

# The Ohio State University

## FALL HORSEWEED BURNDOWN AND RESIDUAL

Trial ID: 12 FALLHOWE      Location: Western Branch F-10      Trial Year:  
 Protocol ID: 12 FALLHOWE      Investigator: Dr. Mark M. Loux  
 Project ID: 12 FALLHOWE      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 °:** 39.85868 N  
**Longitude of LL Corner °:** 83.67133 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 1:** GLXMA      Glycine max  
**Variety:** SEED CONSULTANTS      **Crop Description:** Soybean  
**Description:** glufosinate resistant      **BBCH Scale:** BSOY

**Planting Rate, Unit:** 145000 S/A      **Planting Date:** Jun-15-2012  
**Depth, Unit:** 0.5 IN      **Planting Method:** PLANTD planted  
**Row Spacing, Unit:** 15 IN      **Emergence Date:** Jun-22-2012  
**Soil Temperature, Unit:** 75 F  
**Soil Moisture:** DRY      dry  
**Seed Bed:** COMPAC      compacted

### Pest Description

**Pest 1 Type:** W      **Code:** LAMPU Lamium purpureum  
**Common Name:** Purple deadnettel

**Pest 2 Type:** W      **Code:** STEME Stellaria media  
**Common Name:** Common chickweed

**Pest 3 Type:** W      **Code:** SENGL Senecio glabellus  
**Common Name:** Cressleaf groundsel

**Pest 4 Type:** W      **Code:** TAROF Taraxacum officinale  
**Common Name:** Common dandelion

### Site and Design

**Treated Plot Width:** 10 FT      **Site Type:** FIELD      field  
**Treated Plot Length:** 30 FT      **Experimental Unit:** 1      PLOT      plot  
**Treated Plot Area:** 300 FT2      **Treatments:** 22      **Tillage Type:** NOTILL      no-till  
**Replications:** 3      **Study Design:** RACOB� Randomized Complete Block (RCB)  
**Untreated Arrangement:** INCLUDED single control randomized in each block

### Soil Description

**Description Name:** F-10 East  
**% OM:** 2.2      **Texture:** SSIL      sandy silt loam  
**pH:** 5.9      **Soil Name:** Kokomo Silty Clay Loam  
**CEC:** 22      **Fert. Level:** G      good  
**Soil Drainage:** G      good

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## Application Description

	A	B
Application Date:	Nov-17-2011	Jun-15-2012
Appl. Start Time:	10:00 AM	9:00
Application Method:	SPRAY	SPRAY
Application Timing:	FALL	MIPOWE
Application Placement:	BROFOL	BROFOL
Air Temperature, Unit:	38 F	76 F
% Relative Humidity:	49	65
Wind Velocity, Unit:	8 MPH	6 MPH
Wind Direction:	WSW	SE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	41 F	70 F
Soil Moisture:	MOIST	GOOD
% Cloud Cover:	7	0

## Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA	BSOY GLXMA BSOY

## Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	LAMPU W	LAMPU W
Stage Majority, Percent:	12	100
Diameter, Unit:	3 IN	
Height, Unit:	2 IN	
Height Minimum, Maximum:	1 2	
Pest 2 Code, Type, Scale:	STEME W	STEME W
Stage Majority, Percent:	12	100
Diameter, Unit:	2 IN	
Height, Unit:	2 IN	
Height Minimum, Maximum:	1 2	
Pest 3 Code, Type, Scale:	SENGL W	SENGL W
Stage Majority, Percent:	12	100
Diameter, Unit:	4 IN	
Height, Unit:	2 IN	
Height Minimum, Maximum:	1 2	
Pest 4 Code, Type, Scale:	TAROF W	TAROF W
Stage Majority, Percent:	15	100
Diameter, Unit:	6 IN	
Height, Unit:	1 IN	
Height Minimum, Maximum:	0.5 1	

