

# Manitoba Pulse & Soybean Growers On-Farm Network 2017 Research Results



**on-farm network**  
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## Important Information to Interpret On-Farm Network Single Page Reports

There are two statistical tests that are used to analyze On-Farm Network data:

- A **paired t-test** is used for trials with two treatments (eg. Treated vs. untreated).
- **Analysis of variance (ANOVA)** is used for trials with three or more treatments (eg. Product A vs. Product B vs. Untreated).

**Confidence level:** A 95% confidence level is used within our trials. This means we can say with 95% certainty that we are certain of the outcome.

**P-value:** A calculated probability used in statistics to either accept or reject the null hypothesis. The null hypothesis for our trials is that there is no difference between treatment means. A p-value of less than 0.05 suggests that there is enough evidence to reject the null hypothesis, meaning there is a significant difference between treatment means. If the p-value is greater than 0.05, then there is not enough evidence to conclude that the observed treatment differences are due to our applied treatment at a 95% confidence level. A trial with a significant yield difference is highlighted green in the yield difference column of the database.

**Coefficient of Variation (CV):** The statistical measure of random variation in a trial. The lower the value, the less variable the data. A trial that does not meet the trial requirements, eg. field history, is not included in the overall average for yield difference.

**MPSG does not endorse the use of products tested in the On-Farm Network. Although trials are conducted at multiple sites under varying conditions, your individual results may vary. Contents of these research publications can only be reproduced with the permission of MPSG.**

# Dry Bean Foliar Fungicide Trial

Dry bean foliar fungicide trial information and yield response at six On-Farm Network trials across Manitoba in 2017.

Trial ID	Rural Municipality	Bean Class	Variety	Previous Crop	Seeding Date	Row Spacing	Seeding Rate	Stage Sprayed	Plant Stand @ V1	Yield		Yield Difference	Product	Statistically Significant @ 95%
										With	W/O			
						inch	'000/ac	plants/ac		lbs/ac	lbs/ac			
2017-DBF04	Thompson	Pinto	Windbreaker	Corn	May 24	30	-	R2	65,000	2784	2784	0	Lance	No
2017-DBF06	Stanley	Pinto	Windbreaker	Canola	May 15	30	112	R2	-	2662	2648	14	Acapela	No
2017-DBF01	Rhineland	Pinto	Windbreaker	Wheat	May 18	30	83	R2	69,000	2309	2233	76	Acapela	No
2017-DBF03	Roland	Pinto	Windbreaker	Corn	May 24	30	-	R2	70,000	2630	2535	95	Lance	No
2017-DBF02	North Norfolk	Navy	Hyland T9905	Wheat	May 22	30	110	R2	75,000	3317	3187	130	Acapela	No
2017-DBF05	Glenboro - South Cypress	Navy	Hyland T9905	Oats	May 24	30	100	R2	-	3055	2836	220	Lance	No
									<b>70,000</b>	<b>2,793</b>	<b>2,704</b>	<b>89</b>	<b>0/6</b>	

## Dry Bean Fungicide Trial – Pinto Beans

Trial ID: 2017-DBF01 – R.M. of Rhineland

**Objective:** The objective of this study was to quantify the agronomic and economic impacts of foliar fungicide in dry bean fields. A single application of Acapela was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Acapela vs. Untreated
<b>Rural Municipality</b>	Rhineland
<b>Previous Crop</b>	Spring Wheat
<b>Soil Description</b>	Loamy Lacustrine
<b>Tillage</b>	Deep Tilled 2x
<b>Planting Date</b>	May 24, 2017
<b>Variety</b>	Pinto – Windbreaker
<b>Row Spacing</b>	30"
<b>Plant Population @V2</b>	69,000 plants/ac
<b>Application Date</b>	July 18, 2017
<b>Application Timing</b>	R2 – early pin bean
<b>Application Rate</b>	355 ml/ac
<b>Harvest Date</b>	September 9, 2017

### PRECIPITATION†

	May	June	July	Aug
<b>Rainfall</b>	27.3	75.3	54.6	20.5
<b>Normal</b>	68.8	101.5	75	67.9

† Growing season precipitation (mm)

### WHITE MOULD DISEASE RATING‡

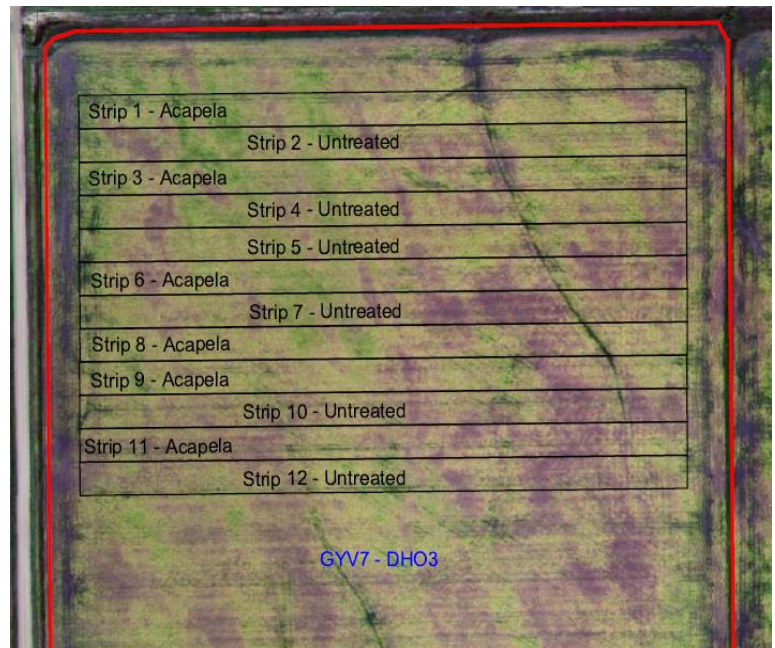
	Incidence	Severity
<b>Acapela</b>	3.2%	1.6
<b>Untreated</b>	6.4%	0.78
<b>P-Value</b>	0.2907	0.4273
<b>Significance</b>	No	No

‡ Rated on a scale of 0-5 (0 = no disease, 5 = full infection) at growth stage R7

### OVERALL YIELD

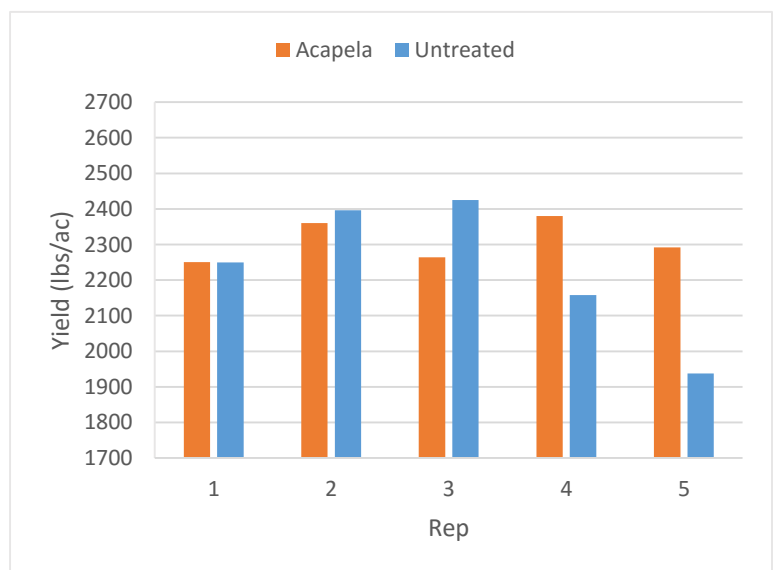
	Mean (lbs/ac)
<b>Acapela</b>	2309
<b>Untreated</b>	2233
<b>Yield Difference</b>	76
<b>P-Value</b>	0.4592
<b>CV</b>	6.31%
<b>Significance</b>	No

### FIELD IMAGE – AUG. 24, 2017



GYV7 - DHO3

### STRIP YIELD



**Summary:** There was no significant yield difference between a single application of Acapela fungicide and untreated strips applied at R2 (early pin bean). White mould disease incidence and severity was not significantly different between treated and untreated strips. Rainfall was below normal for the entire growing season, which reduced the risk of white mould disease pressure.



## Dry Bean Fungicide Trial – Navy Beans

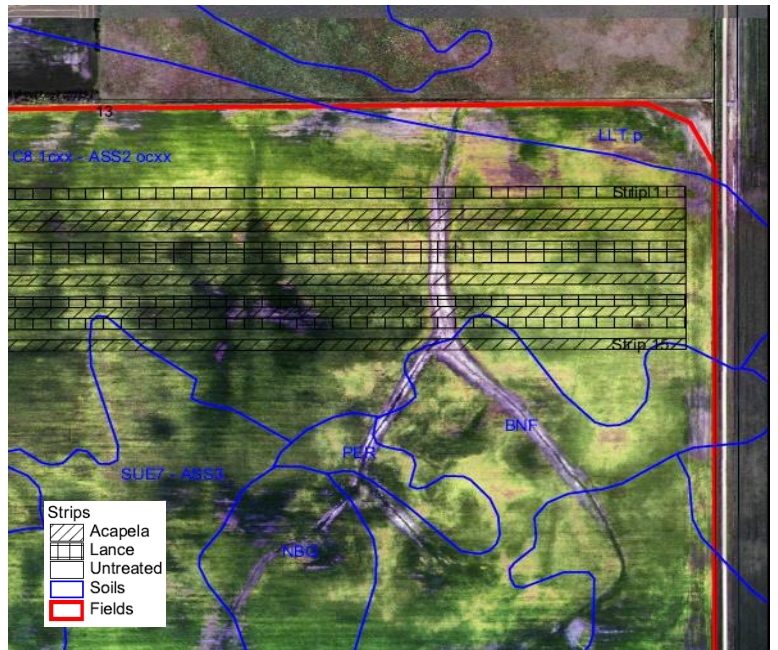
Trial ID: 2017-DBF02 - R.M. of North Norfolk

**Objective:** The objective of this study was to quantify the agronomic and economic impacts of foliar fungicide in dry bean fields. Untreated check strips were compared to a single application of Lance and a single application of Acapela.

### TRIAL INFORMATION

Treatment	Acapela Lance Untreated
Rural Municipality	North Norfolk
Previous Crop	Wheat
Soil Description	Loamy/Sandy Lacustrine
Tillage	Strip Till
Planting Date	May 22, 2017
Variety	Navy – Hyland T9905
Row Spacing	30"
Plant Population @V2	75,000 plants/ac
Application Date	July 27, 2017
Application Timing	R2 – early pin bean
Application Rate – Acapela	352 ml/ac
Application Rate – Lance	225 g/ac
Harvest Date	September 25, 2017

### FIELD IMAGE – AUG. 25, 2017



### PRECIPITATION†

	May	June	July	August
Rainfall	31.7	76.9	24.8	14.6
Normal	57.3	89.4	78.1	65.7

† Growing season precipitation (mm)

### WHITE MOULD DISEASE RATING†

	Incidence	Severity
Acapela	18.4%	1.493
Lance	17.6%	1.427
Untreated	21.2%	1.508
P-Value	0.8925	0.9676
Significance	No	No

† Rated on a scale of 0-5 (0 = no disease, 5 = full infection) at growth stage R7

### OVERALL YIELD

	Mean (lbs/ac)
Acapela	3317
Lance	3255
Untreated	3187
P-Value	0.1160
CV	3.07%
Significance	No

### STRIP YIELD



**Summary:** There was no significant yield difference between Acapela, Lance and untreated check strips applied at R2 (early pin bean). Rainfall was below normal for the entire growing season, with dry conditions during flowering. White mould incidence and severity was not significantly different between treatments.

## Dry Bean Fungicide Trial – Pinto Beans

Trial ID: 2017-DBF03 - R.M. of Roland

**Objective:** The objective of this study was to quantify the agronomic and economic impacts of foliar fungicide in dry bean fields. A single application of Lance was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Lance vs. Untreated
<b>Rural Municipality</b>	Roland
<b>Previous Crop</b>	Corn
<b>Soil Description</b>	Sandy/Loam Lacustrine
<b>Tillage</b>	Conventional
<b>Planting Date</b>	May 24, 2017
<b>Variety</b>	Pinto – Windbreaker
<b>Row Spacing</b>	30"
<b>Plant Population @V2</b>	70,400 plants/ac
<b>Application Date</b>	July 20, 2017
<b>Application Timing</b>	R2 – early pin bean
<b>Application Rate</b>	300 g/ac
<b>Harvest Date</b>	September 3, 2017

### PRECIPITATION†

	May	June	July	August
<b>Rainfall</b>	25.2	67.1	23.3	28.6
<b>Normal</b>	67.7	96.4	78.6	74.8

† Growing season precipitation (mm)

### WHITE MOULD DISEASE RATING‡

	Incidence	Severity
<b>Lance</b>	0.33%	0.33
<b>Untreated</b>	1.71%	0.61
<b>P-Value</b>	0.1114	0.6269
<b>Significance</b>	<b>No</b>	<b>No</b>

‡ Rated on a scale of 0-5 (0 = no disease, 5 = full infection) at growth stage R7

### OVERALL YIELD

	Mean (lbs/ac)
<b>Lance</b>	2630
<b>Untreated</b>	2535
<b>Yield Difference</b>	95
<b>P-Value</b>	0.3013
<b>CV</b>	9.07%
<b>Significance</b>	<b>No</b>

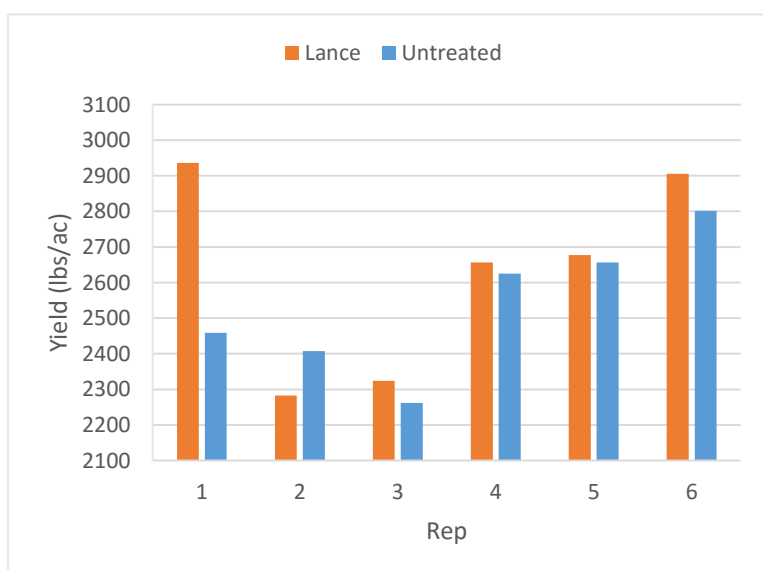
**Summary:** There was no significant yield difference between a single application of Lance fungicide and untreated strips applied at R2 (early pin bean). White mould disease incidence and severity was not significantly different between treated and untreated strips, with only trace amounts of white mould found within the trial. Rainfall was below normal for the entire growing season, which reduced the risk of white mould disease pressure.

