

The Ohio State University

Rye Cover Crop

Trial ID: 14AnnualRyeWestern
Protocol ID: 13RYEwestern
Project ID:

Location: Trial Year: 2014
Investigator: Dr. Mark M. Loux
Study Director:
Sponsor Contact:

Crop Description

Crop 1: GLXMA Glycine max
Variety: Seed Consultants SC9314RR

Soybean

BBCH Scale: BSOY

Planting Date: May-4-2014

Planting Rate, Unit: 155507 S/A

Planting Method: SEEDED seeded

Depth, Unit: 1 IN

Planting Equipment: FE Field Equipment

Row Spacing, Unit: 15 IN

Emergence Date: May-15-2014

Soil Moisture: SLIWET slightly wet, moist

Seed Bed: MEDTRA medium/trashy

Crop 2: LOLMG Lolium multiflorum gaudini

Annual ryegrass

Variety: PPERC2 Oregon Certified Seed **BBCH Scale:** BGRM

Description: Tillage Rootmax Brand

Planting Date: Oct-11-2013

Planting Rate, Unit: 26 LB/A

Planting Method: DRILLE drilled

Depth, Unit: 0.37 IN

Planting Equipment: DD Disc Drill

Row Spacing, Unit: 7.5 IN

Emergence Date: Oct-18-2013

Pest Description

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

Pest 2 Type: W **Code:** ERICA Conyza canadensis
Common Name: Canada horseweed

Site and Design

Treated Plot Width: 10 FT

Site Type: FIELD field

Treated Plot Length: 40 FT

Experimental Unit: 1 PLOT plot

Treated Plot Area: 400 FT² **Treatments:** 12

Tillage Type: NOTILL no-till

Replications: 4

Study Design: FACTOR Factorial

No. Previous Crop Year

1. soybean 2013

Maintenance

No.	Date	Maintenance Product Name	Form Conc	Form Type	Form Rate	Maintenance Tank Unit	Maintenance Tank Code	Maintenance Tank Mix
1.	Jun-4-2014	Roundup Weathermax	4.5	SL	32	OZ/A	N	no

Soil Description

Description Name: F-9 West

% OM: 2

Texture: SICL silty clay loam

pH: 6.2

Soil Name: Kokomo

CEC: 9.7

Fert. Level: G good

Soil Drainage: G good

Application Description

	A	B	C
Application Date:	Nov-14-2013	Apr-17-2014	Apr-24-2014
Appl. Start Time:	5:00 PM	11:00 AM	11:00 AM
Appl. Stop Time:	5:30 PM	11:30 AM	11:30 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	FALL	SPRING	7 EPP
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	Dobbels	Reeb	Dobbels
Air Temperature, Unit:	47 F	49 F	48.5 F
% Relative Humidity:	50	54	45
Wind Velocity, Unit:	5 MPH	8.3 MPH	7 MPH
Wind Direction:	S	S	E
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	40 F	40 F	50 F
Soil Moisture:	WET	MOIST	MOIST
% Cloud Cover:	0	15	20
Next Moisture Occurred On:	Nov-17-2013	Apr-25-2014	Apr-25-2014
Time to Next Moisture, Unit:	3 DAY	8 DAY	22 HR

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Crop Stage At Each Application

	A		B		C	
Crop 1 Code, BBCH Scale:	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY
Crop 2 Code, BBCH Scale:	LOLMG	BGRM	LOLMG	BGRM	LOLMG	BGRM
Stage Scale Used:	DESC		BBCH		BBCH	
Stage Majority, Percent:	12	100	23	100	25	100
Height, Unit:	1	IN	2	IN	2	IN
Height Minimum, Maximum:	1	1	1	2	1	3

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	LAMPU W	LAMPU W	LAMPU W
Pest 2 Code, Type, Scale:	ERICA W	ERICA W	ERICA W

Application Equipment

	A	B	C
Appl. Equipment:	10' AI XR	10' AI XR	10' AI XR
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	46 PSI	46 PSI
Nozzle Type:	AI XR	AI XR	AI XR
Nozzle Size:	110015	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN
Boom Length, Unit:	10 FT	10 FT	10 FT
Boom Height, Unit:	20 IN	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA
Mix Size, Unit:	3 Gallons	3 Gallons	3 Gallons
Propellant:	CO2	CO2	CO2

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Pest Type	W Weed	W Weed	W Weed
Pest Code	ERICA	ERICA	LOLMG
Pest Scientific Name	Conyza canadensis	Conyza canadensis	Lolium multiflorum
Pest Name	Canada horseweed	Canada horseweed	Annual ryegrass
Rating Date	Jun-4-2014	Jun-5-2014	Jun-5-2014
Rating Type	COUPLA	CONTRO	CONTRO
Rating Unit	1/2 M2	%	%
Number of Subsamples	1	1	1
SE Group No.	1	2	3
Days After First/Last Applic.	202 41	203 42	203 42
Plant-Eval Interval	31 DP-1	32 DP-1	32 DP-1
Days After Emergence	20 DE-1	21 DE-1	21 DE-1
Number of Decimals	0	0	

