz/a	B					
LSD (P=.05)							16.7	18.7t	15.2	18.2t	47.1
Standard Deviation							9.9	11.0t	9.0	10.8t	25.0
CV							10.94	13.18	9.81	13.1	38.6
Bartlett's X2							51.322	3.941	4.505	5.966	3.294
P(Bartlett's X2)							0.001*	0.862	0.609	0.427	0.857
Skewness							-3.2415*	-1.2528*	-2.0076*	-1.3006*	-0.2149
Kurtosis							11.7149*	0.01	3.0852*	0.4816	-1.1744
Replicate F							0.206	0.301	1.166	1.753	1.776
Replicate Prob(F)							0.8154	0.7428	0.3303	0.1966	0.2301
Treatment F							11.311	0.823	8.649	1.827	1.710
Treatment Prob(F)							0.0001	0.6193	0.0001	0.1103	0.2281

# The Ohio State University

## Syngenta Residual Pigweed Control

Trial ID: SYN BG                      Location: Western Branch G-8   Trial Year: 2014  
Protocol ID: 14SYN BG              Investigator: Dr. Mark M. Loux  
Project ID:                              Study Director: Anthony Dobbels  
Sponsor Contact: Dain Bruns, Syngenta

Pest Type

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

Pest Code

SETFA, *Setaria faberi*, = US

AMBTR, *Ambrosia trifida*, = US

AMARE, *Amaranthus retroflexus*, = US

ABUTH, *Abutilon theophrasti*, = US

IPOHE, *Ipomoea hederacea*, = US

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

ARM Action Codes

AA = Automatic arcsine square root % transformation

AS = Automatic square root transformation of X+0.5