MPSG would like to thank BASF for providing the chemical for this trial

### FIELD IMAGE – AUG. 29, 2017



### STRIP YIELD



## Dry Bean Fungicide Trial – Pinto Beans

Trial ID: 2017-DBF04 - R.M. of Thompson

**Objective:** The objective of this study was to quantify the agronomic and economic impacts of foliar fungicide in dry bean fields. Untreated check strips were compared to a single application of Lance and a single application of Allegro.

### TRIAL INFORMATION

<b>Treatment</b>	Lance Allegro Untreated
<b>Rural Municipality</b>	Thompson
<b>Previous Crop</b>	Corn
<b>Soil Description</b>	Sandy/Loam Lacustrine
<b>Tillage</b>	Conventional
<b>Planting Date</b>	May 24, 2017
<b>Variety</b>	Pinto – Windbreaker
<b>Row Spacing</b>	30"
<b>Plant Population @V2</b>	65,100 plants/ac
<b>Application Date</b>	July 20, 2017
<b>Application Timing</b>	R2 – early pin bean
<b>Application Rate – Lance</b>	300 g/ac
<b>Application Rate – Allegro</b>	405 ml/ac
<b>Harvest Date</b>	September 13, 2017

### PRECIPITATION†

	May	June	July	August
<b>Rainfall</b>	25.2	64.3	22.7	53.9
<b>Normal</b>	67.7	96.4	78.6	74.8

† Growing season precipitation (mm)

### WHITE MOULD DISEASE RATING‡

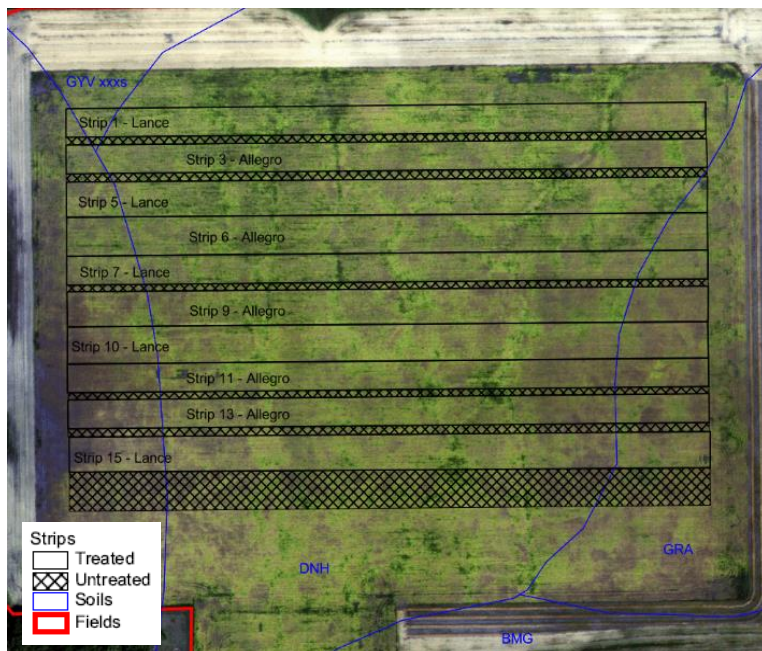
	Incidence	Severity
<b>Lance</b>	0.4%	0.2
<b>Allegro</b>	0.4%	0.4
<b>Untreated</b>	0.4%	0.2
<b>P-Value</b>	n/a	0.8484
<b>Significance</b>	No	No

‡ Rated on a scale of 0-5 (0 = no disease, 5 = full infection) at growth stage R7

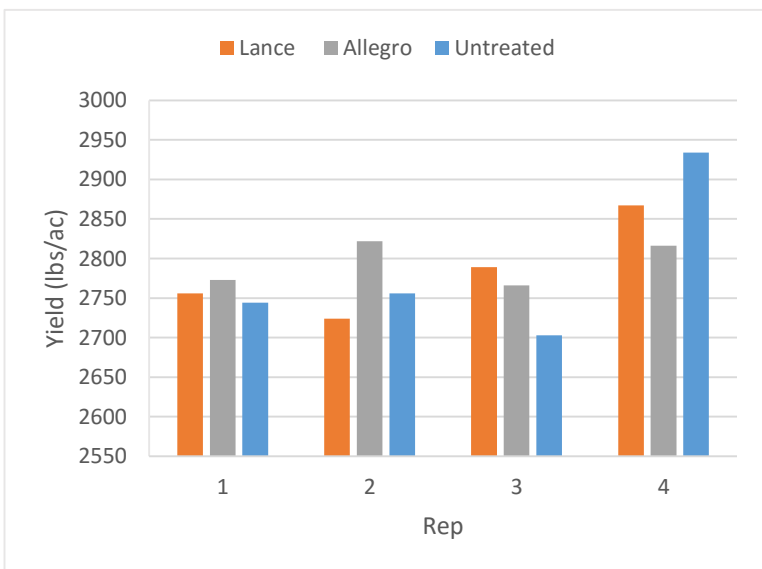
### OVERALL YIELD

	Mean (lbs/ac)
<b>Lance</b>	2784
<b>Allegro</b>	2794
<b>Untreated</b>	2784
<b>P-Value</b>	0.9732
<b>CV</b>	2.31%
<b>Significance</b>	No

### FIELD IMAGE – AUG. 29, 2017



### STRIP YIELD



**Summary:** There was no significant yield difference between Lance, Allegro, and untreated check strips applied at R2 (early pin bean). Rainfall was below normal for the entire growing season, with dry conditions during flowering. There were only trace amounts of white mould found within the trial area.



## Dry Bean Fungicide Trial – Navy Beans

Trial ID: 2017-DBF05 - R.M. of Glenboro-South Cypress

**Objective:** The objective of this study was to quantify the agronomic and economic impacts of foliar fungicide in dry bean fields. A single application of Lance was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Lance vs. Untreated
<b>Rural Municipality</b>	Glenboro-South Cypress
<b>Previous Crop</b>	Oats
<b>Soil Description</b>	Loamy Lacustrine
<b>Tillage</b>	Conventional
<b>Planting Date</b>	May 24, 2017
<b>Variety</b>	Navy – Hyland T9905
<b>Row Spacing</b>	30"
<b>Plant Population</b>	---
<b>Application Date</b>	July 21, 2017
<b>Application Timing</b>	R2 – early pin bean
<b>Application Rate</b>	310 g/ac
<b>Harvest Date</b>	September 28, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	August
<b>Rainfall</b>	33.4	53.5	97.3	15.7
<b>Normal</b>	58.8	96	78.9	65.3

<sup>†</sup> Growing season precipitation (mm)

### WHITE MOULD DISEASE RATING<sup>†</sup>

	Incidence	Severity
<b>Lance</b>	17.5%	1.77
<b>Untreated</b>	21.5%	1.98
<b>P-Value</b>	0.3801	0.1650
<b>Significance</b>	<b>No</b>	<b>No</b>

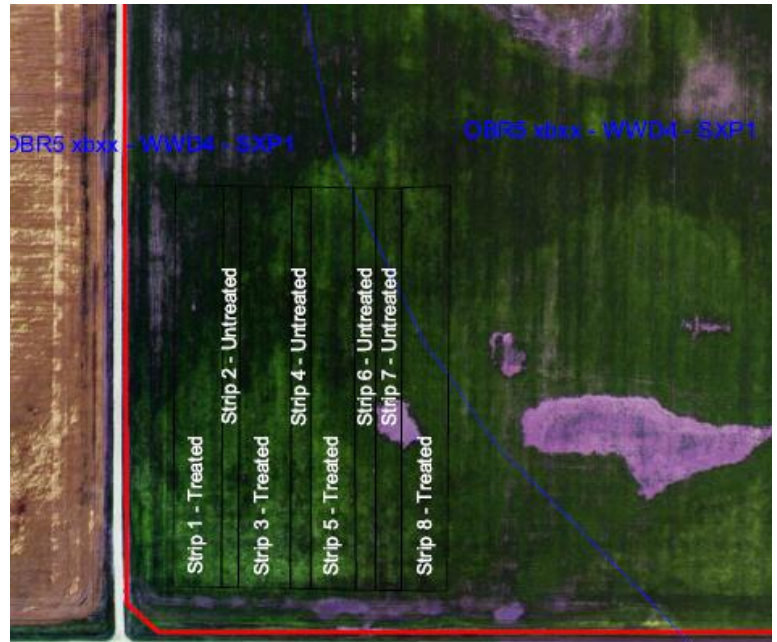
<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection) at growth stage R7

### OVERALL YIELD

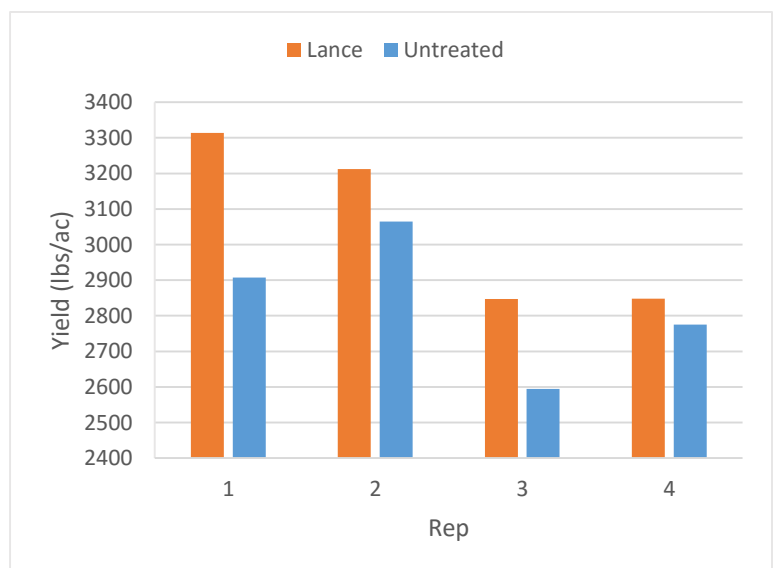
	Mean (lbs/ac)
<b>Lance</b>	3055
<b>Untreated</b>	2836
<b>Yield Difference</b>	220
<b>P-Value</b>	0.0558
<b>CV</b>	8.04%
<b>Significance</b>	<b>No</b>

**Summary:** There was no significant yield difference between a single application of Lance fungicide and untreated strips applied at R2 (early pin bean). White mould disease incidence and severity was not significantly different between treated and untreated strips. Rainfall was above normal for the month of July; however, rainfall was below normal for the rest of the growing season.

