

The Ohio State University

Program Approaches for Managing Pigweed Utilizing New Technologies

Trial ID: 14USBPRE Location: Western Branch G-8 Trial Year: 2018
 Protocol ID: 14USBPRE Investigator: Dr. Mark M. Loux
 Project ID: Study Director:
 Sponsor Contact:

Pest Description

- Pest 1 Type:** W **Code:** AMARE
- Pest 2 Type:** W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed
- Pest 3 Type:** W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass
- Pest 4 Type:** W **Code:** ABUTH Abutilon theophrasti
Common Name: velvetleaf
- Pest 5 Type:** W **Code:** HIBTR Hibiscus trionum
Common Name: Venice mallow
- Pest 6 Type:** W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters
- Pest 7 Type:** W **Code:** CYPES Cyperus esculentus
Common Name: Yellow nutsedge
- Pest 8 Type:** W **Code:** POROL Portulaca oleracea
Common Name: Common purslane

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 FT² **Treatments:** 26 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No. Previous Crop Year

- 1. Soybean 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
Application Date:	May-28-2014	Jun-18-2014	Jul-7-2014
Appl. Start Time:	11:00 AM	8:00 AM	8:45 AM
Appl. Stop Time:	11:30 AM	8:30 AM	
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	14DAPL	35DAPL
Application Placement:	BROSOIL	BROFOL	BROFOL
Applied By:	Reeb		REEB
Air Temperature, Unit:	84.8 F	78.9 F	69 F
% Relative Humidity:	60	80	83.5
Wind Velocity, Unit:	3 MPH	3.3 MPH	2 MPH
Wind Direction:	SSW	SSW	SSW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	70 F	70 F	70 F
Soil Moisture:	DRY	DRY	DRY
% Cloud Cover:	10	50	25
Next Moisture Occurred On:	Jun-2-2014	Jun-18-2014	
Time to Next Moisture, Unit:	5 DAY	11 HR	

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Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMARE W	AMARE W	AMARE W
Stage Majority, Percent:	14	100	16 100
Height, Unit:	0.5	IN	6 IN
Height Minimum, Maximum:	0.5	3	
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	14	100	19 100
Height, Unit:	1	IN	16 IN
Height Minimum, Maximum:	1	5	16 18
Pest 3 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Stage Majority, Percent:	17	100	19
Height, Unit:	4	IN	12 IN
Height Minimum, Maximum:	4	5	12 13
Pest 4 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:			14 100
Height, Unit:			4 IN
Height Minimum, Maximum:			4 4.5
Pest 5 Code, Type, Scale:	HIBTR W	HIBTR W	HIBTR W
Stage Majority, Percent:			19 100
Height, Unit:			4.5 IN
Height Minimum, Maximum:			4.5 5
Pest 6 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W
Stage Majority, Percent:			19 100
Height, Unit:			11 IN
Height Minimum, Maximum:			11 12
Pest 7 Code, Type, Scale:	CYPES W	CYPES W	CYPES W
Stage Majority, Percent:			19 100
Height, Unit:			12 IN
Height Minimum, Maximum:			12
Pest 8 Code, Type, Scale:	POROL W	POROL W	POROL W
Stage Majority, Percent:			19 100
Diameter, Unit:			18 IN
Height, Unit:			1.5 IN
Height Minimum, Maximum:			1.5 3

Application Equipment

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

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Trial ID: 14USBPRE Location: Western Branch G-8 Trial Year: 2018
 Protocol ID: 14USBPRE Investigator: Dr. Mark M. Loux
 Project ID: Study Director:
 Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMARE	AMBTR	ECHCG	AMARE	AMARE
Pest Scientific Name	Amaranthus ret>	Ambrosia trifi>	Echinochloa cr>	Amaranthus ret>	Amaranthus ret>
Pest Name	Redroot pigweed	Giant ragweed	Common barnyar>	Redroot pigweed	Redroot pigweed
Rating Date	Jun-16-2014	Jun-16-2014	Jun-16-2014	Jun-17-2014	Jul-8-2014
Rating Type	CONTRO			COUPLA	
Rating Unit	%			1/2M2	
Number of Subsamples	1	1	1	1	1
SE Group No.	1	2	3	4	5
Days After First/Last Applic.	19 19	19 19	19 19	20 20	41 1
Trt-Eval Interval	19 DA-A	19 DA-A	19 DA-A	20 DA-A	
Number of Decimals	0			0	