## Application Equipment

	A	B
Appl. Equipment:	Backpack	TRACTOR
Equipment Type:	SPRBAC	SPTRMO
Operation Pressure, Unit:	46 PSI	30 PSI
Nozzle Type:	DG	DG
Nozzle Size:	110015	11002
Nozzle Spacing, Unit:	18 IN	20 IN
Boom Length, Unit:	10 FT	10 FT
Boom Height, Unit:	18 IN	20 IN
Ground Speed, Unit:	3 MPH	3.8 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 gal/ac	15 gal/ac
Mix Size, Unit:	2 Liters	15 gallons
Propellant:	COMCO2	PUMROL

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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	May-9-2012	May-29-2012	Jun-14-2012	Jul-16-2012
Rating Type	COUNT	COUNT	COUNT	CONTRO
Rating Unit	M2	M2	M2	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	174 174	194 194	210 210	242 31
Trt-Eval Interval	174 DA-A			
Plant-Eval Interval	-37 DP-1	-17 DP-1	-1 DP-1	31 DP-1
Days After Emergence	-44 DE-1	-24 DE-1	-8 DE-1	24 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4
1	2,4-D Ester	0.5 lb ai/a	A		16	45	60	7
1	Roundup Power Max	0.375 lb ae/a	A					
1	N-pak ams	2.5 % v/v	A					
2	Clarity	0.25 lb ai/a	A		39	36	66	17
2	2,4-D Ester	0.5 lb ai/a	A					
2	Roundup Power Max	0.375 lb ae/a	A					
2	N-pak ams	2.5 % v/v	A					
3	Clarity	0.5 lb ai/a	A		25	48	60	13
3	2,4-D Ester	0.5 lb ai/a	A					
3	Roundup Power Max	0.375 lb ae/a	A					
3	N-pak ams	2.5 % v/v	A					
4	Sencor 75DF	0.188 lb ai/a	A		22	58	63	23
4	2,4-D Ester	0.5 lb ai/a	A					
4	Roundup Power Max	0.375 lb ae/a	A					
4	N-pak ams	2.5 % v/v	A					
5	Sencor 75DF	0.375 lb ai/a	A		16	75	56	17
5	2,4-D Ester	0.5 lb ai/a	A					
5	Roundup Power Max	0.375 lb ae/a	A					
5	N-pak ams	2.5 % v/v	A					
6	Sencor 75DF	0.56 lb ai/a	A		41	25	56	10
6	2,4-D Ester	0.5 lb ai/a	A					
6	Roundup Power Max	0.375 lb ae/a	A					
6	N-pak ams	2.5 % v/v	A					
7	Canopy EX @ 1.1oz				2	1	2	67
7	Classic	0.0156 lb ai/a	A					
7	Express	0.0047 lb ai/a	A					
7	2,4-D Ester	0.5 lb ai/a	A					
7	Roundup Power Max	0.375 lb ae/a	A					
7	N-pak ams	2.5 % v/v	A					
8	Canopy EX @ 2.2oz				0	1	1	83
8	Classic	0.0308 lb ai/a	A					
8	Express	0.0094 lb ai/a	A					
8	2,4-D Ester	0.5 lb ai/a	A					
8	Roundup Power Max	0.375 lb ae/a	A					
8	N-pak ams	2.5 % v/v	A					

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Days After Emergence	-44 DE-1	-24 DE-1	-8 DE-1	24 DE-1
Number of Decimals	0	0	0	0

