

The Ohio State University

Trial ID: 18RYE2 Location: Trial Year: 2017
Protocol ID: Investigator: Dr. Mark M. Loux
Project ID: Study Director:
Sponsor Contact:

General Trial Information**Investigator:** Dr. Mark M. Loux**Trial Location**

City: South Charleston **Country:** USA United States
State/Prov.: Ohio
Postal Code: 45368 **Climate Zone:** USWARM US Warm Continental

Latitude of LL Corner °: 39.85814 N
Longitude of LL Corner °: 83.66788 W
Altitude of LL Corner, Unit: 1085.00 FT

Conducted Under GLP: No
Conducted Under GEP: No

Investigator: Dr. Mark M. Loux
Organization: The Ohio State Universtiy
Address: 2021 Coffey Road
City+State/Prov: Columbus, Ohio
Postal Code: 43210
Country: USA United States

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Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: 36X6 **BBCH Scale:** BSOY
Description: Asgrow RR2X

Planting Date: Apr-30-2018
Planting Method: PLANTD planted
Planting Equipment: PP plot planter
Emergence Date: May-11-2018

Planting Rate, Unit: 166000 S/A
Depth, Unit: 1.25 IN
Row Spacing, Unit: 15 IN

Harvested Width, Unit: 6.25 FT
Harvested Length, Unit: 36 FT
% Standard Moisture: 13.5

Rows per Plot: 8
Soil Temperature, Unit: 50 F
Soil Moisture: SLIWET slightly wet, moist
Seed Bed: MEDTRA medium/trashy

Crop 2: SECCW Secale cereale Winter rye
Variety: VNS **BBCH Scale:** BCER
Description: Cisco Co. Indianapolis, IN

Planting Date: Sep-25-2017
Planting Method: DRILLE drilled
Planting Equipment: DD Disc Drill
Emergence Date: Oct-2-2017

Planting Rate, Unit: 45 LB/A
Depth, Unit: 0.75 IN
Row Spacing, Unit: 7.5 IN
Soil Temperature, Unit: 67 F
Soil Moisture: GOOD good
Seed Bed: MEDTRA medium/trashy

Crop 3: SECCW Secale cereale Winter rye
Variety: VNS **BBCH Scale:** BCER

Planting Date: Sep-25-2017
Planting Method: DRILLE drilled
Planting Equipment: DD Disc Drill
Emergence Date: Oct-2-2017

Planting Rate, Unit: 90 LB/A
Depth, Unit: 0.75 IN
Row Spacing, Unit: 7.5 IN
Soil Temperature, Unit: 67 F
Soil Moisture: GOOD good
Seed Bed: MEDTRA medium/trashy

Crop 4: SECCW Secale cereale Winter rye
Variety: VNS **BBCH Scale:** BCER

Planting Date: Oct-22-2017
Planting Method: DRILLE drilled
Planting Equipment: DD disc drill

Planting Rate, Unit: 45 LB/A
Depth, Unit: 0.75 IN
Row Spacing, Unit: 7.5 IN
Soil Temperature, Unit: 60 F
Soil Moisture: GOOD good
Seed Bed: MEDTRA medium/trashy

Crop 5: SECCW Secale cereale Winter rye
Variety: VNS **BBCH Scale:** BCER

Planting Date: Oct-22-2017
Planting Method: DRILLE drilled
Planting Equipment: DD disc drill

Planting Rate, Unit: 90 LB/A
Depth, Unit: 0.75 IN
Row Spacing, Unit: 7.5 IN
Soil Temperature, Unit: 60 F
Soil Moisture: GOOD good
Seed Bed: MEDTRA medium/trashy

Pest Description

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

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

Pest 3 Type: W **Code:** LAMPU *Lamium purpureum*
Common Name: Purple deadnettle

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

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Site and Design

Treated Plot Width: 10 FT Site Type: FIELD field
 Treated Plot Length: 36 FT Experimental Unit: 1 PLOT plot
 Treated Plot Area: 360 FT2 Treatments: 12 Tillage Type: NOTILL no-till
 Replications: 4 Study Design: STRBLO Strip-Block

No. Previous Crop Year

1. WHEAT 2017

Maintenance

No.	Date	Type	Maintenance Product Name	Form Conc	Form Unit	Form Type	Registration Number	Rate	Unit	Tank Mix Code	Tank Mix
1.	Apr-26-2018	HERB	Roundup Powermax	5.5	LB/GAL	SL	524-549	32	OZ/A	Y	yes
2.	Apr-26-2018	HERB	Valor SX					2.5	OZ/A	Y	yes
3.	Apr-26-2018	HERB	Dual II Magnum	7.674	LBA/GAL	EC		1.6	PT/A	Y	yes
4.	Apr-26-2018	FERT	N Pak AMS	100	%	L		2.5	% V/V	Y	yes
5.	Jun-2-2018	HERB	Roundup Powermax	5.5	LB/GAL	SL	524-549	32	OZ/A	Y	yes
6.	Jun-2-2018	HERB	Dual II Magnum	7.674	LBA/GAL	EC		1.6	PT/A	Y	yes