### FIELD IMAGE – AUG. 18, 2017



### STRIP YIELD



## Dry Bean Fungicide Trial – Pinto Beans

Trial ID: 2017-DBF06 - R.M. of Stanley

**Objective:** The objective of this study was to quantify the agronomic and economic impacts of foliar fungicide in dry bean fields. A single application of Acapela was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Acapela vs. Untreated
<b>Rural Municipality</b>	Stanley
<b>Previous Crop</b>	Canola
<b>Soil Description</b>	Sandy/Loamy lacustrine
<b>Tillage</b>	Conventional
<b>Planting Date</b>	May 15, 2017
<b>Variety</b>	Pinto – Windbreaker
<b>Row Spacing</b>	30"
<b>Plant Population</b>	---
<b>Application Date</b>	July 24, 2017
<b>Application Timing</b>	R2 – early pin bean
<b>Application Rate</b>	355 ml/ac
<b>Harvest Date</b>	September 11, 2017

### PRECIPITATION†

	May	June	July	August
<b>Rainfall</b>	25.9	62.1	61.6	22.7
<b>Normal</b>	79.3	100.1	77.8	77.1

† Growing season precipitation (mm)

### WHITE MOULD DISEASE RATING‡

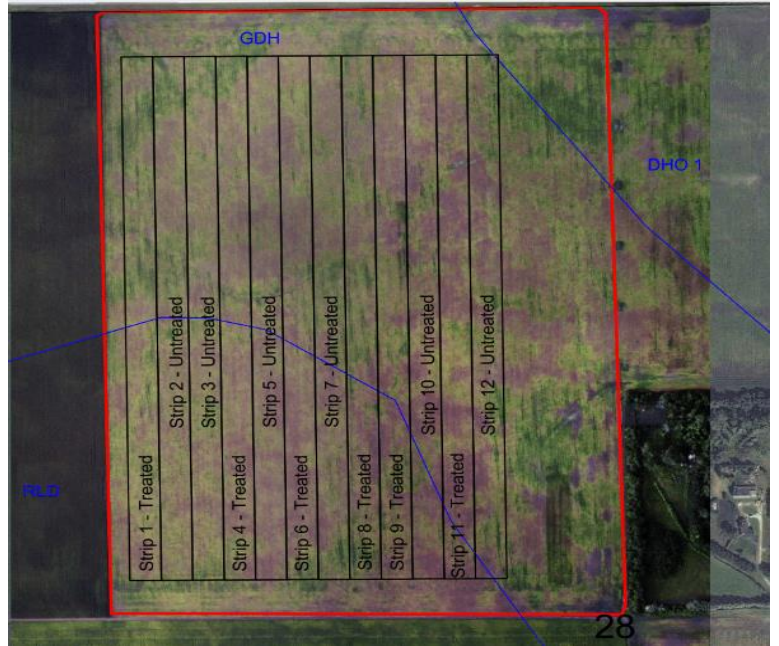
	Incidence	Severity
<b>Acapela</b>	3.0%	0.67
<b>Untreated</b>	9.7%	2.3
<b>P-Value</b>	0.0059	0.0017
<b>Significance</b>	<b>Yes</b>	<b>Yes</b>

‡ Rated on a scale of 0-5 (0 = no disease, 5 = full infection) at growth stage R7

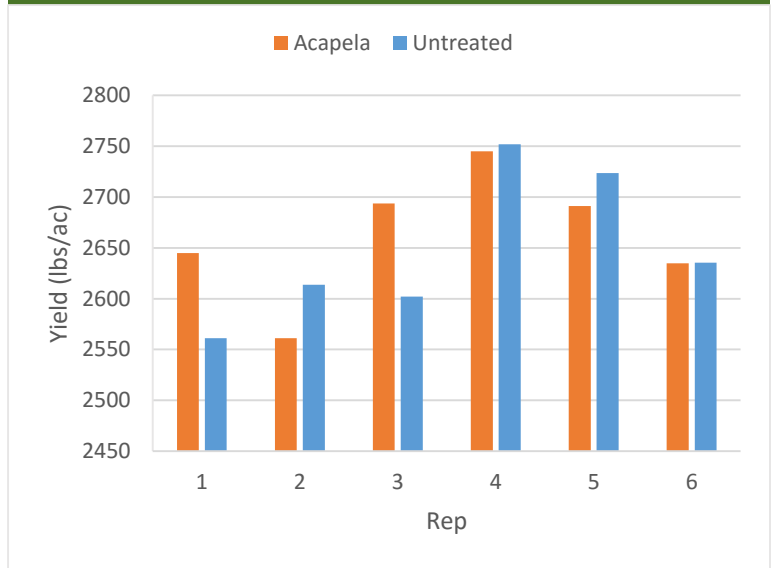
### OVERALL YIELD

	Mean (lbs/ac)
<b>Acapela</b>	2662
<b>Untreated</b>	2648
<b>Yield Difference</b>	14
<b>P-Value</b>	0.5991
<b>CV</b>	2.49%
<b>Significance</b>	<b>No</b>

### FIELD IMAGE – AUG. 24, 2017



### STRIP YIELD



**Summary:** There was no significant yield difference between a single application of Acapela fungicide and untreated strips applied at R2 (early pin bean). Treated strips of Acapela had significantly lower white mould incidence and severity compared to untreated strips. Rainfall was below normal for the entire growing season, which reduced the risk of white mould disease pressure.

# Field Pea Foliar Fungicide Trial

Field pea foliar fungicide trial information and yield response for six On-Farm Network trials across Manitoba in 2017.

Trial ID	Rural Municipality	Variety	Previous Crop	Seeding Date	Row Spacing	Seeding Rate	Stage Sprayed	Yield			Yield Difference (2 app - 1 App)	Yield Difference (1 App - W/O)	Product 1st Application	Product 2nd Application	Statistically Significant @ 95%
								2 Apps	1 App	Untreated					
					inch	lbs/ac	bu/ac			bu/ac	bu/ac				
2017-PF01	Montcalm	AC Agassiz	Wheat	May 04	7.5	185	Early Flower	-	64.5	58.5	-	6.0	Delaro	-	Yes
2017-PF02	Roland	Granger Austrian Winter Pea	Fall Rye	May 03	7.5	183	Early Flower	60.4	56.7	48.4	3.7	8.3	Delaro	Delaro	Yes
2017-PF03	Wallace-Woodworth	CDC Amarillo	Barley	May 10	10	142	Early Flower	43.7	43.4	-	0.3	-	Delaro	Delaro	No
2017-PF04	Rockwood	AAC Carver	Wheat	Apr 29	10	168	Early Flower	-	82.1	80.1	-	2.0	Delaro	-	Yes
2017-PF05	Two Borders	CDC Meadow	Rye	Apr 30	10	180	Early Flower	53.0	55.0	51.7	-2.0	3.3	Delaro	-	No
2017-PF06	Rhineland	CDC Amarillo	Corn	Apr 29	7.5	150	Early Flower	73.4	66.4	-	7.0	-	Priaxor	Delaro	Yes
								<b>57.6</b>	<b>61.4</b>	<b>59.7</b>	<b>2.3</b>	<b>4.9</b>			



## Field Pea Foliar Fungicide Trial

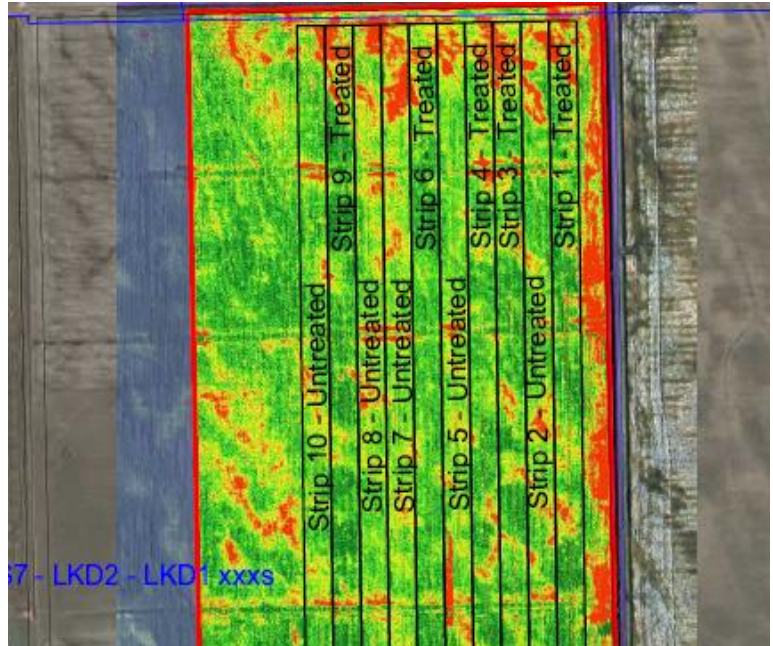
Trial ID: 2017-PF01 – R.M. of Montcalm

**Objective:** The objective of this study was to quantify the agronomic and economic impacts of foliar fungicide in field peas. A single application of Delaro was compared to an untreated check strip.

### TRIAL INFORMATION

Treatment	Delaro vs. Untreated
Rural Municipality	Montcalm
Previous Crop	Spring Wheat
Soil Description	Clayey Lacustrine
Tillage	Deep Till
Planting Date	May 4, 2017
Variety	AC Aggasiz
Row Spacing	7.5"
Seeding Rate	185 lbs/ac
Application Date	June 26, 2017
Application Timing	Early Flower
Application Rate	355 ml/ac
Application Method	Ground
Harvest Date	August 18, 2017

### NDVI FIELD IMAGE – JULY 23, 2017



### PRECIPITATION†

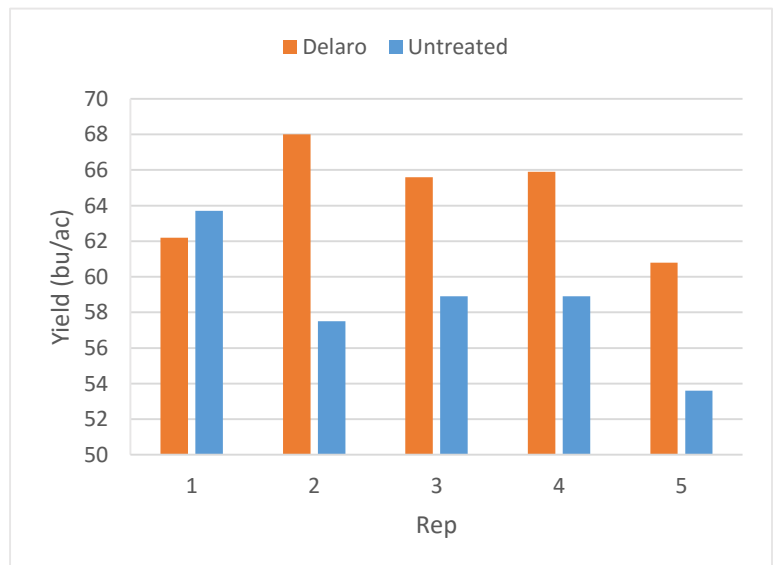
	May	June	July	Aug
Rainfall	28.2	69.2	45.8	20.8
Normal	68.8	101.5	75	67.9

† Growing season precipitation until harvest (mm)

### OVERALL YIELD

	Mean (bu/ac)
Delaro	64.5
Untreated	58.5
Yield Difference	6.0
P-Value	0.0399
CV	7.19%
Significance	Yes

### STRIP YIELD



**Summary:** There was a significant yield difference of 6.0 bu/ac between a single application of Delaro fungicide (64.5 bu/ac) and untreated strips (58.5 bu/ac). Delaro was applied at early flower and rainfall was below normal for the entire growing season.

## Field Pea Foliar Fungicide Trial

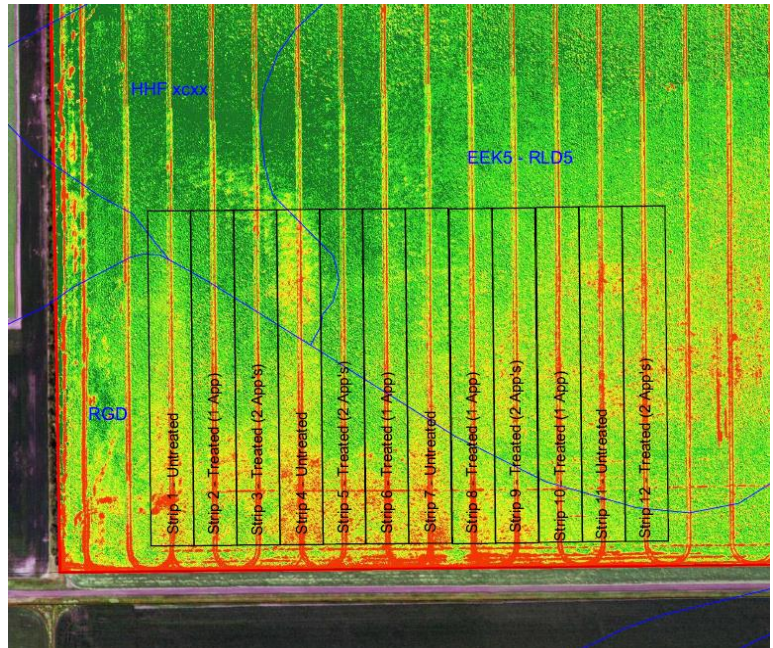
Trial ID: 2017-PF02 – R.M. of Roland

**Objective:** The objective of this study was to quantify the agronomic and economic impacts of foliar fungicide in field peas. One application and two applications of Delaro were compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Delaro – 1 Application Delaro – 2 Applications Untreated
<b>Rural Municipality</b>	Roland
<b>Previous Crop</b>	Fall Rye
<b>Soil Description</b>	Loamy/Sandy Lacustrine
<b>Tillage</b>	Tandem Disc + Harrow
<b>Planting Date</b>	May 3, 2017
<b>Variety</b>	Granger Austrian Winter Pea
<b>Row Spacing</b>	7.5"
<b>Seeding Rate</b>	183 lbs/ac
<b>App Date – 1 app</b>	July 1, 2017
<b>App Date – 2 app</b>	July 10, 2017
<b>Application Timing</b>	Early Flower
<b>Application Rate</b>	355 ml/ac
<b>Application Method</b>	Ground
<b>Harvest Date</b>	August 30, 2017

### NDVI FIELD IMAGE – JULY 23, 2017



### PRECIPITATION†

	May	June	July	Aug
<b>Rainfall</b>	25.2	64.4	23.3	24.0
<b>Normal</b>	67.7	96.4	78.6	74.8

† Growing season precipitation until harvest (mm)

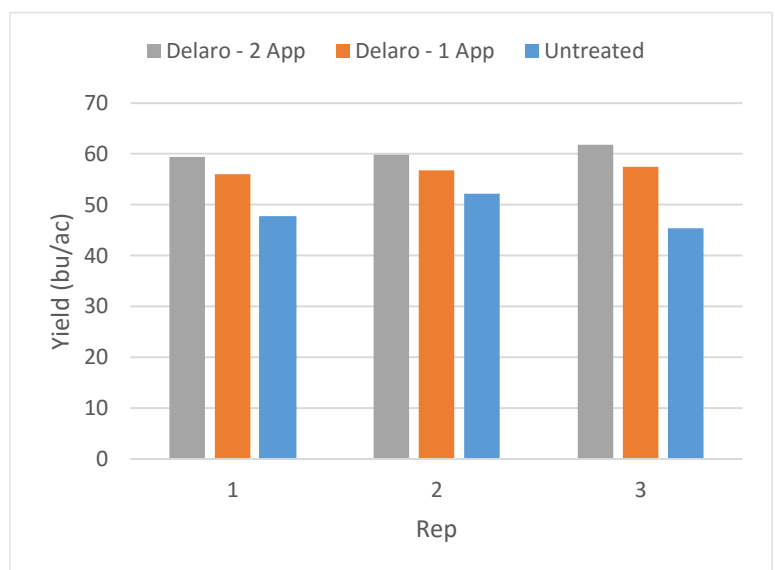
### OVERALL YIELD

	Mean (bu/ac)*
<b>Delaro – 2 Applications</b>	60.4 A
<b>Delaro – 1 Application</b>	56.7 A
<b>Untreated</b>	48.4 B
<b>P-Value</b>	0.0013
<b>CV</b>	10.2%
<b>Significance</b>	<b>Yes</b>

\*Means followed by the same letter are not significantly different

**Summary:** There was a significant yield difference of 12.0 bu/ac between field peas sprayed with Delaro fungicide and untreated strips; however, there was no significant difference between one application and two applications of Delaro. The pea variety is a semi-leafless type that can produce a lot of biomass. Rainfall was below average for the entire growing season.