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	1	2	3	4	5
1	UTC						0	0.0	0.0	93	0.0
2	Fierce	0.143 lb ai/a		3 oz/a		A	100	75.0	77.5	0	96.5
3	Dual II Magnum	0.955 lb ai/a		1 pt/a		A	100	77.5	98.8	0	99.9
	3 Sencor 75DF	0.375 lb ai/a		0.5 lb/a		A					
	3 Balance Pro	0.094 lb ai/a		3 oz/a		A					
4	Clarity	1 lb ai/a		32 oz/a		A	100	86.7	95.0	0	100.0
	4 Warrant	2.06 lb ai/a		2.75 qt/a		A					
5	Zemax	1.84 lb ai/a		2 qt/a		A	99	87.5	93.8	0	96.3
	5 Sencor 75DF	0.25 lb ai/a		0.333 lb/a		A					
6	PREFIX	1.32 lb ai/a		1 qt/a		A	100	67.5	86.3	0	92.5
	6 Sencor 75DF	0.25 lb ai/a		0.333 lb/a		A					
7	Fierce	0.143 lb ai/a		3 oz/a		A	100	76.3	80.0	0	99.9
	7 Dual II Magnum	0.955 lb ai/a		1 pt/a		B					
	7 Roundup PowerMax	0.77 lb ae/a		22 oz/a		B					
8	Fierce	0.143 lb ai/a		3 oz/a		A	100	66.7	78.8	0	100.0
	8 Dual II Magnum	0.955 lb ai/a		1 pt/a		B					
	8 Roundup PowerMax	0.77 lb ae/a		22 oz/a		B					
	8 Clarity	0.5 lb ai/a		16 oz/a		A					
9	Clarity	1 lb ai/a		32 oz/a		A	99	93.3	95.0	0	99.9
	9 Warrant	2.06 lb ai/a		2.75 qt/a		A					
	9 Dual II Magnum	0.955 lb ai/a		1 pt/a		B					
	9 Roundup PowerMax	0.77 lb ae/a		22 oz/a		B					
	9 Clarity	0.5 lb ai/a		16 oz/a		B					
10	Fierce	0.143 lb ai/a		3 oz/a		A	75	70.0	88.8	1	99.9
	10 Dual II Magnum	0.955 lb ai/a		1 pt/a		B					
	10 Liberty	0.53 lb ai/a		29 oz/a		B					
11	Fierce	0.143 lb ai/a		3 oz/a		A	100	75.0	77.5	0	100.0
	11 Dual II Magnum	0.955 lb ai/a		1 pt/a		B					
	11 Roundup PowerMax	0.77 lb ae/a		22 oz/a		B					
	11 Weedar 64	1 lb ai/a		1 qt/a		B					
12	Fierce	0.143 lb ai/a		3 oz/a		A	100	75.0	86.3	0	100.0
	12 Dual II Magnum	0.955 lb ai/a		1 pt/a		B					
	12 Roundup PowerMax	0.77 lb ae/a		22 oz/a		B					
	12 Weedar 64	0.5 lb ai/a		1 pt/a		B					
	12 Liberty	0.53 lb ai/a		29 oz/a		B					

Missing data estimates are included in columns: Yates=5,8,9,11,12,14; Average=2

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMARE	AMBTR	ECHCG	AMARE	AMARE
Pest Scientific Name	Amaranthus ret>	Ambrosia trifi>	Echinochloa cr>	Amaranthus ret>	Amaranthus ret>
Pest Name	Redroot pigweed	Giant ragweed	Common barnyar>	Redroot pigweed	Redroot pigweed
Rating Date	Jun-16-2014	Jun-16-2014	Jun-16-2014	Jun-17-2014	Jul-8-2014
Rating Type	CONTRO			COUPLA	
Rating Unit	%			1/2M2	
Number of Subsamples	1	1	1	1	1
SE Group No.	1	2	3	4	5
Days After First/Last Applic.	19 19	19 19	19 19	20 20	41 1
Trt-Eval Interval	19 DA-A	19 DA-A	19 DA-A	20 DA-A	
Number of Decimals	0			0	

Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Appl Code	1	2	3	4	5
13	Dual II Magnum	0.955 lb ai/a		1 pt/a	A	99	78.8	95.0	0	100.0
13	Sencor 75DF	0.375 lb ai/a		0.5 lb/a	A					
13	Balance Pro	0.094 lb ai/a		3 oz/a	A					
13	Roundup PowerMax	0.77 lb ae/a		22 oz/a	B					
13	Flexstar	0.235 lb ai/a		16 oz/a	B					
14	Zemax	1.84 lb ai/a		2 qt/a	A	100	91.3	92.5	0	100.0
14	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A					
14	Flexstar GT	1.25 lb ae/a		3.5 pt/a	B					
14	MSO	1.25 lb ai/a		1 % v/v	B					
15	PREFIX	1.32 lb ai/a		1 qt/a	A	98	75.0	85.0	1	100.0
15	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A					
15	Halex GT	1.97 lb ai/a		3.6 pt/a	B					
15	Induce	0.313 lb ai/a		0.25 % v/v	B					
16	PREFIX	1.32 lb ai/a		1 qt/a	A	91	66.3	80.0	2	100.0
16	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A					
16	Halex GT	1.97 lb ai/a		3.6 pt/a	B					
16	Clarity	0.5 lb ai/a		1 pt/a	B					
16	Induce	0.313 lb ai/a		0.25 % v/v	B					
17	Fierce	0.143 lb ai/a		3 oz/a	A	100	81.3	85.0	0	100.0
17	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
17	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
18	Fierce	0.143 lb ai/a		3 oz/a	A	100	75.0	83.8	1	100.0
18	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
18	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
18	Clarity	0.5 lb ai/a		16 oz/a	C					
19	Clarity	1 lb ai/a		32 oz/a	A	75	66.3	70.0	21	66.7
19	Warrant	2.06 lb ai/a		2.75 qt/a	A					
19	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
19	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
19	Clarity	0.5 lb ai/a		16 oz/a	C					
20	Fierce	0.143 lb ai/a		3 oz/a	A	99	62.5	81.3	1	100.0
20	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
20	Liberty	0.53 lb ai/a		29 oz/a	C					
21	Fierce	0.143 lb ai/a		3 oz/a	A	100	78.8	82.5	1	100.0
21	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
21	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
21	Weedar 64	1 lb ai/a		1 qt/a	C					
22	Fierce	0.143 lb ai/a		3 oz/a	A	100	72.5	77.5	1	100.0
22	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
22	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
22	Weedar 64	0.5 lb ai/a		1 pt/a	C					
22	Liberty	0.53 lb ai/a		29 oz/a	C					
23	Dual II Magnum	0.955 lb ai/a		1 pt/a	A	100	86.7	96.3	0	97.5
23	Sencor 75DF	0.375 lb ai/a		0.5 lb/a	A					
23	Balance Pro	0.094 lb ai/a		3 oz/a	A					
23	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
23	Flexstar	0.235 lb ai/a		16 oz/a	C					