Trt Treatment	Rate	Unit	Appl Code	1	2	3	4
9 Canopy	0.105 lb ai/a	A		0	1	3	75
9 2,4-D Ester	0.5 lb ai/a	A					
9 Roundup Power Max	0.375 lb ae/a	A					
9 N-pak ams	2.5 % v/v	A					
10 Canopy	0.21 lb ai/a	A		0	1	3	72
10 2,4-D Ester	0.5 lb ai/a	A					
10 Roundup Power Max	0.375 lb ae/a	A					
10 N-pak ams	2.5 % v/v	A					
11 Canopy	0.105 lb ai/a	A		0	3	2	68
11 Sencor 75DF	0.28 lb ai/a	A					
11 2,4-D Ester	0.5 lb ai/a	A					
11 Roundup Power Max	0.375 lb ae/a	A					
11 N-pak ams	2.5 % v/v	A					
12 VALOR XLT @ 2 oz				0	0	2	73
12 Valor SX	0.0373 lb ai/a	A					
12 Classic	0.013 lb ai/a	A					
12 2,4-D Ester	0.5 lb ai/a	A					
12 Roundup Power Max	0.375 lb ae/a	A					
12 N-pak ams	2.5 % v/v	A					
13 VALOR XLT @ 4 oz				0	0	2	87
13 Valor SX	0.075 lb ai/a	A					
13 Classic	0.0258 lb ai/a	A					
13 2,4-D Ester	0.5 lb ai/a	A					
13 Roundup Power Max	0.375 lb ae/a	A					
13 N-pak ams	2.5 % v/v	A					
14 Valor SX	0.032 lb ai/a	A		15	41	72	20
14 2,4-D Ester	0.5 lb ai/a	A					
14 Roundup Power Max	0.375 lb ae/a	A					
14 N-pak ams	2.5 % v/v	A					
15 Valor SX	0.064 lb ai/a	A		6	28	39	30
15 2,4-D Ester	0.5 lb ai/a	A					
15 Roundup Power Max	0.375 lb ae/a	A					
15 N-pak ams	2.5 % v/v	A					
16 Sharpen	0.0223 lb ai/a	A		16	33	95	27
16 2,4-D Ester	0.5 lb ai/a	A					
16 Roundup Power Max	0.375 lb ae/a	A					
16 N-pak ams	2.5 % v/v	A					
17 Authority MTZ	0.338 lb ai/a	A		36	49	118	13
17 2,4-D Ester	0.5 lb ai/a	A					
17 Roundup Power Max	0.375 lb ae/a	A					
17 N-pak ams	2.5 % v/v	A					

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Days After Emergence	-44 DE-1	-24 DE-1	-8 DE-1	24 DE-1
Number of Decimals	0	0	0	0

Trt Treatment No. Name	Rate	Rate Unit	Appl Code	1	2	3	4
18 Authority XL	0.0875	lb ai/a	A	0	0	3	68
18 2,4-D Ester	0.5	lb ai/a	A				
18 Roundup Power Max	0.375	lb ae/a	A				
18 N-pak ams	2.5	% v/v	A				
19 Authority XL	0.175	lb ai/a	A	0	1	1	68
19 2,4-D Ester	0.5	lb ai/a	A				
19 Roundup Power Max	0.375	lb ae/a	A				
19 N-pak ams	2.5	% v/v	A				
20 Scepter	0.123	lb ai/a	A	7	52	57	23
20 2,4-D Ester	0.5	lb ai/a	A				
20 Roundup Power Max	0.375	lb ae/a	A				
20 N-pak ams	2.5	% v/v	A				
21 KIH 485	0.133	lb ai/a	A	21	24	39	20
21 2,4-D Ester	0.5	lb ai/a	A				
21 Roundup Power Max	0.375	lb ae/a	A				
21 N-pak ams	2.5	% v/v	A				
22 KIH 485	0.266	lb ai/a	A	37	49	67	27
22 2,4-D Ester	0.5	lb ai/a	A				
22 Roundup Power Max	0.375	lb ae/a	A				
22 N-pak ams	2.5	% v/v	A				
LSD P=.05				39.4	39.2	40.7	23.6
Standard Deviation				23.9	23.8	24.7	14.3
CV				175.97	92.11	62.93	34.66
Bartlett's X2				71.216	106.134	105.104	14.922
P(Bartlett's X2)				0.001*	0.001*	0.001*	0.781
Replicate F				1.542	12.113	4.824	3.620
Replicate Prob(F)				0.2259	0.0001	0.0130	0.0354
Treatment F				1.111	3.049	6.225	11.727
Treatment Prob(F)				0.3743	0.0010	0.0001	0.0001

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

Pest Code  
ERICA, Conyza canadensis, = US

Rating Type  
COUNT = count  
CONTRO = control / burndown or knockdown

Rating Unit  
M2 = square meter  
% = percent

Plant-Eval Interval  
-37 DP-1 = 1 GLXMA Jun-15-2012  
-17 DP-1 = 1 GLXMA Jun-15-2012  
-1 DP-1 = 1 GLXMA Jun-15-2012  
31 DP-1 = 1 GLXMA Jun-15-2012