

# The Ohio State University

## 4" - 12" Horseweed burndown with Liberty/Glyphosate tank mixed

Trial ID: 12 HOWEBURN1      Location: Western Branch    Trial Year:  
 Protocol ID: 12 HOWEBURN1    Investigator: Dr. Mark M. Loux  
 Project ID: 12 HOWEBURN1    Study Director: Bryan Reeb  
 Sponsor Contact:

### General Trial Information

**Study Director:** Bryan Reeb      **Title:** Research Technician  
**Investigator:** Dr. Mark M. Loux    **Title:** Professor

**Latitude of LL Corner °:** 39.85806 N  
**Longitude of LL Corner °:** 83.67551 W

**Conducted Under GLP:** No  
**Conducted Under GEP:** No

### Contacts

**Study Director:** Bryan Reeb      **Title:** Research Technician  
**Organization:** The Ohio State University  
**Address:** 7721 South Charleston Pike  
**City+State/Prov:** South Charleston, Ohio  
**Postal Code:** 45368      **E-mail:** reeb.22@osu.edu

**Investigator:** Dr. Mark M. Loux      **Title:** Professor  
**Organization:** The Ohio State University  
**Address:** 222 Kottman Hall, 2021 Coffey Road  
**City+State/Prov:** Columbus, Ohio  
**Postal Code:** 43210      **E-mail:** loux.1@osu.edu

### Crop Description

**Seed Bed:** COMPAC compacted

### Pest Description

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

**Pest 2 Type:** W    **Code:** AMBTR Ambrosia trifida  
**Common Name:** Giant ragweed

**Pest 3 Type:** W    **Code:** TAROF Taraxacum officinale  
**Common Name:** Common dandelion

**Pest 4 Type:** W    **Code:** SENGL Senecio glabellus  
**Common Name:** Cressleaf groundsel

**Pest 5 Type:** W    **Code:** VERAG Veronica agrestis  
**Common Name:** Field speedwell

**Pest 6 Type:** W    **Code:** CAPBP Capsella bursa-pastoris  
**Common Name:** Shepherd's purse

**Pest 7 Type:** W    **Code:** ERICA Conyza canadensis  
**Common Name:** Canada horseweed

### Site and Design

**Treated Plot Width:** 6.67 FT  
**Treated Plot Length:** 30 FT  
**Treated Plot Area:** 200.1 FT<sup>2</sup>    **Treatments:** 28  
**Replications:** 3

**Study Design:** SPLBLO Split-Block

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## Application Description

	A	B
Application Date:	May-18-2012	Jun-15-2012
Appl. Start Time:	2:30PM	9:00am
Application Method:	SPRAY	SPRAY
Application Timing:	4" howe	12"HOWE
Application Placement:	BROFOL	BROFOL
Air Temperature, Unit:	84 F	76 F
% Relative Humidity:	39	65
Wind Velocity, Unit:	5 MPH	6 MPH
Wind Direction:		SE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	76 F	70 F
Soil Moisture:	DRY	GOOD
% Cloud Cover:	0	0

## Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:	19 100	19 100
Height, Unit:	3.5 IN	6 IN
Height Minimum, Maximum:	2 5	2 8
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:	19 100	
Height, Unit:	18 IN	
Height Minimum, Maximum:	7 24	
Pest 3 Code, Type, Scale:	TAROF W	TAROF W
Stage Majority, Percent:	69 100	
Height, Unit:	4 IN	
Height Minimum, Maximum:	2 6	
Pest 4 Code, Type, Scale:	SENGL W	SENGL W
Stage Majority, Percent:	19 100	
Height, Unit:	18 IN	
Height Minimum, Maximum:	14 24	
Pest 5 Code, Type, Scale:	VERAG W	VERAG W
Stage Majority, Percent:	19 100	
Height, Unit:	5 IN	
Height Minimum, Maximum:	3 7	
Pest 6 Code, Type, Scale:	CAPBP W	CAPBP W
Stage Majority, Percent:	69 100	
Height, Unit:	23 IN	
Height Minimum, Maximum:	23 23	
Pest 7 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:		19 100
Height, Unit:		28 in
Height Minimum, Maximum:		18 34

