

The Ohio State University

Rye Cover Crop

Trial ID: 14RYEwestern Location: Trial Year: 2014
 Protocol ID: 13RYEwestern Investigator: Dr. Mark M. Loux
 Project ID: Study Director:
 Sponsor Contact:

General Trial Information

Investigator: Dr. Mark M. Loux

Latitude of LL Corner °: 39.85887 N
 Longitude of LL Corner °: 83.67324 W

Investigator: Dr. Mark M. Loux

Crop 1: GLXMA Glycine max
Variety: Seed Consultants SC9314RR

Planting Rate, Unit: 155507 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN

Soil Moisture: SLIWET slightly wet, moist
Seed Bed: MEDTRA medium/trashy

Crop Description

Planting Date: 5-4-2014
Planting Method: SEEDED seeded
Planting Equipment: FE Field Equipment
Emergence Date: 5-15-2014
Harvest Date: 10-25-2014
Harvested Width, Unit: 6.25 FT
Harvested Length, Unit: 40 FT
Harvest Equipment: Massey Ferguson 8 XP
% Standard Moisture: 13.0
Moisture Meter: Harvest Master
Weighing Equipment: Harvest Master

Crop 2: SECCW Secale cereale (winter)
Variety: VNS

Description: KD2013B Walnut Creek Seed

Planting Rate, Unit: 90 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Winter rye

Planting Date: 10-11-2013
Planting Method: DRILLE drilled
Planting Equipment: DD Disc Drill

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 40 FT
Treated Plot Area: 400 FT2 **Treatments:** 12
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: NOTILL no-till
Study Design: FACTOR Factorial

No. Previous Crop Previous Pesticides Year
 1. Soybean various 2013

Maintenance

No.	Date	Maintenance Product Name	Form Conc	Form Type	Rate	Tank Unit	Mix
1.	6-4-2014	Roundup Weathermax	4.5	SL	32	OZ/A	no

Soil Description

Description Name: F-9 East
% OM: 2.8 **Texture:** SICL silty clay loam
pH: 6.4 **Soil Name:** Kokomo
CEC: 19.6 **Fert. Level:** G good
Soil Drainage: G good

Application Description

	A	B	C
Application Date:	11-14-2013	4-17-2014	4-24-2014
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:	11-17-2013	4-25-2014	4-25-2014
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:	SECCW	BCER	SECCW	BCER	SECCW	BCER
Stage Scale Used:	DESC		DESC		BBCH	
Stage Majority, Percent:	12	100	24	100	27	100
Height, Unit:	2	IN	6	IN	8	IN
Height Minimum, Maximum:	2	2	4	6	7	8

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

Date **By** **Notes**
 4-21-2014 Dobbels Rye was clipped today about 8" tall down to about 2"

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Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Rating Date	10-25-2014	10-25-2014	10-25-2014	10-25-2014
Rating Type	YIELD	MOICON	YIELD	WEITES
Rating Unit	LBS	%	BU	LBS
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	345 184	345 184	345 184	345 184
Plant-Eval Interval	174 DP-1	174 DP-1	174 DP-1	174 DP-1
Days After Emergence	163 DE-1	163 DE-1	163 DE-1	163 DE-1
ARM Action Codes		AL	TY1	
Number of Decimals	1	1	1	1

Trt No.	Treatment Name	Other Rate	Other Rate	Growth Unit	Appl Code	6	7	8	9
1	2,4-D		1 pt/a	Fall	A	21.2 bcd	15.4 a	60.0 bcd	55.6 a
1	Early April								
1	Roundup WeatherMax	22 oz/a		April	B				
1	2,4-D		1 pt/a	April	B				
1	N-PAK AMS		1.5 qt/a	April	B				
2	2,4-D		1 pt/a	Fall	A	23.0 ab	15.4 a	64.8 ab	55.1 a
2	Early April								
2	Roundup WeatherMax	22 oz/a		April	B				
2	2,4-D		1 pt/a	April	B				
2	Canopy		4 oz/a	April	B				
2	Sencor 75DF		5 oz/a	April	B				
2	N-PAK AMS		1.5 qt/a	April	B				
3	2,4-D		1 pt/a	Fall	A	19.8 d	15.4 a	55.8 d	55.5 a
3	7 EPP								
3	Roundup WeatherMax	22 oz/a		7 EPP	C				
3	2,4-D		1 pt/a	7 EPP	C				
3	N-PAK AMS		1.5 qt/a	7 EPP	C				
4	2,4-D		1 pt/a	Fall	A	21.1 bcd	16.1 a	59.0 bcd	54.6 a
4	7 EPP								
4	Roundup WeatherMax	22 oz/a		7 EPP	C				
4	2,4-D		1 pt/a	7 EPP	C				
4	Canopy		4 oz/a	7 EPP	C				
4	Sencor 75DF		5 oz/a	7 EPP	C				
4	N-PAK AMS		1.5 qt/a	7 EPP	C				
5	2,4-D		1 pt/a	Fall	A	23.0 ab	15.1 a	65.1 ab	55.8 a
5	Cut & Bale								
5	Roundup WeatherMax	22 oz/a		7 EPP	C				
5	2,4-D		1 pt/a	7 EPP	C				
5	N-PAK AMS		1.5 qt/a	7 EPP	C				
6	2,4-D		1 pt/a	Fall	A	23.2 ab	15.5 a	65.4 ab	55.8 a
6	Cut & Bale								
6	Roundup WeatherMax	22 oz/a		7 EPP	C				
6	2,4-D		1 pt/a	7 EPP	C				
6	Canopy		4 oz/a	7 EPP	C				
6	Sencor 75DF		5 oz/a	7 EPP	C				
6	N-PAK AMS		1.5 qt/a	7 EPP	C				