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Pest Code	AMARE	AMBTR	ECHCG	AMARE	AMARE
Pest Scientific Name	Amaranthus ret>	Ambrosia trifi>	Echinochloa cr>	Amaranthus ret>	Amaranthus ret>
Pest Name	Redroot pigweed	Giant ragweed	Common barnyar>	Redroot pigweed	Redroot pigweed
Rating Date	Jun-16-2014	Jun-16-2014	Jun-16-2014	Jun-17-2014	Jul-8-2014
Rating Type	CONTRO			COUPLA	
Rating Unit	%			1/2M2	
Number of Subsamples	1	1	1	1	1
SE Group No.	1	2	3	4	5
Days After First/Last Applic.	19 19	19 19	19 19	20 20	41 1
Trt-Eval Interval	19 DA-A	19 DA-A	19 DA-A	20 DA-A	
Number of Decimals	0			0	
Trt Treatment	Rate	Other	Other	Appl	
No. Name	Rate	Unit	Rate	Unit	Code
24 Zemax	1.84 lb ai/a		2 qt/a		A
24 Sencor 75DF	0.25 lb ai/a		0.333 lb/a		A
24 Flexstar GT	1.25 lb ae/a		3.5 pt/a		C
24 MSO	1.25 lb ai/a		1 % v/v		C
25 PREFIX	1.32 lb ai/a		1 qt/a		A
25 Sencor 75DF	0.25 lb ai/a		0.333 lb/a		A
25 Halex GT	1.97 lb ai/a		3.6 pt/a		C
25 Induce	0.313 lb ai/a		0.25 % v/v		C
26 PREFIX	1.32 lb ai/a		1 qt/a		A
26 Sencor 75DF	0.25 lb ai/a		0.333 lb/a		A
26 Halex GT	1.97 lb ai/a		3.6 pt/a		C
26 Clarity	0.5 lb ai/a		1 pt/a		C
26 Induce	0.313 lb ai/a		0.25 % v/v		C
LSD (P=.05)					
Standard Deviation					
CV					
Bartlett's X2					
P(Bartlett's X2)					
Skewness					
Kurtosis					
Replicate F					
Replicate Prob(F)					
Treatment F					
Treatment Prob(F)					

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	ECHCG	ABUTH	CHEAL
Pest Scientific Name	Ambrosia trifida	Echinochloa crus-galli	Abutilon theophrasti	Chenopodium album
Pest Name	Giant ragweed	Common barnyard	velvetleaf	Common lambsquarters
Rating Date	Jul-8-2014	Jul-8-2014	Jul-8-2014	Jul-8-2014
Rating Type				
Rating Unit				
Number of Subsamples	1	1	1	1
SE Group No.	6	7	8	9
Days After First/Last Applic.	41 1	41 1	41 1	41 1
Trt-Eval Interval				
Number of Decimals				

Trt Treatment No. Name	Rate	Other Rate	Other Rate	Appl Unit Code	6	7	8	9
1 UTC					0.0	0.0	0.0	0.0
2 Fierce	0.143 lb ai/a		3 oz/a	A	60.0	42.5	93.7	90.6
3 Dual II Magnum	0.955 lb ai/a		1 pt/a	A	63.8	86.3	100.4	83.9
3 Sencor 75DF	0.375 lb ai/a		0.5 lb/a	A				
3 Balance Pro	0.094 lb ai/a		3 oz/a	A				
4 Clarity	1 lb ai/a		32 oz/a	A	90.0	81.3	82.5	86.3
4 Warrant	2.06 lb ai/a		2.75 qt/a	A				
5 Zemax	1.84 lb ai/a		2 qt/a	A	78.8	72.5	100.0	88.8
5 Sencor 75DF	0.25 lb ai/a		0.333 lb/a	A				
6 PREFIX	1.32 lb ai/a		1 qt/a	A	55.0	58.8	80.0	47.5
6 Sencor 75DF	0.25 lb ai/a		0.333 lb/a	A				
7 Fierce	0.143 lb ai/a		3 oz/a	A	81.3	96.3	100.4	100.6
7 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
7 Roundup PowerMax	0.77 lb ae/a		22 oz/a	B				
8 Fierce	0.143 lb ai/a		3 oz/a	A	86.3	98.8	100.0	100.0
8 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
8 Roundup PowerMax	0.77 lb ae/a		22 oz/a	B				
8 Clarity	0.5 lb ai/a		16 oz/a	A				
9 Clarity	1 lb ai/a		32 oz/a	A	93.8	98.8	100.4	100.6
9 Warrant	2.06 lb ai/a		2.75 qt/a	A				
9 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
9 Roundup PowerMax	0.77 lb ae/a		22 oz/a	B				
9 Clarity	0.5 lb ai/a		16 oz/a	B				
10 Fierce	0.143 lb ai/a		3 oz/a	A	90.0	92.5	100.4	100.6
10 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
10 Liberty	0.53 lb ai/a		29 oz/a	B				
11 Fierce	0.143 lb ai/a		3 oz/a	A	98.8	98.8	100.0	100.0
11 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
11 Roundup PowerMax	0.77 lb ae/a		22 oz/a	B				
11 Weedar 64	1 lb ai/a		1 qt/a	B				
12 Fierce	0.143 lb ai/a		3 oz/a	A	100.0	100.0	100.0	100.0
12 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
12 Roundup PowerMax	0.77 lb ae/a		22 oz/a	B				
12 Weedar 64	0.5 lb ai/a		1 pt/a	B				
12 Liberty	0.53 lb ai/a		29 oz/a	B				