Soil Description

Description Name: Western Branch Ent 6 West
 % OM: 3.3 Texture: SCL sandy clay loam
 pH: 6.9 Soil Name: Kokomo
 CEC: 19.6 Fert. Level: G good
 Soil Drainage: G good

Application Description

	A	B	C
Application Date:	Nov-29-2017	Apr-26-2018	Jun-2-2018
Appl. Start Time:	1:35 PM	1:00 AM	11:30 AM
Appl. Stop Time:	2:00 PM	1:30 AM	12:00 PM
Interval to Prev. Appl., Unit:			37 DAYS
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	FALL	7 EPP	POST
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	Dobbels	Lamb	Dobbels
Air Temperature, Unit:	44 F	66 F	75 F
% Relative Humidity:	30	51	75
Wind Velocity, Unit:	2 MPH	3 MPH	6 MPH
Wind Direction:	NE	SSE	N
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	42 F	72 F	72 F
Soil Moisture:	MOIST	SLIWET	DRY
% Cloud Cover:	0	50	0
Next Moisture Occurred On:	Dec-5-2017	May-3-2018	Jun-8-2018
Time to Next Moisture, Unit:	6 DAY	7 DAY	6 DAY
Moisture 1 Week after Appl.:	0.51 IN	0.02 IN	0.65 IN

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Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:			BBCH
Stage Majority, Percent:			13 100
Height, Unit:			10 IN
Height Minimum, Maximum:			10 12
Crop 2 Code, BBCH Scale:	SECCW BCER	SECCW BCER	SECCW BCER
Stage Scale Used:	BBCH	BBCH	
Stage Majority, Percent:	23 80	25 100	
Stage Minimum, Percent:	23 80		
Stage Maximum, Percent:	24 20		
Height, Unit:	3 IN	24 IN	
Height Minimum, Maximum:	3 4	24 36	
Crop 3 Code, BBCH Scale:	SECCW BCER	SECCW BCER	SECCW BCER
Stage Scale Used:	BBCH	BBCH	
Stage Majority, Percent:	23 80	25 100	
Stage Minimum, Percent:	23 80		
Stage Maximum, Percent:	24 20		
Height, Unit:	3 IN	24 IN	
Height Minimum, Maximum:	3 4	24 36	
Crop 4 Code, BBCH Scale:	SECCW BCER	SECCW BCER	SECCW BCER
Stage Scale Used:	BBCH	BBCH	
Stage Majority, Percent:	11 100	25 100	
Height, Unit:	1 IN	18 IN	
Height Minimum, Maximum:	1 1.5	14 18	
Crop 5 Code, BBCH Scale:	SECCW BCER	SECCW BCER	SECCW BCER
Stage Scale Used:	BBCH	BBCH	
Stage Majority, Percent:	11 100	25 100	
Height, Unit:	1 IN	18 IN	
Height Minimum, Maximum:	1 1.5	14 18	

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ERICA W	ERICA W	ERICA W
Stage Majority, Percent:	14 80		
Stage Minimum, Percent:	12 20		
Stage Maximum, Percent:	14 80		
Diameter, Unit:	0.25 IN		
Height, Unit:	0.25 IN		
Height Minimum, Maximum:	0.125 0.25		
Pest 2 Code, Type, Scale:	STEME W	STEME W	STEME W
Stage Majority, Percent:	19 100		
Diameter, Unit:	4 IN		
Height, Unit:	1 IN		
Height Minimum, Maximum:	1 1		
Pest 3 Code, Type, Scale:	LAMPU W	LAMPU W	LAMPU W
Stage Majority, Percent:	19 100		
Diameter, Unit:	2 IN		
Height, Unit:	2 IN		
Height Minimum, Maximum:	2 3		
Pest 4 Code, Type, Scale:	SENGL W	SENGL W	SENGL W
Stage Majority, Percent:	19 100		
Diameter, Unit:	2 IN		
Height, Unit:	1 IN		
Height Minimum, Maximum:	1 2		

Application Equipment

	A	B	C
Appl. Equipment:	10' AI XR	Tractor	Tractor
Equipment Type:	SPRBAC	TRMOSP	TRMOSP
Operation Pressure, Unit:	46 PSI	32 PSI	32 PSI
Nozzle Type:	AI XR	AI	AI
Nozzle Size:	110015	11002	11002
Nozzle Spacing, Unit:	18 IN	20 IN	20 IN
Boom Length, Unit:	10 FT	10 FT	10 FT
Boom Height, Unit:	20 IN	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3.8 MPH	3.8 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	15 GPA	20 GPA	20 GPA
Mix Size, Unit:	2 L	10 GAL	10 GAL
Propellant:	CO2	PUMROL	PUMROL
Tank Mix (Y/N):		N no	N no