## Application Equipment

	A	B
Appl. Equipment:	Backpack	Backpack
Equipment Type:	SPRBAC	SPRBAC
Operation Pressure, Unit:	44 PSI	44 PSI
Nozzle Type:	AIXR	AIXR
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN
Boom Length, Unit:	10 FT	10 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac
Mix Size, Unit:	1 Liters	1 Liters
Propellant:	COMCO2	COMCO2

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Pest Type	W Weed	W Weed	W Weed	W Weed				
Pest Code	ERICA	ERICA	ERICA	ERICA				
Pest Scientific Name	Conyza canadensis	Conyza canadensis	Conyza canadensis	Conyza canadensis				
Pest Name	Canada horseweed	Canada horseweed	Canada horseweed	Canada horseweed				
Rating Date	Jun-21-2012	Jun-21-2012	Jun-21-2012	Jun-21-2012				
Rating Type	CONTRO	COUNT	CONTRO	CONTRO				
Rating Unit	%	ADD DEAD	%	%				
Number of Subsamples	1	1	1	1				
Days After First/Last Applic.	34 6	34 6	34 6	34 6				
Trt-Eval Interval			34 DAT	6 DAT				
Number of Decimals	0	0	0	0				
Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit Code	1	2	3	4
1	Roundup Power Max	21.3 oz/a		A		7		7
	1 N-pak ams	1.5 qt/a		A				
2	Liberty	11 oz/a		A		57		57
	2 N-pak ams	1.5 qt/a		A				
3	Liberty	22 oz/a		A		62		62
	3 N-pak ams	1.5 qt/a		A				
4	Roundup Power Max	21.3 oz/a		A		53		53
	4 Liberty	11 oz/a		A				
	4 N-pak ams	1.5 qt/a		A				
5	Roundup Power Max	21.3 oz/a		A		68		68
	5 Liberty	22 oz/a		A				
	5 N-pak ams	1.5 qt/a		A				
6	Roundup Power Max	21.3 oz/a		A		60		60
	6 Liberty	11 oz/a		A				
	6 2,4-D	1 pt/a		A				
	6 N-pak ams	1.5 qt/a		A				
7	Roundup Power Max	21.3 oz/a		A		55		55
	7 Liberty	22 oz/a		A				
	7 2,4-D	1 pt/a		A				
	7 N-pak ams	1.5 qt/a		A				
8	Roundup Power Max	21.3 oz/a		A		63		63
	8 Liberty	11 oz/a		A				
	8 Sharpen	1 oz/a		A				
	8 N-pak ams	1.5 qt/a		A				
	8 MSO	0.6 qt/a		A				
9	Roundup Power Max	21.3 oz/a		A		77		77
	9 Liberty	22 oz/a		A				
	9 Sharpen	1 oz/a		A				
	9 N-pak ams	1.5 qt/a		A				
	9 MSO	0.6 qt/a		A				
10	Roundup Power Max	21.3 oz/a		A		70		70
	10 Liberty	11 oz/a		A				
	10 Sencor 75DF	4 oz/a		A				
	10 N-pak ams	1.5 qt/a		A				

Could not calculate LSD (% mean diff) for columns 2 because error mean square = 0.

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	ERICA	ERICA	ERICA	ERICA
Pest Scientific Name	Conyza canadensis	Conyza canadensis	Conyza canadensis	Conyza canadensis
Pest Name	Canada horseweed	Canada horseweed	Canada horseweed	Canada horseweed
Rating Date	Jun-21-2012	Jun-21-2012	Jun-21-2012	Jun-21-2012
Rating Type	CONTRO	COUNT	CONTRO	CONTRO
Rating Unit	%	ADD DEAD	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	34 6	34 6	34 6	34 6
Trt-Eval Interval			34 DAT	6 DAT
Number of Decimals	0	0	0	0