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	ECHCG	ABUTH	CHEAL
Pest Scientific Name	Ambrosia trifi>	Echinochloa cr>	Abutilon theop>	Chenopodium al>
Pest Name	Giant ragweed	Common barnyar>	velvetleaf	Common lambsqu>
Rating Date	Jul-8-2014	Jul-8-2014	Jul-8-2014	Jul-8-2014
Rating Type				
Rating Unit				
Number of Subsamples	1	1	1	1
SE Group No.	6	7	8	9
Days After First/Last Applic.	41 1	41 1	41 1	41 1
Trt-Eval Interval				
Number of Decimals				

Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Appl Code	6	7	8	9
13	Dual II Magnum	0.955 lb ai/a	1 pt/a		A	100.0	100.0	100.5	100.7
13	Sencor 75DF	0.375 lb ai/a	0.5 lb/a		A				
13	Balance Pro	0.094 lb ai/a	3 oz/a		A				
13	Roundup PowerMax	0.77 lb ae/a	22 oz/a		B				
13	Flexstar	0.235 lb ai/a	16 oz/a		B				
14	Zemax	1.84 lb ai/a	2 qt/a		A	97.5	100.0	100.0	100.0
14	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A				
14	Flexstar GT	1.25 lb ae/a	3.5 pt/a		B				
14	MSO	1.25 lb ai/a	1 % v/v		B				
15	PREFIX	1.32 lb ai/a	1 qt/a		A	97.5	100.0	100.0	100.0
15	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A				
15	Halex GT	1.97 lb ai/a	3.6 pt/a		B				
15	Induce	0.313 lb ai/a	0.25 % v/v		B				
16	PREFIX	1.32 lb ai/a	1 qt/a		A	96.3	98.8	100.5	100.7
16	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A				
16	Halex GT	1.97 lb ai/a	3.6 pt/a		B				
16	Clarity	0.5 lb ai/a	1 pt/a		B				
16	Induce	0.313 lb ai/a	0.25 % v/v		B				
17	Fierce	0.143 lb ai/a	3 oz/a		A	57.5	56.3	100.5	89.0
17	Dual II Magnum	0.955 lb ai/a	1 pt/a		C				
17	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C				
18	Fierce	0.143 lb ai/a	3 oz/a		A	53.8	47.5	97.2	99.0
18	Dual II Magnum	0.955 lb ai/a	1 pt/a		C				
18	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C				
18	Clarity	0.5 lb ai/a	16 oz/a		C				
19	Clarity	1 lb ai/a	32 oz/a		A	52.5	50.0	63.8	62.4
19	Warrant	2.06 lb ai/a	2.75 qt/a		A				
19	Dual II Magnum	0.955 lb ai/a	1 pt/a		C				
19	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C				
19	Clarity	0.5 lb ai/a	16 oz/a		C				
20	Fierce	0.143 lb ai/a	3 oz/a		A	40.0	42.5	98.8	100.0
20	Dual II Magnum	0.955 lb ai/a	1 pt/a		C				
20	Liberty	0.53 lb ai/a	29 oz/a		C				
21	Fierce	0.143 lb ai/a	3 oz/a		A	56.3	40.0	100.0	100.0
21	Dual II Magnum	0.955 lb ai/a	1 pt/a		C				
21	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C				
21	Weedar 64	1 lb ai/a	1 qt/a		C				
22	Fierce	0.143 lb ai/a	3 oz/a		A	52.5	35.0	100.0	95.0
22	Dual II Magnum	0.955 lb ai/a	1 pt/a		C				
22	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C				
22	Weedar 64	0.5 lb ai/a	1 pt/a		C				
22	Liberty	0.53 lb ai/a	29 oz/a		C				
23	Dual II Magnum	0.955 lb ai/a	1 pt/a		A	78.8	87.5	100.0	97.5
23	Sencor 75DF	0.375 lb ai/a	0.5 lb/a		A				
23	Balance Pro	0.094 lb ai/a	3 oz/a		A				
23	Roundup PowerMax	0.77 lb ae/a	22 oz/a		C				
23	Flexstar	0.235 lb ai/a	16 oz/a		C				