Means followed by same letter do not significantly differ (P=.05, LSD)
t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns: Yates=6,7,8,9

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Pest Code				
Pest Scientific Name				
Pest Name				
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BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Rating Date	10-25-2014	10-25-2014	10-25-2014	10-25-2014
Rating Type	YIELD	MOICON	YIELD	WEITES
Rating Unit	LBS	%	BU	LBS
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	345 184	345 184	345 184	345 184
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Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	6	7	8	9
7	No Fall Herb					20.5 cd	15.3 a	57.9 cd	55.8 a
7	Early April								
7	Roundup WeatherMax	22 oz/a		April	B				
7	2,4-D	1 pt/a		April	B				
7	N-PAK AMS	1.5 qt/a		April	B				
8	No Fall Herb					21.2 bcd	15.1 a	60.0 bcd	54.9 a
8	Early April								
8	Roundup WeatherMax	22 oz/a		April	B				
8	2,4-D	1 pt/a		April	B				
8	Canopy	4 oz/a		April	B				
8	Sencor 75DF	5 oz/a		April	B				
8	N-PAK AMS	1.5 qt/a		April	B				
9	No Fall Herb					24.1 a	14.8 a	68.5 a	55.5 a
9	7 EPP								
9	Roundup WeatherMax	22 oz/a		7 EPP	C				
9	2,4-D	1 pt/a		7 EPP	C				
9	N-PAK AMS	1.5 qt/a		7 EPP	C				
10	No Fall Herb					23.9 a	15.3 a	67.6 a	55.5 a
10	7 EPP								
10	Roundup WeatherMax	22 oz/a		7 EPP	C				
10	2,4-D	1 pt/a		7 EPP	C				
10	Canopy	4 oz/a		7 EPP	C				
10	Sencor 75DF	5 oz/a		7 EPP	C				
10	N-PAK AMS	1.5 qt/a		7 EPP	C				
11	No Fall Herb					21.9 a-d	15.5 a	61.7 a-d	55.8 a
11	Cut & Bale								
11	Roundup WeatherMax	22 oz/a		7 EPP	C				
11	2,4-D	1 pt/a		7 EPP	C				
11	N-PAK AMS	1.5 qt/a		7 EPP	C				

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ARM Action Codes		AL	TY1	
Number of Decimals	1	1	1	1

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	6	7	8	9
12	No Fall Herb					22.6 abc	15.3 a	63.9 abc	55.7 a
12	Cut & Bale								
12	Roundup WeatherMax	22 oz/a		7 EPP	C				
12	2,4-D	1 pt/a		7 EPP	C				
12	Canopy	4 oz/a		7 EPP	C				
12	Sencor 75DF	5 oz/a		7 EPP	C				
12	N-PAK AMS	1.5 qt/a		7 EPP	C				
	LSD (P=.05)					2.36	0.03t	6.88	1.30
	Standard Deviation					1.64	0.02t	4.76	0.90
	CV					7.4	1.81	7.62	1.63
	Grand Mean					22.1	1.21t	62.47	55.46
	Bartlett's X2					6.631	4.508	7.801	17.729
	P(Bartlett's X2)					0.828	0.953	0.731	0.088
	Skewness					-0.0094	0.6341	0.0093	-0.6439
	Kurtosis					-0.9045	-0.5309	-0.7866	0.0614
	Replicate F					0.969	0.643	0.988	2.474
	Replicate Prob(F)					0.4196	0.5933	0.4108	0.0794
	Treatment F					2.833	0.523	2.814	0.783
	Treatment Prob(F)					0.0106	0.8734	0.0110	0.6544

Crop Code
 GLXMA, BSOY, Glycine max, = US
Rating Type
 YIELD = yield
 MOICON = moisture content
 WEITES = weight - test
Rating Unit
 % = percent
 BU = bushel
Plant-Eval Interval
 174 DP-1 = 1 GLXMA 5-4-2014
ARM Action Codes
 AL = Automatic log transformation of X+1
 TY1 = 2.904*[6]*(100-[7])/87