### STRIP YIELD





## Field Pea Foliar Fungicide Trial

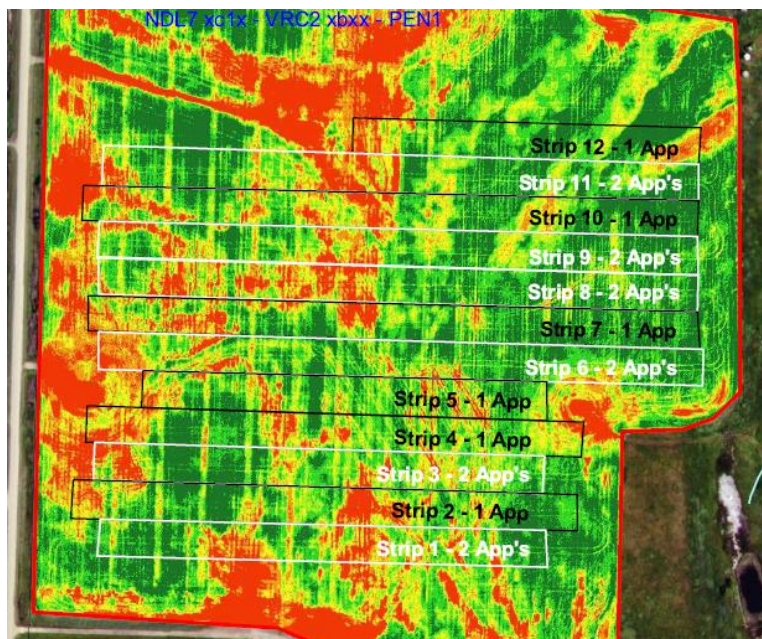
Trial ID: 2017-PF03 – R.M. of Wallace-Woodworth

**Objective:** The objective of this study was to quantify the agronomic and economic impacts foliar fungicide in field peas. One application of Delaro was compared to two applications of Delaro. There was no untreated check strip within this trial.

### TRIAL INFORMATION

<b>Treatment</b>	Delaro – 1 Application Delaro – 2 Applications
<b>Rural Municipality</b>	Wallace-Woodworth
<b>Previous Crop</b>	Barley
<b>Soil Description</b>	Loamy Till
<b>Tillage</b>	Minimum
<b>Planting Date</b>	May 10, 2017
<b>Variety</b>	CDC Amarillo
<b>Row Spacing</b>	10"
<b>Seeding Rate</b>	142 lbs/ac
<b>App Date – 1 app</b>	July 4, 2017
<b>App Date – 2 app</b>	July 18, 2017
<b>Application Timing</b>	Early Flower
<b>Application Rate</b>	355 ml/ac
<b>Application Method</b>	Ground
<b>Harvest Date</b>	August 17, 2017

### NDVI FIELD IMAGE – JULY 23, 2017



### PRECIPITATION†

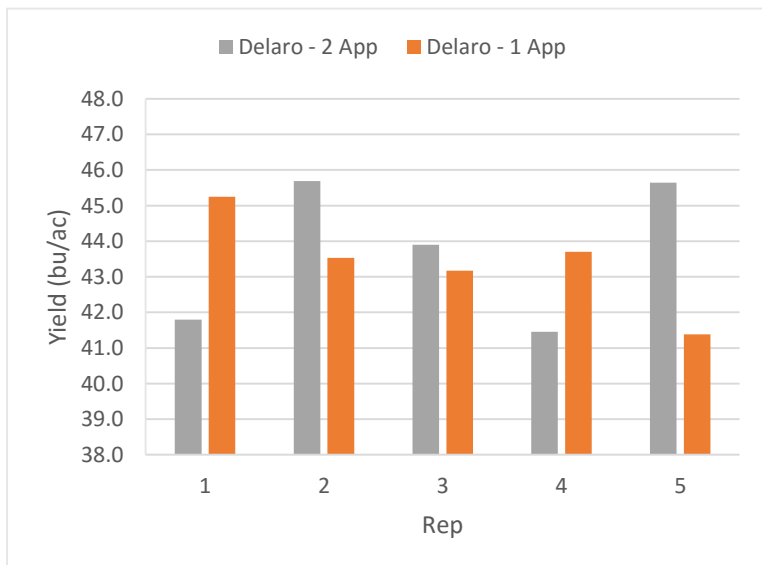
	May	June	July	Aug
<b>Rainfall</b>	12.9	77.1	27.2	32.7
<b>Normal</b>	49.4	82.2	66.7	62.1

† Growing season precipitation until harvest (mm)

### OVERALL YIELD

	Mean (bu/ac)
<b>Delaro – 2 app</b>	43.7
<b>Delaro – 1 app</b>	43.4
<b>Yield Difference</b>	0.3
<b>P-Value</b>	0.8402
<b>CV</b>	3.73
<b>Significance</b>	No

### STRIP YIELD



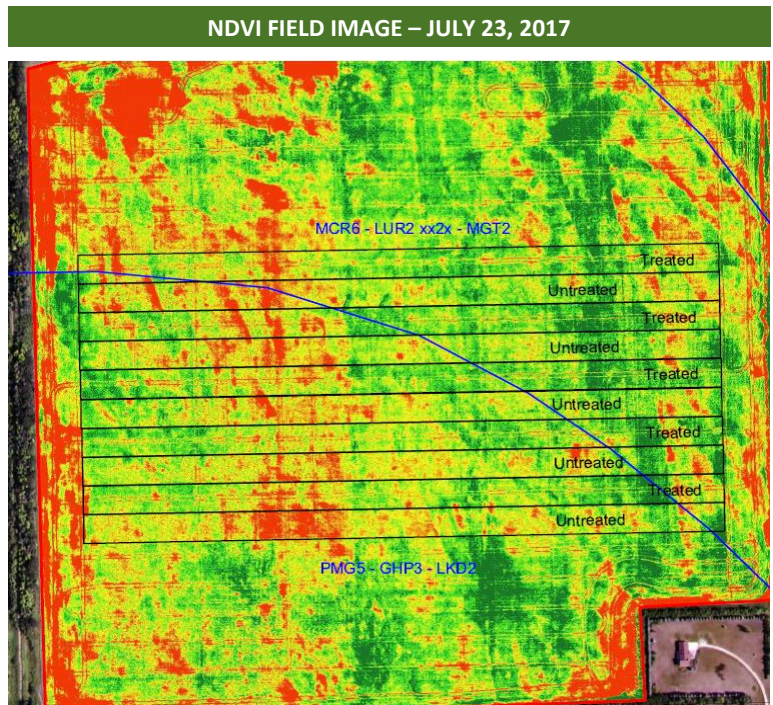
**Summary:** There was no significant yield difference between one application of Delaro applied at early flower and a second application of Delaro applied two weeks later. There was no untreated check within this trial to determine the efficacy of one application of Delaro. Rainfall was near normal for the month of June, but below normal for the remainder of the growing season.

## Field Pea Foliar Fungicide Trial

Trial ID: 2017-PF04 – R.M. of Rockwood

**Objective:** The objective of this study was to quantify the agronomic and economic impacts of foliar fungicide in field peas. A single application of Delaro was compared to an untreated check strip.

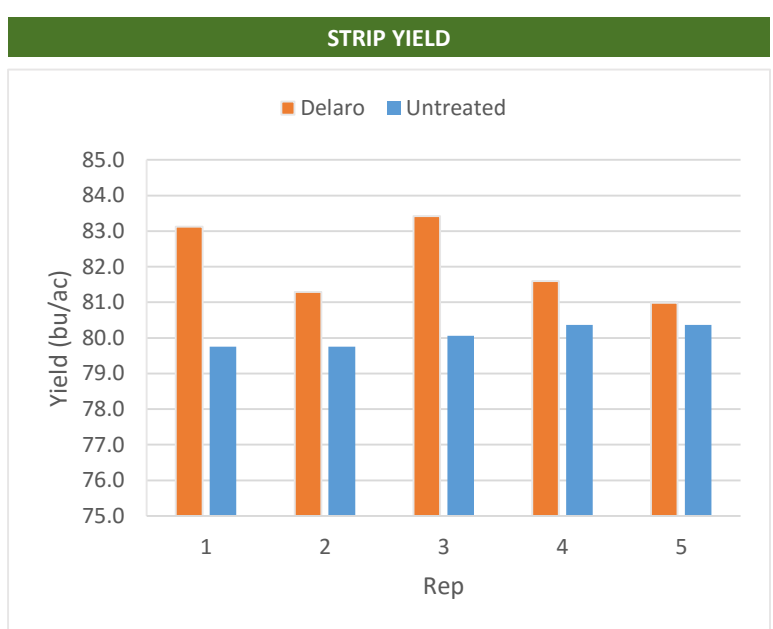
TRIAL INFORMATION	
Treatment	Delaro vs. Untreated
Rural Municipality	Rockwood
Previous Crop	Spring Wheat
Soil Description	Sandy loam/Loamy lacustrine
Tillage	Deep Till + Harrow
Planting Date	April 29, 2017
Variety	AAC Carver
Row Spacing	10"
Seeding Rate	2.8 bu/ac
Application Date	June 26, 2017
Application Timing	Early Flower
Application Rate	355 ml/ac
Application Method	Ground
Harvest Date	August 7, 2017



PRECIPITATION†				
	May	June	July	Aug
Rainfall	27.4	82.1	50.1	18.4
Normal	54.1	90	79.5	77

† Growing season precipitation until harvest (mm)

OVERALL YIELD	
	Mean (bu/ac)
Delaro	82.1
Untreated	80.1
Yield Difference	2.0
P-Value	0.0238
CV	1.59%
Significance	Yes



**Summary:** There was a significant yield difference of 2.0 bu/ac between a single application of Delaro fungicide (82.1 bu/ac) and untreated strips (80.1 bu/ac). Delaro was applied at early flower. Rainfall was near normal for the month of June, but below normal for the remainder of the growing season.



## Field Pea Foliar Fungicide Trial

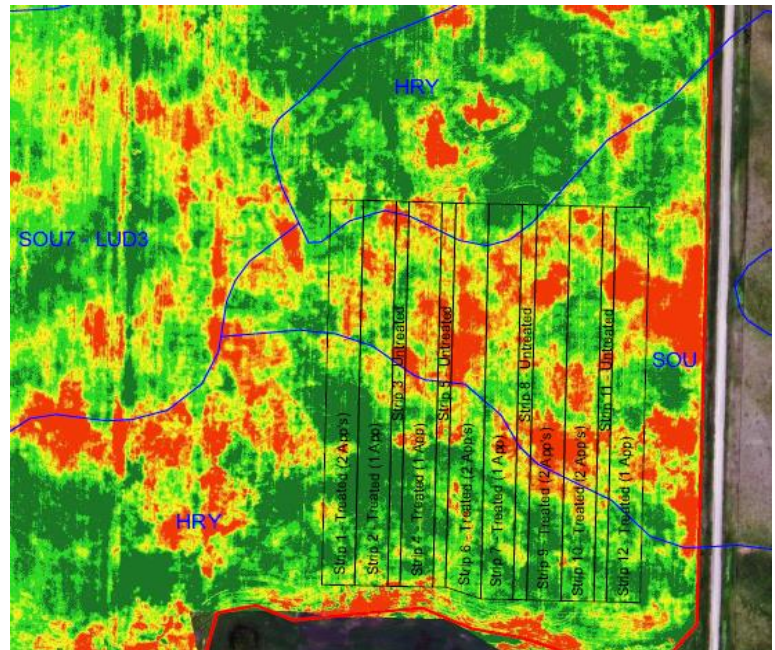
Trial ID: 2017-PF05 – R.M. of Two Borders

**Objective:** The objective of this study was to quantify the agronomic and economic impacts of foliar fungicide in field pea production fields. A single application of Delaro was compared to two applications of Delaro and an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Delaro – 1 Application Delaro – 2 Applications Untreated
<b>Rural Municipality</b>	Two Borders
<b>Previous Crop</b>	Fall Rye
<b>Soil Description</b>	Sandy/Loamy Lacustrine
<b>Tillage</b>	Minimum
<b>Planting Date</b>	April 30, 2017
<b>Variety</b>	CDC Meadows
<b>Row Spacing</b>	10"
<b>Seeding Rate</b>	180 lbs/ac
<b>App Date – 1 App</b>	June 28, 2017
<b>App Date – 2 App</b>	July 10, 2017
<b>Application Timing</b>	Early Flower
<b>Application Rate</b>	355 ml/ac
<b>Application Method</b>	Ground
<b>Harvest Date</b>	August 11, 2017