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Pest Type	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMBTR	ECHCG	ABUTH	CHEAL				
Pest Scientific Name	Ambrosia trifi>	Echinochloa cr>	Abutilon theop>	Chenopodium al>				
Pest Name	Giant ragweed	Common barnyar>	velvetleaf	Common lambsqu>				
Rating Date	Jul-8-2014	Jul-8-2014	Jul-8-2014	Jul-8-2014				
Rating Type								
Rating Unit								
Number of Subsamples	1	1	1	1				
SE Group No.	6	7	8	9				
Days After First/Last Applic.	41 1	41 1	41 1	41 1				
Trt-Eval Interval								
Number of Decimals								
Trt Treatment	Rate	Other	Other	Appl	6	7	8	9
No. Name	Rate Unit	Rate	Rate Unit	Code				
24 Zemax	1.84 lb ai/a	2 qt/a		A	86.3	82.5	100.5	100.7
24 Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A				
24 Flexstar GT	1.25 lb ae/a	3.5 pt/a		C				
24 MSO	1.25 lb ai/a	1 % v/v		C				
25 PREFIX	1.32 lb ai/a	1 qt/a		A	56.3	68.8	80.5	50.7
25 Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A				
25 Halex GT	1.97 lb ai/a	3.6 pt/a		C				
25 Induce	0.313 lb ai/a	0.25 % v/v		C				
26 PREFIX	1.32 lb ai/a	1 qt/a		A	61.3	53.8	85.5	47.4
26 Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A				
26 Halex GT	1.97 lb ai/a	3.6 pt/a		C				
26 Clarity	0.5 lb ai/a	1 pt/a		C				
26 Induce	0.313 lb ai/a	0.25 % v/v		C				
LSD (P=.05)					23.15	14.26	17.17	18.15
Standard Deviation					16.37	10.08	12.14	12.83
CV					22.59	13.88	13.23	14.88
Bartlett's X2					53.615	59.24	23.187	25.49
P(Bartlett's X2)					0.001*	0.001*	0.002*	0.008*
Skewness					-0.9057*	-0.8689*	-3.2094*	-2.0802*
Kurtosis					0.1269	-0.059	9.5727*	3.5019*
Replicate F					1.147	0.362	1.341	0.467
Replicate Prob(F)					0.3358	0.7806	0.2693	0.7065
Treatment F					8.655	29.609	11.820	14.827
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMARE	AMARE	AMBTR	ECHCG
Pest Scientific Name	Amaranthus ret>	Amaranthus ret>	Ambrosia trifi>	Echinochloa cr>
Pest Name	Redroot pigweed	Redroot pigweed	Giant ragweed	Common barnyar>
Rating Date	Jul-7-2014	Jul-31-2014	Jul-31-2014	Jul-31-2014
Rating Type	COUPLA			
Rating Unit	1/2M2			
Number of Subsamples	1	1	1	1
SE Group No.	10	11	12	13
Days After First/Last Applic.	40 19	64 24	64 24	64 24
Trt-Eval Interval				
Number of Decimals				

Trt Treatment No. Name	Rate	Other Rate	Other Rate	Appl Unit Code	10	11	12	13
1 UTC					52.63	0.0	0.0	0.0
2 Fierce	0.143 lb ai/a		3 oz/a	A	0.25	99.8	55.0	55.0
3 Dual II Magnum	0.955 lb ai/a		1 pt/a	A	0.13	81.5	60.0	81.3
3 Sencor 75DF	0.375 lb ai/a		0.5 lb/a	A				
3 Balance Pro	0.094 lb ai/a		3 oz/a	A				
4 Clarity	1 lb ai/a		32 oz/a	A	0.25	92.5	68.2	80.0
4 Warrant	2.06 lb ai/a		2.75 qt/a	A				
5 Zemax	1.84 lb ai/a		2 qt/a	A	0.38	86.3	75.0	75.0
5 Sencor 75DF	0.25 lb ai/a		0.333 lb/a	A				
6 PREFIX	1.32 lb ai/a		1 qt/a	A	1.13	90.0	52.5	57.5
6 Sencor 75DF	0.25 lb ai/a		0.333 lb/a	A				
7 Fierce	0.143 lb ai/a		3 oz/a	A	0.00	99.9	77.5	87.3
7 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
7 Roundup PowerMax	0.77 lb ae/a		22 oz/a	B				
8 Fierce	0.143 lb ai/a		3 oz/a	A	0.00	95.0	77.5	81.3
8 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
8 Roundup PowerMax	0.77 lb ae/a		22 oz/a	B				
8 Clarity	0.5 lb ai/a		16 oz/a	A				
9 Clarity	1 lb ai/a		32 oz/a	A	0.00	96.2	81.3	81.3
9 Warrant	2.06 lb ai/a		2.75 qt/a	A				
9 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
9 Roundup PowerMax	0.77 lb ae/a		22 oz/a	B				
9 Clarity	0.5 lb ai/a		16 oz/a	B				
10 Fierce	0.143 lb ai/a		3 oz/a	A	0.50	94.9	77.5	92.5
10 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
10 Liberty	0.53 lb ai/a		29 oz/a	B				
11 Fierce	0.143 lb ai/a		3 oz/a	A	0.00	99.5	97.5	85.0
11 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
11 Roundup PowerMax	0.77 lb ae/a		22 oz/a	B				
11 Weedar 64	1 lb ai/a		1 qt/a	B				
12 Fierce	0.143 lb ai/a		3 oz/a	A	0.00	97.3	100.0	93.8
12 Dual II Magnum	0.955 lb ai/a		1 pt/a	B				
12 Roundup PowerMax	0.77 lb ae/a		22 oz/a	B				
12 Weedar 64	0.5 lb ai/a		1 pt/a	B				
12 Liberty	0.53 lb ai/a		29 oz/a	B				

