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Rye Cover Crop

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

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Seed Consultants SC9314RR **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: SECCW Secale cereale (winter) Winter rye
Variety: VNS **BBCH Scale:** BCER
Description: KD2013B Walnut Creek Seed
Planting Date: Oct-11-2013
Planting Rate, Unit: 90 LB/A **Planting Method:** DRILLE drilled
Depth, Unit: 1 IN **Planting Equipment:** DD Disc Drill
Row Spacing, Unit: 7.5 IN

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	Previous Pesticides	Year
1.	Soybean	various	2013

Maintenance

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

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

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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
Apr-21-2014	Dobbels	Rye was clipped today about 8" tall down to about 2"

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Pest Type	W Weed	W Weed	W Weed
Pest Code	ERICA	ERICA	SECCW
Pest Scientific Name	Conyza canaden>	Conyza canaden>	Secale cereale>
Pest Name	Canada horsewe>	Canada horsewe>	Winter rye
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	0

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	1	2	3
1	2,4-D	0.5	lb ai/a	1	pt/a	A	25	30	88
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	3	66	99
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	16	65	89
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	93	69
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	25	30	74
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	96	28
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						11	47	100
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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Pest Type								W Weed	W Weed	W Weed
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Pest Scientific Name								Conyza canaden>	Conyza canaden>	Secale cereale>
Pest Name								Canada horsewe>	Canada horsewe>	Winter rye
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	0
Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code		1	2	3
8	No Fall Herb							1	84	98
8	Early April									
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							7	48	78
9	7 EPP									
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							1	98	48
10	7 EPP									
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							19	55	48
11	Cut & Bale									
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							4	96	44
12	Cut & Bale									
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)								12.7	33.9	32.3
Standard Deviation								8.8	23.5	22.4
CV								92.92	34.87	31.25
Bartlett's X2								55.381	29.756	44.32
P(Bartlett's X2)								0.001*	0.002*	0.001*
Skewness								1.605*	-0.6801	-0.9264*
Kurtosis								1.7968*	-1.0295	-0.1279
Replicate F								5.417	5.232	0.830
Replicate Prob(F)								0.0038	0.0046	0.4867
Treatment F								4.667	4.790	4.868
Treatment Prob(F)								0.0003	0.0002	0.0002

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
Pest Code
ERICA, Conyza canadensis, = US
SECCW, Secale cereale (winter), = 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