Trt No.	Treatment Name	Rate	Other Rate	Other Unit	Appl Unit Code	1	2	3
1	2,4-D	0.5 lb ai/a	1 pt/a		A	7	35	71.3
	1 Early April							
1	Roundup WeatherMax	0.77 lb ae/a	22 oz/a		B			
1	2,4-D	0.5 lb ai/a	1 pt/a		B			
1	N-PAK AMS	2.5 % v/v	1.5 qt/a		B			
2	2,4-D	0.5 lb ai/a	1 pt/a		A	1	95	95.0
	2 Early April							
2	Roundup WeatherMax	0.77 lb ae/a	22 oz/a		B			
2	2,4-D	0.5 lb ai/a	1 pt/a		B			
2	Canopy	0.188 lb ai/a	4 oz/a		B			
2	Sencor 75DF	0.234 lb ai/a	5 oz/a		B			
2	N-PAK AMS	2.5 % v/v	1.5 qt/a		B			
3	2,4-D	0.5 lb ai/a	1 pt/a		A	4	43	73.8
	3 7 EPP							
3	Roundup WeatherMax	0.77 lb ae/a	22 oz/a		C			
3	2,4-D	0.5 lb ai/a	1 pt/a		C			
3	N-PAK AMS	2.5 % v/v	1.5 qt/a		C			
4	2,4-D	0.5 lb ai/a	1 pt/a		A	1	74	78.8
	4 7 EPP							
4	Roundup WeatherMax	0.77 lb ae/a	22 oz/a		C			
4	2,4-D	0.5 lb ai/a	1 pt/a		C			
4	Canopy	0.188 lb ai/a	4 oz/a		C			
4	Sencor 75DF	0.234 lb ai/a	5 oz/a		C			
4	N-PAK AMS	2.5 % v/v	1.5 qt/a		C			
5	2,4-D	0.5 lb ai/a	1 pt/a		A	9	30	73.8
	5 Cut & Bale							
5	Roundup WeatherMax	0.77 lb ae/a	22 oz/a		C			
5	2,4-D	0.5 lb ai/a	1 pt/a		C			
5	N-PAK AMS	2.5 % v/v	1.5 qt/a		C			
6	2,4-D	0.5 lb ai/a	1 pt/a		A	1	97	70.0
	6 Cut & Bale							
6	Roundup WeatherMax	0.77 lb ae/a	22 oz/a		C			
6	2,4-D	0.5 lb ai/a	1 pt/a		C			
6	Canopy	0.188 lb ai/a	4 oz/a		C			
6	Sencor 75DF	0.234 lb ai/a	5 oz/a		C			
6	N-PAK AMS	2.5 % v/v	1.5 qt/a		C			
7	No Fall Herb					4	28	73.8
	7 Early April							
7	Roundup WeatherMax	0.77 lb ae/a	22 oz/a		B			
7	2,4-D	0.5 lb ai/a	1 pt/a		B			
7	N-PAK AMS	2.5 % v/v	1.5 qt/a		B			

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Rating Type	COUPLA	CONTRO	CONTRO
Rating Unit	1/2 M2	%	%
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SE Group No.	1	2	3
Days After First/Last Applic.	202 41	203 42	203 42
Plant-Eval Interval	31 DP-1	32 DP-1	32 DP-1
Days After Emergence	20 DE-1	21 DE-1	21 DE-1
Number of Decimals	0	0	

Trt Treatment No. Name	Rate	Other Rate	Other Rate	Appl Unit Code	1	2	3
8 No Fall Herb					1		81.3
8 Early April						74	
8 Roundup WeatherMax	0.77 lb ae/a	22 oz/a		B			
8 2,4-D	0.5 lb ai/a	1 pt/a		B			
8 Canopy	0.188 lb ai/a	4 oz/a		B			
8 Sencor 75DF	0.234 lb ai/a	5 oz/a		B			
8 N-PAK AMS	2.5 % v/v	1.5 qt/a		B			
9 No Fall Herb					9		70.0
9 7 EPP						20	
9 Roundup WeatherMax	0.77 lb ae/a	22 oz/a		C			
9 2,4-D	0.5 lb ai/a	1 pt/a		C			
9 N-PAK AMS	2.5 % v/v	1.5 qt/a		C			
10 No Fall Herb					3		81.8
10 7 EPP						86	
10 Roundup WeatherMax	0.77 lb ae/a	22 oz/a		C			
10 2,4-D	0.5 lb ai/a	1 pt/a		C			
10 Canopy	0.188 lb ai/a	4 oz/a		C			
10 Sencor 75DF	0.234 lb ai/a	5 oz/a		C			
10 N-PAK AMS	2.5 % v/v	1.5 qt/a		C			
11 No Fall Herb					12		78.8
11 Cut & Bale						29	
11 Roundup WeatherMax	0.77 lb ae/a	22 oz/a		C			
11 2,4-D	0.5 lb ai/a	1 pt/a		C			
11 N-PAK AMS	2.5 % v/v	1.5 qt/a		C			
12 No Fall Herb					0		78.8
12 Cut & Bale						95	
12 Roundup WeatherMax	0.77 lb ae/a	22 oz/a		C			
12 2,4-D	0.5 lb ai/a	1 pt/a		C			
12 Canopy	0.188 lb ai/a	4 oz/a		C			
12 Sencor 75DF	0.234 lb ai/a	5 oz/a		C			
12 N-PAK AMS	2.5 % v/v	1.5 qt/a		C			
LSD (P=.05)					9.0	41.8	19.97
Standard Deviation					6.2	28.9	13.83
CV					145.37	49.32	17.91
Bartlett's X2					59.793	25.093	4.064
P(Bartlett's X2)					0.001*	0.005*	0.944
Skewness					2.9493*	-0.2442	-0.5837
Kurtosis					10.4178*	-1.7569*	-0.5052
Replicate F					5.694	2.882	4.905
Replicate Prob(F)					0.0030	0.0505	0.0063
Treatment F					1.641	4.480	1.019
Treatment Prob(F)					0.1328	0.0004	0.4521

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
ERICA, Conyza canadensis, = US
LOLMG, Lolium multiflorum gaudini, = US
Rating Type
COUPLA = count - plant / emergence - objective
CONTRO = control / burndown or knockdown
Rating Unit
% = percent
Plant-Eval Interval
31 DP-1 = 1 GLXMA May-4-2014
32 DP-1 = 1 GLXMA May-4-2014