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMARE	AMARE	AMBTR	ECHCG
Pest Scientific Name	Amaranthus ret>	Amaranthus ret>	Ambrosia trifi>	Echinochloa cr>
Pest Name	Redroot pigweed	Redroot pigweed	Giant ragweed	Common barnyar>
Rating Date	Jul-7-2014	Jul-31-2014	Jul-31-2014	Jul-31-2014
Rating Type	COUPLA			
Rating Unit	1/2M2			
Number of Subsamples	1	1	1	1
SE Group No.	10	11	12	13
Days After First/Last Applic.	40 19	64 24	64 24	64 24
Trt-Eval Interval				
Number of Decimals				

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Code	10	11	12	13
13	Dual II Magnum	0.955 lb ai/a		1 pt/a	A		0.00	91.6	86.3	80.0
13	Sencor 75DF	0.375 lb ai/a		0.5 lb/a	A					
13	Balance Pro	0.094 lb ai/a		3 oz/a	A					
13	Roundup PowerMax	0.77 lb ae/a		22 oz/a	B					
13	Flexstar	0.235 lb ai/a		16 oz/a	B					
14	Zemax	1.84 lb ai/a		2 qt/a	A		0.00	98.5	98.8	92.5
14	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A					
14	Flexstar GT	1.25 lb ae/a		3.5 pt/a	B					
14	MSO	1.25 lb ai/a		1 % v/v	B					
15	PREFIX	1.32 lb ai/a		1 qt/a	A		0.00	98.8	88.8	80.0
15	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A					
15	Halex GT	1.97 lb ai/a		3.6 pt/a	B					
15	Induce	0.313 lb ai/a		0.25 % v/v	B					
16	PREFIX	1.32 lb ai/a		1 qt/a	A		0.00	93.3	92.5	78.8
16	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A					
16	Halex GT	1.97 lb ai/a		3.6 pt/a	B					
16	Clarity	0.5 lb ai/a		1 pt/a	B					
16	Induce	0.313 lb ai/a		0.25 % v/v	B					
17	Fierce	0.143 lb ai/a		3 oz/a	A		0.13	98.3	70.0	90.0
17	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
17	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
18	Fierce	0.143 lb ai/a		3 oz/a	A		0.00	100.0	82.5	92.5
18	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
18	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
18	Clarity	0.5 lb ai/a		16 oz/a	C					
19	Clarity	1 lb ai/a		32 oz/a	A		11.25	98.3	91.3	77.5
19	Warrant	2.06 lb ai/a		2.75 qt/a	A					
19	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
19	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
19	Clarity	0.5 lb ai/a		16 oz/a	C					
20	Fierce	0.143 lb ai/a		3 oz/a	A		0.25	97.5	60.0	67.5
20	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
20	Liberty	0.53 lb ai/a		29 oz/a	C					
21	Fierce	0.143 lb ai/a		3 oz/a	A		0.88	100.0	95.0	82.5
21	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
21	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
21	Weedar 64	1 lb ai/a		1 qt/a	C					
22	Fierce	0.143 lb ai/a		3 oz/a	A		0.25	100.0	92.5	75.0
22	Dual II Magnum	0.955 lb ai/a		1 pt/a	C					
22	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
22	Weedar 64	0.5 lb ai/a		1 pt/a	C					
22	Liberty	0.53 lb ai/a		29 oz/a	C					
23	Dual II Magnum	0.955 lb ai/a		1 pt/a	A		0.38	98.8	90.0	76.3
23	Sencor 75DF	0.375 lb ai/a		0.5 lb/a	A					
23	Balance Pro	0.094 lb ai/a		3 oz/a	A					
23	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C					
23	Flexstar	0.235 lb ai/a		16 oz/a	C					

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Pest Type	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMARE	AMARE	AMBTR	ECHCG				
Pest Scientific Name	Amaranthus ret>	Amaranthus ret>	Ambrosia trifi>	Echinochloa cr>				
Pest Name	Redroot pigweed	Redroot pigweed	Giant ragweed	Common barnyar>				
Rating Date	Jul-7-2014	Jul-31-2014	Jul-31-2014	Jul-31-2014				
Rating Type	COUPLA							
Rating Unit	1/2M2							
Number of Subsamples	1	1	1	1				
SE Group No.	10	11	12	13				
Days After First/Last Applic.	40 19	64 24	64 24	64 24				
Trt-Eval Interval								
Number of Decimals								
Trt Treatment	Rate	Other	Other	Appl	10	11	12	13
No. Name	Rate Unit	Rate	Rate Unit	Code				
24 Zemax	1.84 lb ai/a	2 qt/a		A	0.00	98.3	97.3	81.3
24 Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A				
24 Flexstar GT	1.25 lb ae/a	3.5 pt/a		C				
24 MSO	1.25 lb ai/a	1 % v/v		C				
25 PREFIX	1.32 lb ai/a	1 qt/a		A	0.38	98.3	67.5	91.3
25 Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A				
25 Halex GT	1.97 lb ai/a	3.6 pt/a		C				
25 Induce	0.313 lb ai/a	0.25 % v/v		C				
26 PREFIX	1.32 lb ai/a	1 qt/a		A	1.50	100.0	93.8	92.5
26 Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A				
26 Halex GT	1.97 lb ai/a	3.6 pt/a		C				
26 Clarity	0.5 lb ai/a	1 pt/a		C				
26 Induce	0.313 lb ai/a	0.25 % v/v		C				
LSD (P=.05)					9.988	5.71	20.25	15.49
Standard Deviation					7.062	4.03	14.32	10.95
CV					261.38	4.36	18.36	14.04
Bartlett's X2					194.629	25.658	53.528	56.569
P(Bartlett's X2)					0.001*	0.108	0.001*	0.001*
Skewness					5.3938*	-4.0176*	-1.507*	-2.3033*
Kurtosis					30.4064*	15.7691*	2.1675*	6.1276*
Replicate F					1.356	0.291	2.397	4.193
Replicate Prob(F)					0.2627	0.8314	0.0749	0.0085
Treatment F					8.698	92.684	8.852	11.720
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001