### NDVI FIELD IMAGE – JULY 23, 2017



### PRECIPITATION†

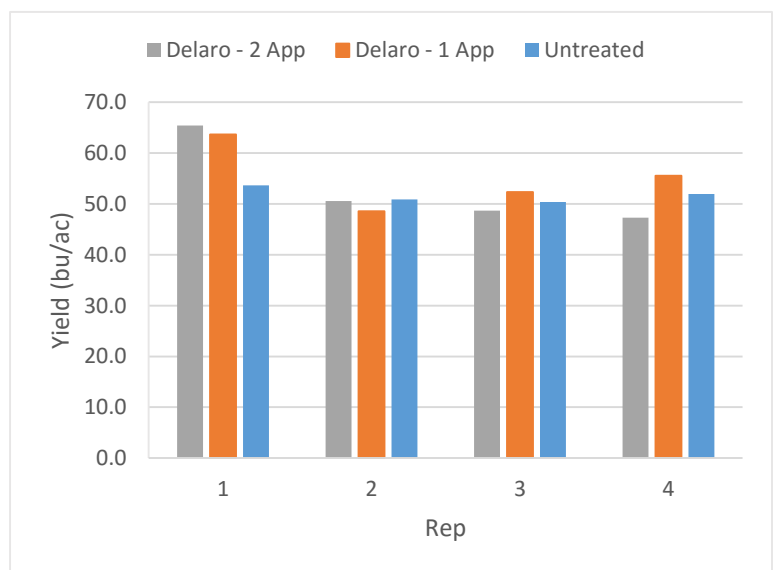
	May	June	July	Aug
<b>Rainfall</b>	10.7	79.2	8.9	36.4
<b>Normal</b>	49.4	82.2	66.7	62.1

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
<b>Delaro – 2 Applications</b>	53.0
<b>Delaro – 1 Application</b>	55.0
<b>Untreated</b>	51.7
<b>P-Value</b>	0.7532
<b>CV</b>	10.8%
<b>Significance</b>	No

### STRIP YIELD



**Summary:** There was no significant yield difference between one application of Delaro, two applications of Delaro and an untreated check. The first application of Delaro was applied at early flower, and the second application occurred 12 days later. Rainfall was below normal for the entire growing season.

## Field Pea Foliar Fungicide Trial

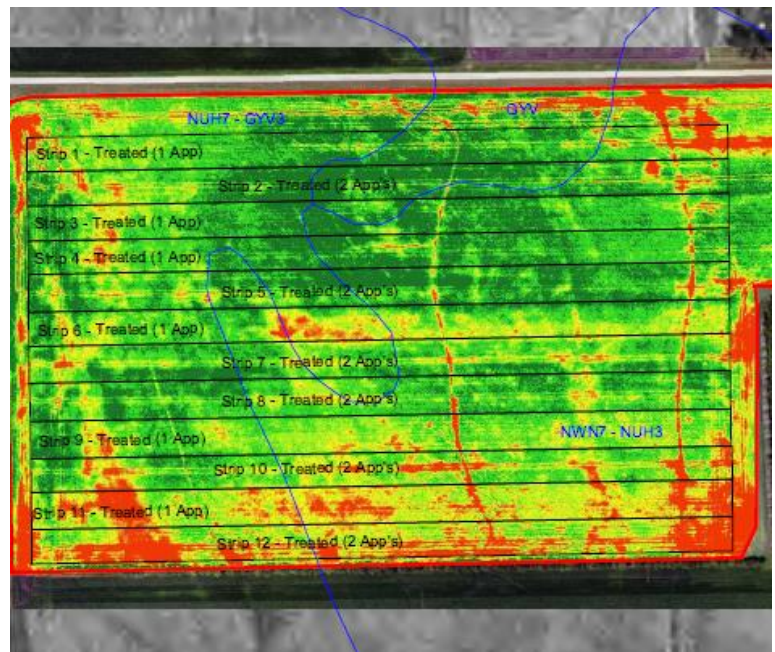
Trial ID: 2017-PF06 – R.M. of Rhineland

**Objective:** The objective of this study was to quantify the agronomic and economic impacts of foliar fungicides in field peas. One application of fungicide was compared to two applications of fungicide. The first application was Priaxor and the second application was Delaro. There was no untreated check strip within this trial.

### TRIAL INFORMATION

<b>Treatment</b>	Priaxor – 1 <sup>st</sup> application Delaro – 2 <sup>nd</sup> application
<b>Rural Municipality</b>	Rhineland
<b>Previous Crop</b>	Corn
<b>Soil Description</b>	Loamy Lacustrine
<b>Tillage</b>	Deep Till
<b>Planting Date</b>	April 29, 2017
<b>Variety</b>	CDC Amarillo
<b>Row Spacing</b>	7.5"
<b>Seeding Rate</b>	2.5 bu/ac
<b>App Date – Priaxor</b>	June 22, 2017
<b>App Date – Delaro</b>	July 6, 2017
<b>Application Timing</b>	Early Flower
<b>App Rate – Delaro</b>	355 ml/ac
<b>App Method – Priaxor</b>	Air
<b>App Method – Delaro</b>	Ground
<b>Harvest Date</b>	August 18, 2017

### NDVI FIELD IMAGE – JULY 23, 2017



### PRECIPITATION†

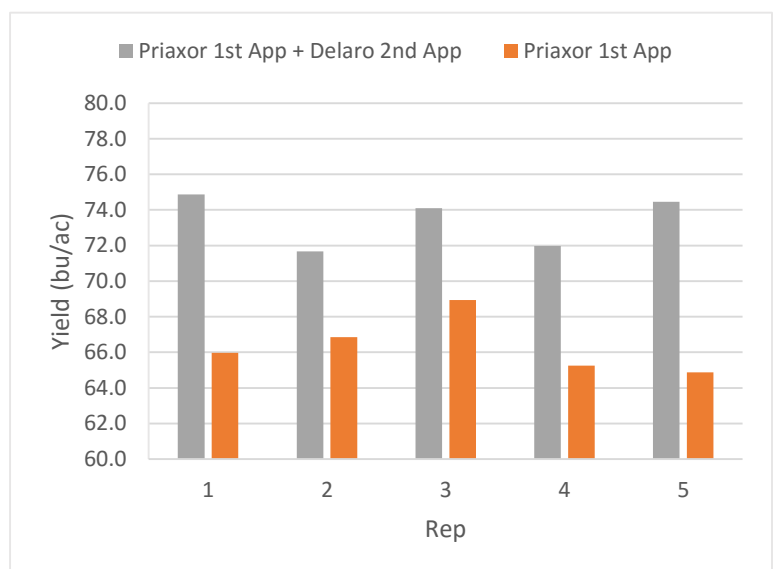
	May	June	July	Aug
<b>Rainfall</b>	26.1	51.3	43.0	16.3
<b>Normal</b>	68.8	101.5	75	67.9

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
<b>Priaxor - 1<sup>st</sup> App + Delaro 2<sup>nd</sup> App</b>	73.4
<b>Priaxor - 1<sup>st</sup> App</b>	66.4
<b>Yield Difference</b>	7.1
<b>P-Value</b>	0.0017
<b>CV</b>	5.73%
<b>Significance</b>	Yes

### STRIP YIELD



**Summary:** There was a significant difference in yield between one application of fungicide vs. two applications of fungicide. The first application of fungicide was applied by air, while the second application was applied by ground. Application method and fungicide product was different between the first and second applications of fungicide. Due to these differences, the cause of yield increase for the second application of fungicide is unclear, i.e., application method, product or a combination of both.



# Soybean Seeding Rate Trial – Western Manitoba

Soybean seeding rate trial information and yield response at six On-Farm Network trial across Manitoba in 2017.

Trial ID	Rural Municipality	Variety	Previous Crop	Seeding Date	Row Spacing	Target Seeding Rate		Plant Stand @ V1 ('000/ac)		% of Target @ V1		Plant Stand @ Harvest		% of Target @ Harvest		Yield		Yield Difference (Low-Normal)	Statistically Significant @ 95%		
						Normal	Low	Normal	Low	Normal	Low	Normal	Low	Normal	Low	Normal	Low			Normal	Low
					inch	'000/ac	'000/ac					'000/ac					bu/ac	bu/ac			
2017-SP03	Grassland	Dario R2X	Wheat	May 23	12	210	180	166	143	79%	79%	152	138	72%	77%	42.6	42.9	-0.3	No		
2017-SP02	Grassland	PS 0035 NR2	Wheat	May 23	12	196	166	186	149	95%	90%	191	147	97%	89%	45.1	44.6	0.5	No		
2017-SP05	Grassland	P006T78R	Corn	May 18	10	210	180	181	136	86%	76%	158	118	75%	66%	45.0	44.0	1.0	No		
2017-SP01	Louise	S007-Y4	Wheat	May 20	10	185	155	111	89	60%	57%	121	108	65%	70%	43.8	42.7	1.1	No		
2017-SP06	Oakland-Wawanesa	S0009-M2	Barley	May 23	10	190	160	142	166	75%	104%	128	156	67%	98%	49.7	48.3	1.4	No		
								<b>157</b>	<b>137</b>					<b>150</b>	<b>133</b>			<b>45.2</b>	<b>44.5</b>	<b>0.7</b>	<b>0/5</b>

## Soybean Seeding Rate Trial – Central Manitoba

Trial ID: 2017-SP01 – R.M. of Louise

**Objective:** Quantify the agronomic and economic impacts of reducing the farmers normal seeding rate by 30,000 seeds/ac in soybean fields.

### TRIAL INFORMATION

Treatment	Reduced Seeding Rate
Rural Municipality	Louise
Previous Crop	Spring Wheat
Soil Description	Loamy Lacustrine
Tillage	Zero Tillage
Seeding Equipment	Air Drill
Planting Date	May 20, 2017
Variety	S007-Y4
Row Spacing	10"
Harvest Date	October 6, 2017

### SEEDING RATE VS. PLANT STAND

Seeding Rate	Plant Stand @ V1	Plant Stand @ Harvest
185,000 seeds/ac	111,000	121,000
155,000 seeds/ac	89,000	108,000

### PRECIPITATION†

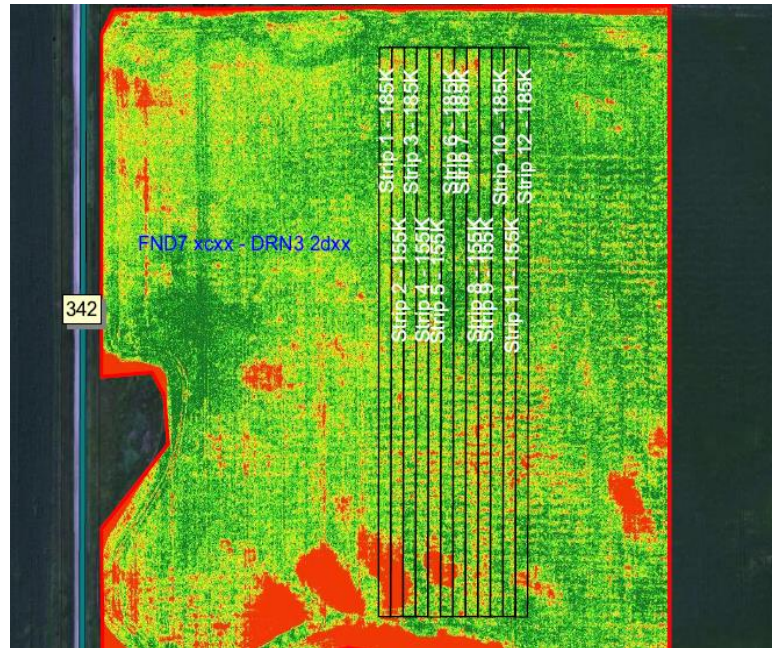
	May	June	July	Aug
Rainfall	18.5	74.3	99.5	32.1
Normal	70.4	92.9	82.1	72.5

† Growing season precipitation (mm)

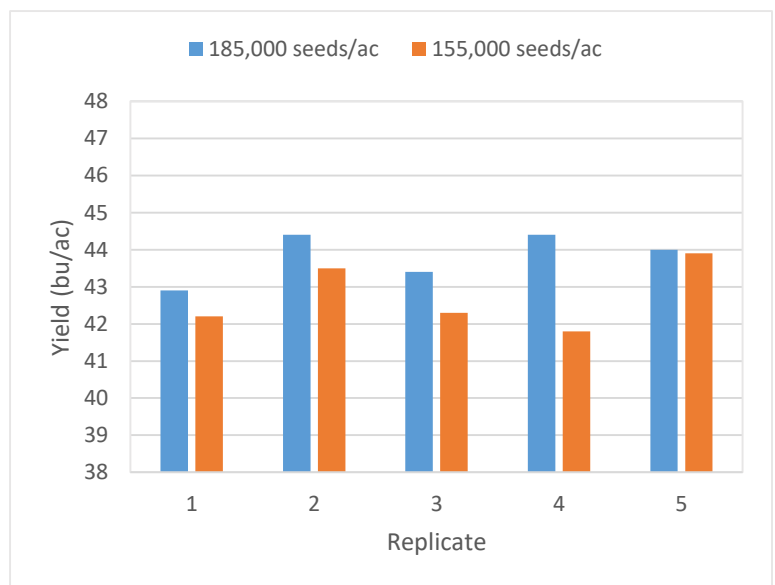
### OVERALL YIELD

	Mean (bu/ac)
185,000 seeds/ac	43.8
155,000 seeds/ac	42.7
Yield Difference	1.1
P-Value	0.0600
CV	2.2%
Significance	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between the normal seeding rate of 185,000 seeds/ac and the reduced seeding rate of 155,000 seeds/ac. The actual plant stand for the normal seeding rate and reduced seeding rate at V1 was 111,000 plants/ac and 89,000 plants/ac, respectively.