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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	Oct-19-2018	Oct-19-2018	Oct-19-2018	Oct-19-2018
Rating Type	WEIGHT	MOICON	WEITES	YIELD
Rating Unit	LBS	%	LBS	BU
Sample Size, Unit	1 PLOT	1 QT	1 QT	1 A
Number of Subsamples	1	1	1	1
Days After First/Last	324 139	324 139	324 139	324 139
Applic.				
Trt-Eval Interval				
Plant-Eval Interval	172 DP-1	172 DP-1	172 DP-1	172 DP-1
Days After Emergence	161 DE-1	161 DE-1	161 DE-1	161 DE-1
ARM Action Codes				TY2
Number of Decimals	1	1	1	1
Trt Treatment				
No. Name	10*	11*	12*	13*
1 EARLY PLANTED RYE HIGH SEEDING RATE FALL 2,4-D	26.7 -	13.0 -	52.4 -	86.8 -
2 EARLY PLANTED RYE HIGH SEEDING RATE NO FALL	25.7 -	13.4 -	52.6 -	83.2 -
3 EARLY PLANTED RYE LOW SEEDING RATE FALL 2,4-D	24.1 -	13.6 -	53.3 -	77.9 -
4 EARLY PLANTED RYE LOW SEEDING RATE NO FALL	26.3 -	13.5 -	53.7 -	84.9 -
5 EARLY PLANTED RYE NO COVER FALL 2,4-D	26.3 -	13.3 -	53.6 -	85.0 -
6 EARLY PLANTED RYE NO COVER NO FALL	25.5 -	13.1 -	52.8 -	83.1 -
7 LATE PLANTED RYE HIGH SEEDING RATE FALL 2,4-D	28.1 -	12.5 -	46.1 -	91.8 -
8 LATE PLANTED RYE HIGH SEEDING RATE NO FALL	27.2 -	12.9 -	53.1 -	88.4 -
9 LATE PLANTED RYE LOW SEEDING RATE FALL 2,4-D	26.3 -	13.1 -	52.2 -	85.5 -
10 LATE PLANTED RYE LOW SEEDING RATE NO FALL	25.6 -	13.1 -	53.2 -	82.8 -
11 LATE PLANTED RYE NO COVER FALL 2,4-D	25.4 -	14.0 -	53.0 -	81.7 -

Means followed by same letter or symbol do not significantly differ
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 * Adjusted means

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Pest Type					
Pest Code					
Pest Scientific Name					
Pest Name					
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Rating Date	Oct-19-2018	Oct-19-2018	Oct-19-2018	Oct-19-2018	Oct-19-2018
Rating Type	WEIGHT	MOICON	WEITES	WEITES	YIELD
Rating Unit	LBS	%	LBS	LBS	BU
Sample Size, Unit	1 PLOT	1 QT	1 QT	1 QT	1 A
Number of Subsamples	1	1	1	1	1
Days After First/Last	324 139	324 139	324 139	324 139	324 139
Applic.					
Trt-Eval Interval					
Plant-Eval Interval	172 DP-1	172 DP-1	172 DP-1	172 DP-1	172 DP-1
Days After Emergence	161 DE-1	161 DE-1	161 DE-1	161 DE-1	161 DE-1
ARM Action Codes					TY2
Number of Decimals	1	1	1	1	1
Trt Treatment					
No. Name	10*	11*	12*	13*	
12 LATE PLANTED RYE NO COVER NO FALL	26.0 -	13.7 -	53.4 -	83.9 -	
LSD P=.05	2.19	1.12	4.83	7.20	
Standard Deviation	1.51	0.78	3.36	4.96	
CV	5.82	5.89	6.4	5.91	
Levene's F	0.931	0.844	1.132	1.161	
Levene's Prob(F)	0.523	0.599	0.366	0.347	
Skewness	-0.3119	1.3218*	-4.8803*	-0.2062	
Kurtosis	-0.1531	5.9503*	30.6868*	-0.0784	
Design AIC	RCB	RCB	NA	RCB	
	204.0922	133.7725		316.1904	
Spatial AIC	SPa 192.1033	SPb 125.2425	NA	SPa 306.3522	
Mean Sep. Test	LSD.05	LSD.05	SNK.05	LSD.05	
Analyzed as	CRD+SPa	CRD+SPb	RCB	CRD+SPa	
Replicate F	7.807	1.352	0.060	8.571	
Replicate Prob(F)	0.0007	0.2733	0.9804	0.0004	
Treatment F	1.261	0.898	1.482	1.519	
Treatment Prob(F)	0.2981	0.5516	0.1851	0.1819	

Crop Code

GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

WEIGHT = weight

MOICON = moisture content

WEITES = weight - test

YIELD = yield

Rating Unit

% = percent

BU = bushel

PLOT = total plot

QT = quart

A = acre

Plant-Eval Interval

172 DP-1 = 1 GLXMA Apr-30-2018

ARM Action Codes

TY2 = 3.226667*[10]*(100-[11])/86.5

SPa = Cubic spatial trend

SPb = Nearest column neighbor

Means followed by same letter or symbol do not significantly differ

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

* Adjusted means