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Pest Type	W Weed	W Weed
Pest Code	CHEAL	AMARE
Pest Scientific Name	Chenopodium al>	Amaranthus ret>
Pest Name	Common lambsqu>	Redroot pigweed
Rating Date	Jul-31-2014	Jul-31-2014
Rating Type		COUPLA
Rating Unit		1/2 M2
Number of Subsamples	1	1
SE Group No.	14	15
Days After First/Last Applic.	64 24	64 24
Trt-Eval Interval		
Number of Decimals		

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	14	15
1	UTC						0.0	30.50
2	Fierce	0.143 lb ai/a		3 oz/a		A	78.8	0.25
3	Dual II Magnum	0.955 lb ai/a		1 pt/a		A	80.5	1.25
3	Sencor 75DF	0.375 lb ai/a		0.5 lb/a		A		
3	Balance Pro	0.094 lb ai/a		3 oz/a		A		
4	Clarity	1 lb ai/a		32 oz/a		A	61.3	1.25
4	Warrant	2.06 lb ai/a		2.75 qt/a		A		
5	Zemax	1.84 lb ai/a		2 qt/a		A	71.3	0.75
5	Sencor 75DF	0.25 lb ai/a		0.333 lb/a		A		
6	PREFIX	1.32 lb ai/a		1 qt/a		A	25.0	0.50
6	Sencor 75DF	0.25 lb ai/a		0.333 lb/a		A		
7	Fierce	0.143 lb ai/a		3 oz/a		A	93.9	0.50
7	Dual II Magnum	0.955 lb ai/a		1 pt/a		B		
7	Roundup PowerMax	0.77 lb ae/a		22 oz/a		B		
8	Fierce	0.143 lb ai/a		3 oz/a		A	92.5	0.25
8	Dual II Magnum	0.955 lb ai/a		1 pt/a		B		
8	Roundup PowerMax	0.77 lb ae/a		22 oz/a		B		
8	Clarity	0.5 lb ai/a		16 oz/a		A		
9	Clarity	1 lb ai/a		32 oz/a		A	63.9	0.50
9	Warrant	2.06 lb ai/a		2.75 qt/a		A		
9	Dual II Magnum	0.955 lb ai/a		1 pt/a		B		
9	Roundup PowerMax	0.77 lb ae/a		22 oz/a		B		
9	Clarity	0.5 lb ai/a		16 oz/a		B		
10	Fierce	0.143 lb ai/a		3 oz/a		A	92.3	0.63
10	Dual II Magnum	0.955 lb ai/a		1 pt/a		B		
10	Liberty	0.53 lb ai/a		29 oz/a		B		
11	Fierce	0.143 lb ai/a		3 oz/a		A	98.8	0.38
11	Dual II Magnum	0.955 lb ai/a		1 pt/a		B		
11	Roundup PowerMax	0.77 lb ae/a		22 oz/a		B		
11	Weedar 64	1 lb ai/a		1 qt/a		B		
12	Fierce	0.143 lb ai/a		3 oz/a		A	96.0	0.50
12	Dual II Magnum	0.955 lb ai/a		1 pt/a		B		
12	Roundup PowerMax	0.77 lb ae/a		22 oz/a		B		
12	Weedar 64	0.5 lb ai/a		1 pt/a		B		
12	Liberty	0.53 lb ai/a		29 oz/a		B		

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Pest Type	W Weed	W Weed
Pest Code	CHEAL	AMARE
Pest Scientific Name	Chenopodium al>	Amaranthus ret>
Pest Name	Common lambsqu>	Redroot pigweed
Rating Date	Jul-31-2014	Jul-31-2014
Rating Type		COUPLA
Rating Unit		1/2 M2
Number of Subsamples	1	1
SE Group No.	14	15
Days After First/Last Applic.	64 24	64 24
Trt-Eval Interval		
Number of Decimals		