## Soybean Seeding Rate Trial – Western Manitoba

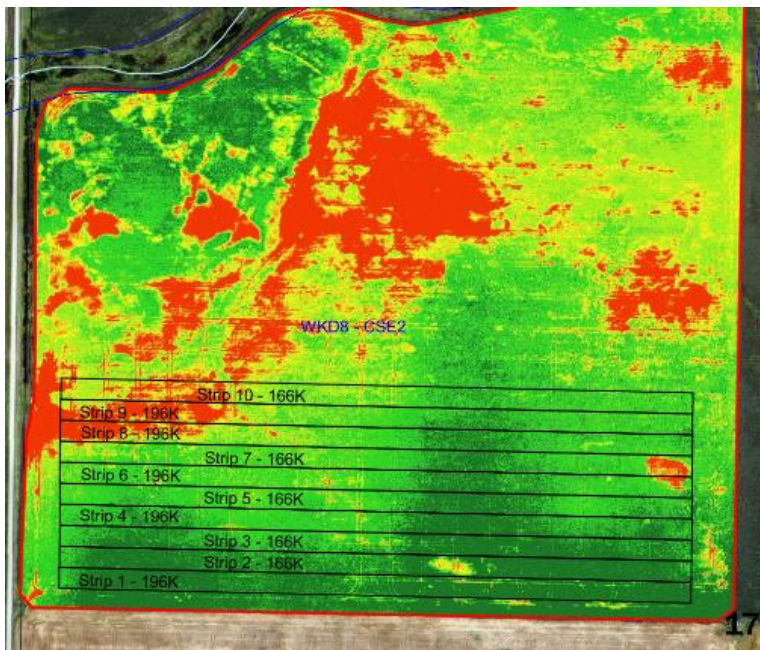
Trial ID: 2017-SP02 – R.M. of Grassland

**Objective:** Quantify the agronomic and economic impacts of reducing the farmers normal seeding rate by 30,000 seeds/ac in soybean fields.

### TRIAL INFORMATION

Treatment	Reduced Seeding Rate
Rural Municipality	Grassland
Previous Crop	Spring Wheat
Soil Description	Loamy Lacustrine
Tillage	Cultivate 1x
Seeding Equipment	Air Drill
Planting Date	May 23, 2017
Variety	PS 0035 NR2
Row Spacing	12"
Harvest Date	September 29, 2017

### FIELD IMAGE



### SEEDING RATE VS. PLANT STAND

Seeding Rate	Plant Stand @ V1	Plant Stand @ Harvest
196,000 seeds/ac	186,000	191,000
166,000 seeds/ac	149,000	147,000

### PRECIPITATION†

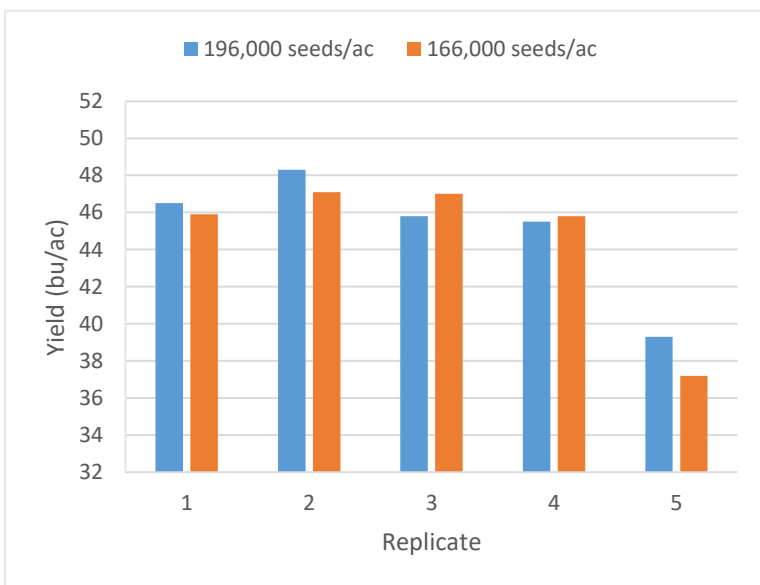
	May	June	July	Aug
Rainfall	18.0	83.5	55.3	37.4
Normal	57.2	92.1	72.6	54.5

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
196,000 seeds/ac	45.1
166,000 seeds/ac	44.6
Yield Difference	0.5
P-Value	0.4500
CV	8.0%
Significance	No

### STRIP YIELD



**Summary:** There was no significant yield difference between the normal seeding rate of 196,000 seeds/ac and the reduced seeding rate of 166,000 seeds/ac. The actual plant stand for the normal seeding rate and reduced seeding rate at V1 was 186,000 plants/ac and 149,000 plants/ac, respectively.



## Soybean Seeding Rate Trial – Western Manitoba

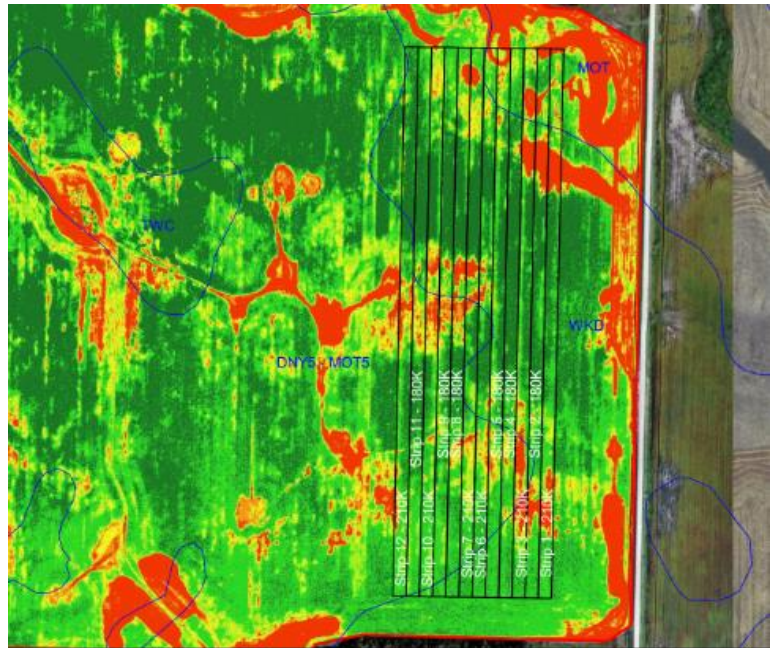
Trial ID: 2017-SP03 – R.M. of Grassland

**Objective:** Quantify the agronomic and economic impacts of reducing the farmers normal seeding rate by 30,000 seeds/ac in soybean fields.

### TRIAL INFORMATION

Treatment	Reduced Seeding Rate
Rural Municipality	Grassland
Previous Crop	Spring Wheat
Soil Description	Loamy Lacustrine
Tillage	Zero Tillage
Seeding Equipment	Air Drill
Planting Date	May 23, 2017
Variety	Dario R2X
Row Spacing	12"
Harvest Date	October 3, 2017

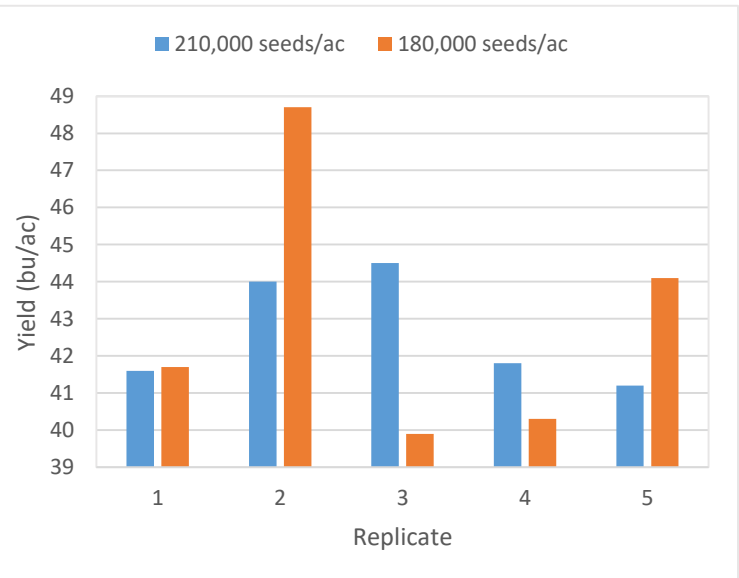
### FIELD IMAGE



### SEEDING RATE VS. PLANT STAND

Seeding Rate	Plant Stand @ V1	Plant Stand @ Harvest
210,000 seeds/ac	166,000	152,000
180,000 seeds/ac	143,000	138,000

### STRIP YIELD



### PRECIPITATION†

	May	June	July	Aug
Rainfall	18.0	83.5	55.3	37.4
Normal	57.2	92.1	72.6	54.5

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
210,000 seeds/ac	42.6
180,000 seeds/ac	42.9
Yield Difference	-0.3
P-Value	0.8543
CV	6.1%
Significance	No

**Summary:** There was no significant yield difference between the normal seeding rate of 210,000 seeds/ac and the reduced seeding rate of 180,000 seeds/ac. The actual plant stand for the normal seeding rate and reduced seeding rate at V1 was 166,000 plants/ac and 143,000 plants/ac, respectively.

## Soybean Seeding Rate Trial – Western Manitoba

Trial ID: 2017-SP05 – R.M. of Grassland

**Objective:** Quantify the agronomic and economic impacts of reducing the farmers normal seeding rate by 30,000 seeds/ac in soybean fields.

### TRIAL INFORMATION

Treatment	Reduced Seeding Rate
Rural Municipality	Grassland
Previous Crop	Grain Corn
Soil Description	Loamy Till/Lacustrine
Tillage	Conventional
Seeding Equipment	N/A
Planting Date	May 18, 2017
Variety	P006T78R
Row Spacing	10"
Harvest Date	October 5, 2017

### SEEDING RATE VS. PLANT STAND

Seeding Rate	Plant Stand @ V1	Plant Stand @ Harvest
210,000 seeds/ac	181,000	158,000
180,000 seeds/ac	136,000	118,000

### PRECIPITATION†

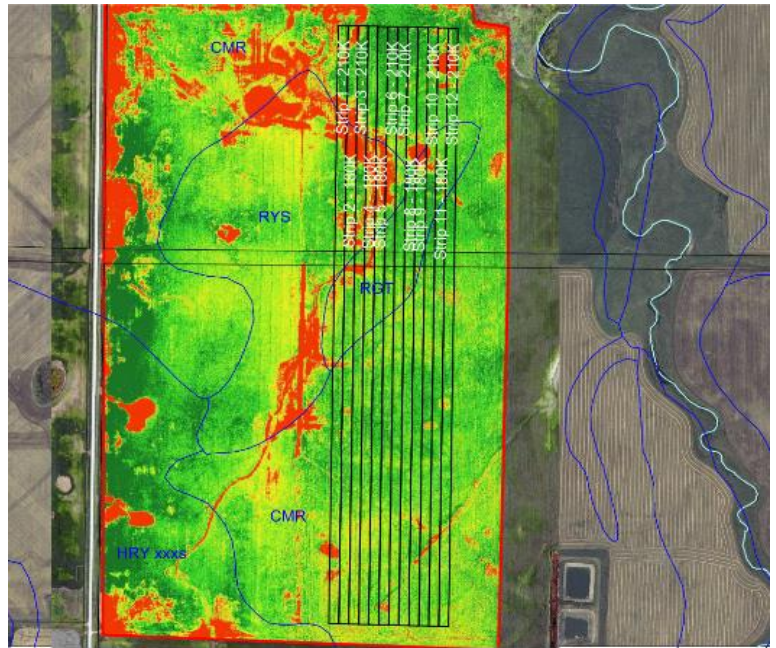
	May	June	July	Aug
Rainfall	12.0	88.9	29.4	38.3
Normal	57.2	92.1	72.6	54.5

† Growing season precipitation (mm)

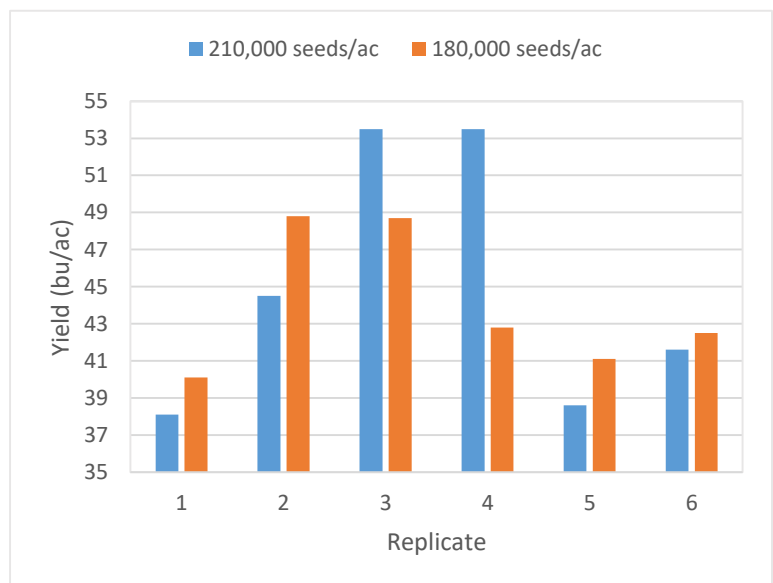
### OVERALL YIELD

	Mean (bu/ac)
210,000 seeds/ac	45.0
180,000 seeds/ac	44.0
Yield Difference	1.0
P-Value	0.6942
CV	12.1%
Significance	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between the normal seeding rate of 210,000 seeds/ac and the reduced seeding rate of 180,000 seeds/ac. The actual plant stand for the normal seeding rate and reduced seeding rate at V1 was 181,000 plants/ac and 136,000 plants/ac, respectively.