Trt Treatment No. Name	Other Rate	Other Rate Unit	Appl Code	1	2	3	4
11 Roundup Power Max	21.3 oz/a		A	63			63
11 Liberty	22 oz/a		A				
11 Sencor 75DF	4 oz/a		A				
11 N-pak ams	1.5 qt/a		A				
12 Roundup Power Max	21.3 oz/a		A	40	4		40
12 2,4-D	1 pt/a		A				
12 N-pak ams	1.5 qt/a		A				
13 Roundup Power Max	21.3 oz/a		A	53			53
13 Sharpen	1 oz/a		A				
13 N-pak ams	1.5 qt/a		A				
13 MSO	0.6 qt/a		A				
14 Roundup Power Max	21.3 oz/a		A	13			13
14 Sencor 75DF	4 oz/a		A				
14 N-pak ams	1.5 qt/a		A				
15 Roundup Power Max	21.3 oz/a		B	33		33	
15 N-pak ams	1.5 qt/a		B				
16 Liberty	11 oz/a		B	37		37	
16 N-pak ams	1.5 qt/a		B				
17 Liberty	22 oz/a		B	65		65	
17 N-pak ams	1.5 qt/a		B				
18 Roundup Power Max	21.3 oz/a		B	33		33	
18 Liberty	11 oz/a		B				
18 N-pak ams	1.5 qt/a		B				
19 Roundup Power Max	21.3 oz/a		B	50		50	
19 Liberty	22 oz/a		B				
19 N-pak ams	1.5 qt/a		B				
20 Roundup Power Max	21.3 oz/a		B	72		72	
20 Liberty	11 oz/a		B				
20 2,4-D	1 pt/a		B				
20 N-pak ams	1.5 qt/a		B				
21 Roundup Power Max	21.3 oz/a		B	63		63	
21 Liberty	22 oz/a		B				
21 2,4-D	1 pt/a		B				
21 N-pak ams	1.5 qt/a		B				
22 Roundup Power Max	21.3 oz/a		B	63			63
22 Liberty	11 oz/a		B				
22 Sharpen	1 oz/a		B				
22 N-pak ams	1.5 qt/a		B				
22 MSO	0.6 qt/a		B				

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Pest Code	ERICA	ERICA	ERICA	ERICA
Pest Scientific Name	Conyza canadensis	Conyza canadensis	Conyza canadensis	Conyza canadensis
Pest Name	Canada horseweed	Canada horseweed	Canada horseweed	Canada horseweed
Rating Date	Jun-21-2012	Jun-21-2012	Jun-21-2012	Jun-21-2012
Rating Type	CONTRO	COUNT	CONTRO	CONTRO
Rating Unit	%	ADD DEAD	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	34 6	34 6	34 6	34 6
Trt-Eval Interval			34 DAT	6 DAT
Number of Decimals	0	0	0	0

Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit Code	1	2	3	4
23 Roundup Power Max	21.3 oz/a		B		85		85
23 Liberty	22 oz/a		B				
23 Sharpen	1 oz/a		B				
23 N-pak ams	1.5 qt/a		B				
23 MSO	0.6 qt/a		B				
24 Roundup Power Max	21.3 oz/a		B		77		77
24 Liberty	11 oz/a		B				
24 Sencor 75DF	4 oz/a		B				
24 N-pak ams	1.5 qt/a		B				
25 Roundup Power Max	21.3 oz/a		B		83		83
25 Liberty	22 oz/a		B				
25 Sencor 75DF	4 oz/a		B				
25 N-pak ams	1.5 qt/a		B				
26 Roundup Power Max	21.3 oz/a		B		60		60
26 2,4-D	1 pt/a		B				
26 N-pak ams	1.5 qt/a		B				
27 Roundup Power Max	21.3 oz/a		B		80		80
27 Sharpen	1 oz/a		B				
27 N-pak ams	1.5 qt/a		B				
27 MSO	0.6 qt/a		B				
28 Roundup Power Max	21.3 oz/a		B		23		23
28 Sencor 75DF	4 oz/a		B				
28 N-pak ams	1.5 qt/a		B				
LSD P=.05				29.1	.	26.2	30.7
Standard Deviation				17.8	.	15.6	18.3
CV				31.82	.	30.52	30.06
Bartlett's X2				19.823	.	8.773	12.046
P(Bartlett's X2)				0.838	.	0.79	0.524
Replicate F				1.057		2.675	2.208
Replicate Prob(F)				0.3546		0.0878	0.1301
Treatment F				3.856		3.913	4.294
Treatment Prob(F)				0.0001		0.0015	0.0008

Pest Type  
 W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop  
Pest Code  
 ERICA, Conyza canadensis, = US  
Rating Type  
 CONTRO = control / burndown or knockdown  
 COUNT = count  
Rating Unit  
 % = percent