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	14	15
13	Dual II Magnum	0.955 lb ai/a		1 pt/a	A	97.3	0.38
13	Sencor 75DF	0.375 lb ai/a		0.5 lb/a	A		
13	Balance Pro	0.094 lb ai/a		3 oz/a	A		
13	Roundup PowerMax	0.77 lb ae/a		22 oz/a	B		
13	Flexstar	0.235 lb ai/a		16 oz/a	B		
14	Zemax	1.84 lb ai/a		2 qt/a	A	100.0	0.50
14	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A		
14	Flexstar GT	1.25 lb ae/a		3.5 pt/a	B		
14	MSO	1.25 lb ai/a		1 % v/v	B		
15	PREFIX	1.32 lb ai/a		1 qt/a	A	100.0	0.25
15	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A		
15	Halex GT	1.97 lb ai/a		3.6 pt/a	B		
15	Induce	0.313 lb ai/a		0.25 % v/v	B		
16	PREFIX	1.32 lb ai/a		1 qt/a	A	100.7	0.50
16	Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A		
16	Halex GT	1.97 lb ai/a		3.6 pt/a	B		
16	Clarity	0.5 lb ai/a		1 pt/a	B		
16	Induce	0.313 lb ai/a		0.25 % v/v	B		
17	Fierce	0.143 lb ai/a		3 oz/a	A	100.7	0.00
17	Dual II Magnum	0.955 lb ai/a		1 pt/a	C		
17	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C		
18	Fierce	0.143 lb ai/a		3 oz/a	A	100.7	0.00
18	Dual II Magnum	0.955 lb ai/a		1 pt/a	C		
18	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C		
18	Clarity	0.5 lb ai/a		16 oz/a	C		
19	Clarity	1 lb ai/a		32 oz/a	A	100.7	3.75
19	Warrant	2.06 lb ai/a		2.75 qt/a	A		
19	Dual II Magnum	0.955 lb ai/a		1 pt/a	C		
19	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C		
19	Clarity	0.5 lb ai/a		16 oz/a	C		
20	Fierce	0.143 lb ai/a		3 oz/a	A	91.3	0.00
20	Dual II Magnum	0.955 lb ai/a		1 pt/a	C		
20	Liberty	0.53 lb ai/a		29 oz/a	C		
21	Fierce	0.143 lb ai/a		3 oz/a	A	100.0	0.25
21	Dual II Magnum	0.955 lb ai/a		1 pt/a	C		
21	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C		
21	Weedar 64	1 lb ai/a		1 qt/a	C		
22	Fierce	0.143 lb ai/a		3 oz/a	A	100.0	0.00
22	Dual II Magnum	0.955 lb ai/a		1 pt/a	C		
22	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C		
22	Weedar 64	0.5 lb ai/a		1 pt/a	C		
22	Liberty	0.53 lb ai/a		29 oz/a	C		
23	Dual II Magnum	0.955 lb ai/a		1 pt/a	A	86.3	0.25
23	Sencor 75DF	0.375 lb ai/a		0.5 lb/a	A		
23	Balance Pro	0.094 lb ai/a		3 oz/a	A		
23	Roundup PowerMax	0.77 lb ae/a		22 oz/a	C		
23	Flexstar	0.235 lb ai/a		16 oz/a	C		

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Pest Type					W Weed	W Weed
Pest Code					CHEAL	AMARE
Pest Scientific Name					Chenopodium al>	Amaranthus ret>
Pest Name					Common lambsqu>	Redroot pigweed
Rating Date					Jul-31-2014	Jul-31-2014
Rating Type						COUPLA
Rating Unit						1/2 M2
Number of Subsamples					1	1
SE Group No.					14	15
Days After First/Last Applic.					64 24	64 24
Trt-Eval Interval						
Number of Decimals						
Trt Treatment	Rate	Other	Other	Appl		
No. Name	Rate Unit	Rate	Rate Unit	Code	14	15
24 Zemax	1.84 lb ai/a		2 qt/a	A	92.4	1.25
24 Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A		
24 Flexstar GT	1.25 lb ae/a	3.5 pt/a		C		
24 MSO	1.25 lb ai/a	1 % v/v		C		
25 PREFIX	1.32 lb ai/a		1 qt/a	A	100.7	0.00
25 Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A		
25 Halex GT	1.97 lb ai/a	3.6 pt/a		C		
25 Induce	0.313 lb ai/a	0.25 % v/v		C		
26 PREFIX	1.32 lb ai/a		1 qt/a	A	100.7	0.00
26 Sencor 75DF	0.25 lb ai/a	0.333 lb/a		A		
26 Halex GT	1.97 lb ai/a	3.6 pt/a		C		
26 Clarity	0.5 lb ai/a	1 pt/a		C		
26 Induce	0.313 lb ai/a	0.25 % v/v		C		
LSD (P=.05)					16.19	3.657
Standard Deviation					11.45	2.586
CV					13.37	151.49
Bartlett's X2					29.707	142.805
P(Bartlett's X2)					0.008*	0.001*
Skewness					-1.9462*	4.9907*
Kurtosis					2.8832*	25.2726*
Replicate F					0.570	0.109
Replicate Prob(F)					0.6369	0.9548
Treatment F					18.556	20.973
Treatment Prob(F)					0.0001	0.0001

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Program Approaches for Managing Pigweed Utilizing New Technologies

Trial ID: 14USBPRE Location: Western Branch G-8 Trial Year: 2018
Protocol ID: 14USBPRE Investigator: Dr. Mark M. Loux
Project ID: Study Director:
Sponsor Contact:

Pest Type

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

Pest Code

AMARE, Amaranthus retroflexus, = US

AMBTR, Ambrosia trifida, = US

ECHCG, Echinochloa crus-galli, = US

ABUTH, Abutilon theophrasti, = US

CHEAL, Chenopodium album, = US

Rating Type

CONTRO = control / burndown or knockdown

COUPLA = count - plant / emergence - objective

Rating Unit

% = percent