## Soybean Seeding Rate Trial – Western Manitoba

Trial ID: 2017-SP06 – R.M. of Oakland-Wawanesa

**Objective:** Quantify the agronomic and economic impacts of reducing the farmers normal seeding rate by 30,000 seeds/ac in soybean fields.

### TRIAL INFORMATION

Treatment	Reduced Seeding Rate
Rural Municipality	Oakland-Wawanesa
Previous Crop	Barley
Soil Description	Loamy Lacustrine
Tillage	Deep Cultivation 1x
Seeding Equipment	Air Drill
Planting Date	May 23, 2017
Variety	S0009-M2
Row Spacing	10"
Harvest Date	September 28, 2017

### SEEDING RATE VS. PLANT STAND

Seeding Rate	Plant Stand @ V1	Plant Stand @ Harvest
190,000 seeds/ac	166,000	156,000
160,000 seeds/ac	142,000	128,000

### PRECIPITATION†

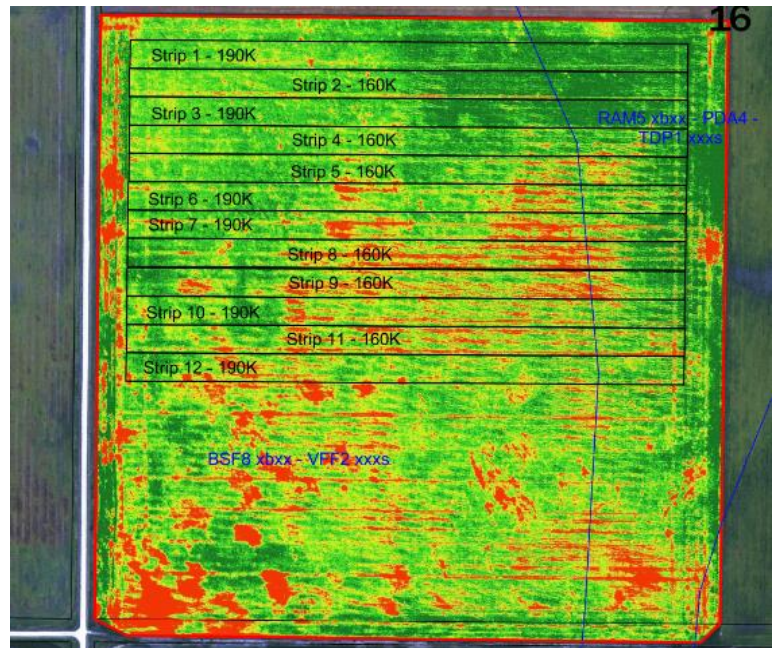
	May	June	July	Aug
Rainfall	26.7	69.3	51.2	35.3
Normal	58.8	96.0	78.9	65.3

† Growing season precipitation (mm)

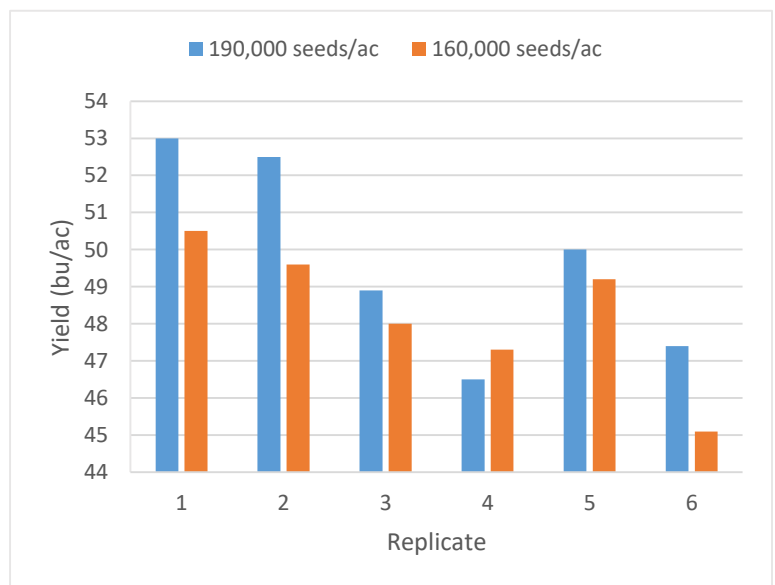
### OVERALL YIELD

	Mean (bu/ac)
190,000 seeds/ac	48.3
160,000 seeds/ac	49.7
Yield Difference	-1.4
P-Value	0.0532
CV	4.8%
Significance	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between the normal seeding rate of 190,000 seeds/ac and the reduced seeding rate of 160,000 seeds/ac. The actual plant stand for the normal seeding rate and reduced seeding rate at V1 was 166,000 plants/ac and 142,000 plants/ac, respectively.



# Soybean Foliar Fungicide Trial

Soybean foliar fungicide trial information and yield response for 11 On-Farm Network trials across Manitoba in 2017.

Trial ID	Rural Municipality	Variety	Previous Crop	Seeding Date	Row Spacing	Seeding Rate	Stage Sprayed	Plant Stand @ Harvest		Yield		Yield Difference	Fungicide Product	Statistically Significant @ 95%	
								With	W/O	With	W/O				
					inch	'000/ac	'000/ac		bu/ac		bu/ac				
2017-SF03	Grey	S006-W5	Wheat	May 12	7.5	185	R2	146	153	36.3	36.0	0.3	Cotegra	No	
2017-SF08	Grey	24-10 RY	Oats	May 10	20	160	R2	120	126	38.3	37.6	0.7	Cotegra	Yes	
2017-SF07	Hanover	Long 6 RR1	Corn	May 17	20	195	R2	166	166	36.8	36.0	0.8	Delaro	No	
2017-SF04	Rhineland	PS 0035 NR2	Canola	May 14	30	160	R2	132	135	42.3	41.3	1.0	Acapela	No	
2017-SF02	Dauphin	Mahony R2	Wheat	May 25	10	189	R2	130	135	38.3	37.2	1.1	Delaro	No	
2017-SF11	Dufferin	0066 XR	Corn	May 20	20	185	R2	152	156	39.8	38.7	1.1	Delaro	Yes	
2017-SF05	Morris	LS Mistral	Soybeans	May 12	30	168	R2	140	143	45.9	44.5	1.4	Cotegra	Yes	
2017-SF06	Westlake-Gladstone	24-10 RY	Wheat	May 16	10	180	R2	-	-	40.5	39.1	1.5	Cotegra	No	
2017-SF09	St Clements	24-10 RY	Soybeans	May 05	10	185	R2	150	172	41.5	39.7	1.8	Cotegra	Yes	
2017-SF10	Dufferin	NSC Richer RR2Y	Soybeans	May 12	15	185	R2	157	152	43.7	41.5	2.2	Acapela	Yes	
2017-SF01	Dauphin	Akras R2	Canola	May 26	10	190	R2	148	144	45.5	42.8	2.7	Acapela	No	
								<b>142</b>	<b>148</b>	<b>40.8</b>	<b>39.5</b>	<b>1.3</b>			

## Soybean Foliar Fungicide Trial

Trial ID: 2017-SF01 – R.M. of Dauphin

**Objective:** Quantify the agronomic and economic impacts of foliar fungicide in soybean fields. A single application of Acapela was compared to an untreated check strip.

### TRIAL INFORMATION

Treatment	Acapela vs. Untreated
Rural Municipality	Dauphin
Previous Crop	Canola
Soil Description	Sandy Lacustrine
Tillage	Zero Till
Planting Date	May 26, 2017
Variety	Akras R2
Row Spacing	10"
Plant Stand @ Harvest	147,000 plants/ac
Application Date	July 18, 2017
Application Timing	R2 – Full Flower
Application Rate	355 ml/ac
Harvest Date	October 13, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	47.6	65.8	90.6	19.3
Normal	50.2	87.3	76.4	74.2

<sup>†</sup> Growing season precipitation (mm)

### DISEASE RATING @ GROWTH STAGE R6

	WM Incidence	BS Incidence	BS Severity <sup>†</sup>
Acapela	1.7%	57%	1.2
Untreated	0.0%	87%	1.4
P-Value	0.3321	0.0214	0.0043
Significance	No	Yes	Yes

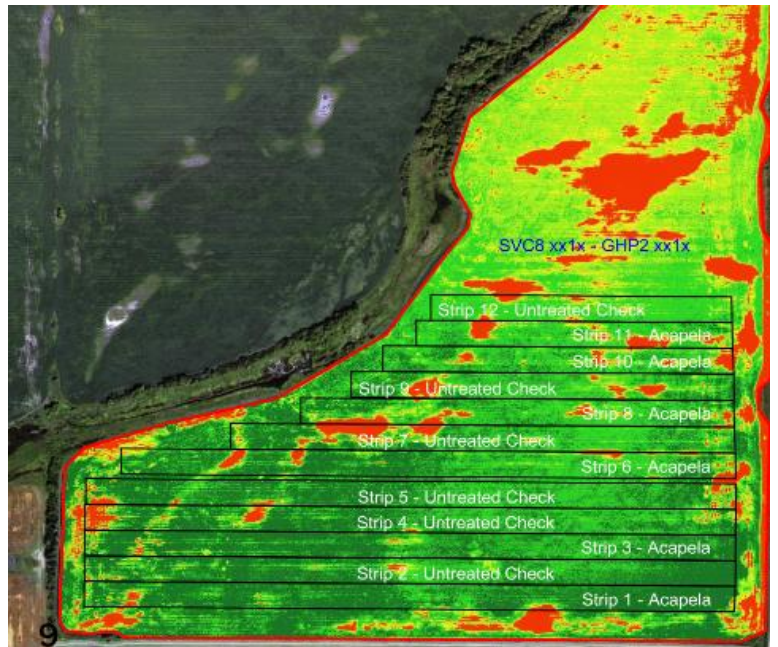
WM = White Mould, BS = Brown Spot

<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection)

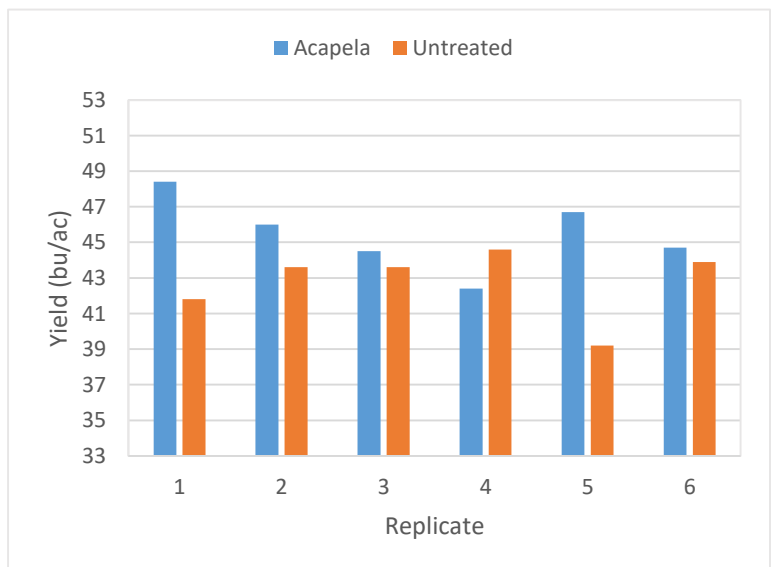
### OVERALL YIELD

	Mean (bu/ac)
Acapela	45.5
Untreated	42.8
Yield Difference	2.7
P-Value	0.1395
CV	5.4%
Significance	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between a single application of Acapela and untreated check strips applied at R2 (full flower). Acapela significantly reduced the brown spot incidence and severity within the trial compared to untreated strips. Only trace amounts of white mould was found within the trial when rated at growth stage R6.

## Soybean Foliar Fungicide Trial

Trial ID: 2017-SF02 – R.M. of Dauphin

**Objective:** Quantify the agronomic and economic impacts of foliar fungicide in soybean fields. A single application of Delaro was compared to an untreated check strip.

### TRIAL INFORMATION

Treatment	Delaro vs Untreated
Rural Municipality	Dauphin
Previous Crop	Spring Wheat
Soil Description	Sandy Loam Lacustrine
Tillage	Heavy Harrow 2x
Planting Date	May 25, 2017
Variety	Mahony R2
Row Spacing	10"
Plant Stand @ Harvest	133,000 plants/ac
Application Date	July 18, 2017
Application Timing	R2
Application Rate	260 ml/ac
Harvest Date	October 12, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	47.6	65.8	90.6	19.3
Normal	52.9	81.7	73.1	61.3

<sup>†</sup> Growing season precipitation (mm)

### DISEASE RATING @ GROWTH STAGE R6

	WM Incidence	BS Incidence	BS Severity <sup>†</sup>
Delaro	0%	13%	1.0
Untreated	0%	65%	1.3
P-Value	n/a	0.0001	0.0001
Significance	n/a	Yes	Yes

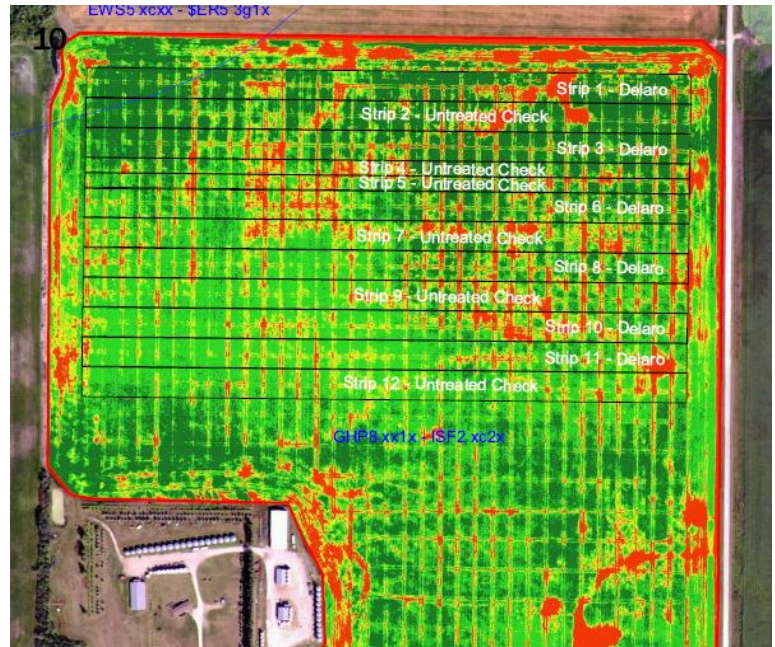
WM = White Mould, BS = Brown Spot

<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection)

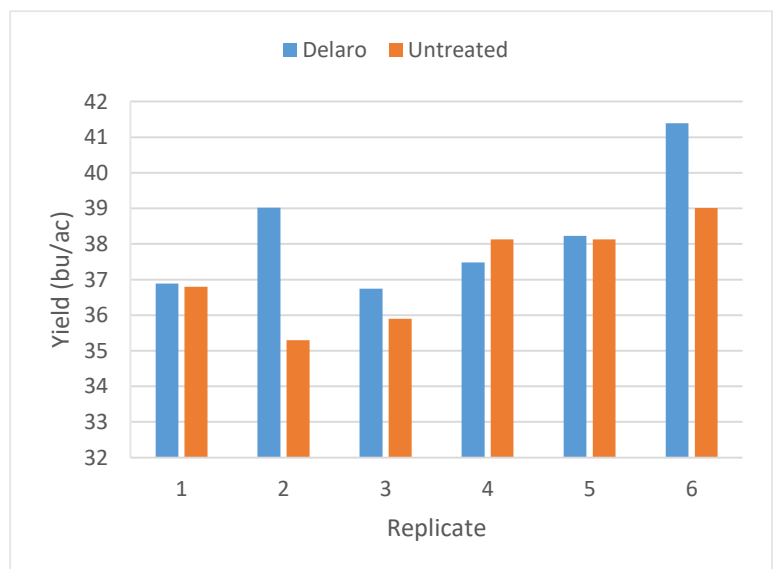
### OVERALL YIELD

	Mean (bu/ac)
Delaro	38.3
Untreated	37.2
Yield Difference	1.1
P-Value	0.1663
CV	4.3%
Significance	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between a single application of Delaro and untreated check strips applied at R2 (full flower). Delaro significantly reduced the brown spot severity and incidence within the trial compared to untreated strips. There was no white mould found within the trial when rated at growth stage R6.



## Soybean Foliar Fungicide Trial

Trial ID: 2017-SF03 – R.M. of Grey

**Objective:** Quantify the agronomic and economic impacts of foliar fungicide in soybean fields. A single application of Cotegra was compared to an untreated check strip.

### TRIAL INFORMATION

Treatment	Cotegra vs. Untreated
Rural Municipality	Grey
Previous Crop	Spring Wheat
Soil Description	Clayey Lacustrine
Tillage	Cultivate 1x
Planting Date	May 12, 2017
Variety	S006-W5
Row Spacing	7.5"
Plant Stand @ Harvest	146,000 plants/ac
Application Date	July 10, 2017
Application Timing	R2 – Full Flower
Application Rate	280 ml/ac
Harvest Date	September 12, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	27.2	69.2	41.8	15.7
Normal	57.5	84.1	76.5	74.5

<sup>†</sup> Growing season precipitation (mm)

### DISEASE RATING @ GROWTH STAGE R6

	WM Incidence	BS Incidence	BS Severity <sup>†</sup>
Cotegra	0%	4%	1.0
Untreated	0%	11%	1.0
P-Value	n/a	0.0382	n/a
Significance	n/a	Yes	n/a

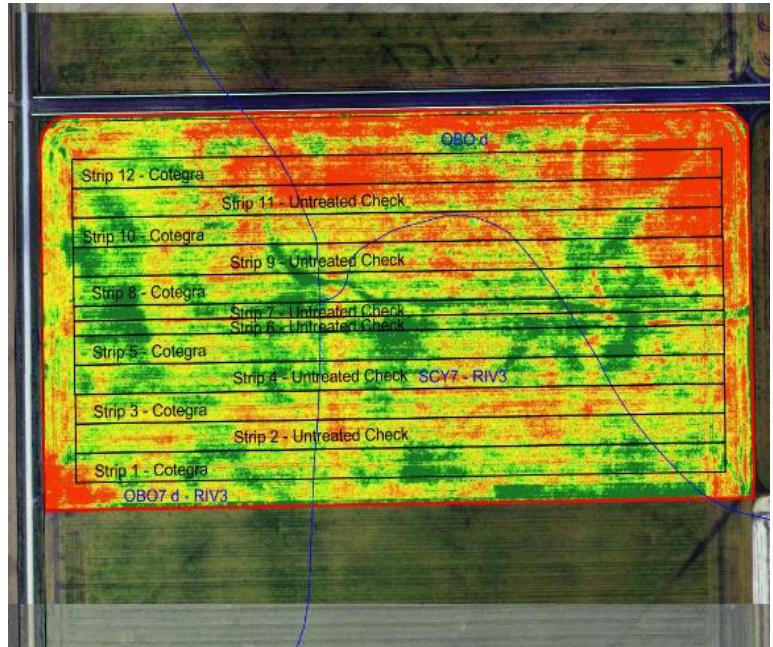
WM = White Mould, BS = Brown Spot

<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection)

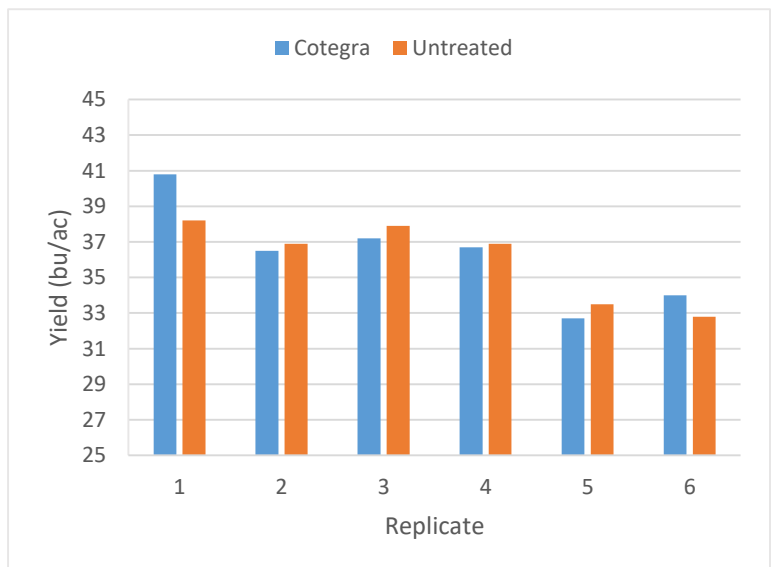
### OVERALL YIELD

	Mean (bu/ac)
Cotegra	36.3
Untreated	36.0
Yield Difference	0.3
P-Value	0.6279
CV	6.8%
Significance	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between a single application of Cotegra and untreated check strips applied at R2 (full flower). Cotegra significantly reduced the brown spot incidence within the trial; however, there was no difference in severity compared to untreated strips. There was no white mould found within the trial when rated at growth stage R6.

## Soybean Foliar Fungicide Trial

Trial ID: 2017-SF04 – R.M. of Rhineland

**Objective:** Quantify the agronomic and economic impacts of foliar fungicide in soybean fields. A single application of Acapela was compared to an untreated check strip.

### TRIAL INFORMATION

Treatment	Acapela vs. Untreated
Rural Municipality	Rhineland
Previous Crop	Canola
Soil Description	Clayey Lacustrine
Tillage	Vertical Tillage
Planting Date	May 14, 2017
Variety	PS 0035 NR2
Row Spacing	30"
Plant Stand @ Harvest	133,000 plants/ac
Application Date	July 10, 2017
Application Timing	R2 – Full Flower
Application Rate	355 ml/ac
Harvest Date	September 13, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	26.1	51.3	43.0	20.0
Normal	68.8	101.5	75.0	67.9

<sup>†</sup> Growing season precipitation (mm)

### DISEASE RATING @ GROWTH STAGE R6

	WM Incidence	BS Incidence	BS Severity <sup>†</sup>
Acapela	0%	100%	1.4
Untreated	0%	100%	2.4
P-Value	n/a	n/a	<0.0001
Significance	n/a	n/a	Yes

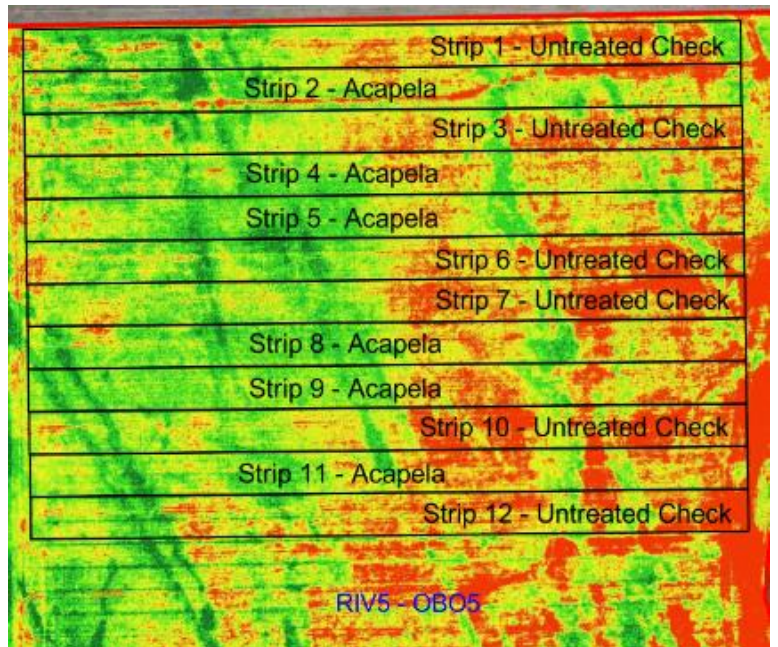
WM = White Mould, BS = Brown Spot

<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection)

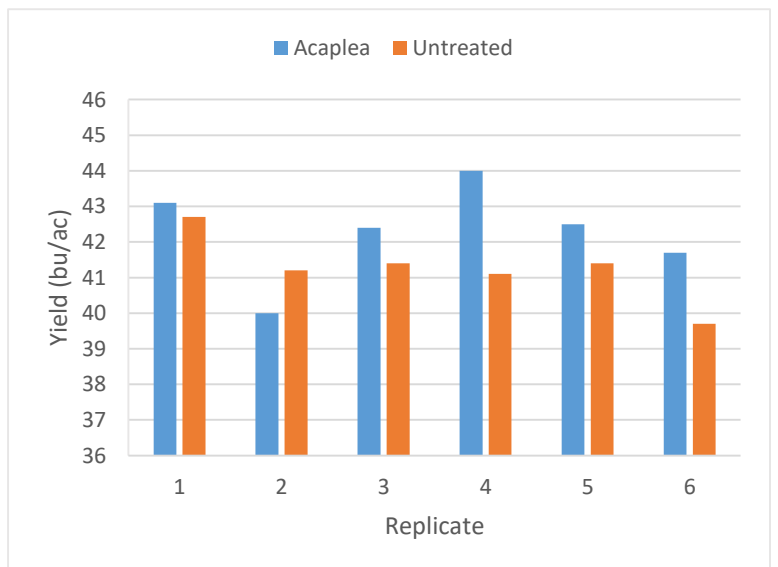
### OVERALL YIELD

	Mean (bu/ac)
Acapela	42.3
Untreated	41.3
Yield Difference	1.0
P-Value	0.1306
CV	3.0%
Significance	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between a single application of Acapela and untreated check strips applied at R2 (full flower). Acapela significantly reduced the brown spot severity within the trial; however, there was no difference in incidence compared to untreated strips. There was no white mould found within the trial when rated at growth stage R6.

## Soybean Foliar Fungicide Trial

Trial ID: 2017-SF05 – R.M. of Morris

**Objective:** Quantify the agronomic and economic impacts of foliar fungicide in soybean fields. A single application of Cotegra was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Cotegra vs. Untreated
<b>Rural Municipality</b>	Morris
<b>Previous Crop</b>	Soybeans
<b>Soil Description</b>	Clayey Lacustrine
<b>Tillage</b>	Conventional
<b>Planting Date</b>	May 12, 2017
<b>Variety</b>	LS Mistral
<b>Row Spacing</b>	30"
<b>Plant Stand @ Harvest</b>	141,000 plants/ac
<b>Application Date</b>	July 11, 2017
<b>Application Timing</b>	R2 – Full Flower
<b>Application Rate</b>	280 ml/ac
<b>Harvest Date</b>	September 21, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
<b>Rainfall</b>	20.1	49.1	54.3	13.1
<b>Normal</b>	67.6	101.8	85.6	83.9

<sup>†</sup> Growing season precipitation (mm)

### DISEASE RATING @ GROWTH STAGE R6

	WM Incidence	BS Incidence	BS Severity <sup>†</sup>
<b>Cotegra</b>	0%	59%	1.0
<b>Untreated</b>	0%	100%	1.4
<b>P-Value</b>	n/a	<0.0001	0.0002
<b>Significance</b>	n/a	Yes	Yes

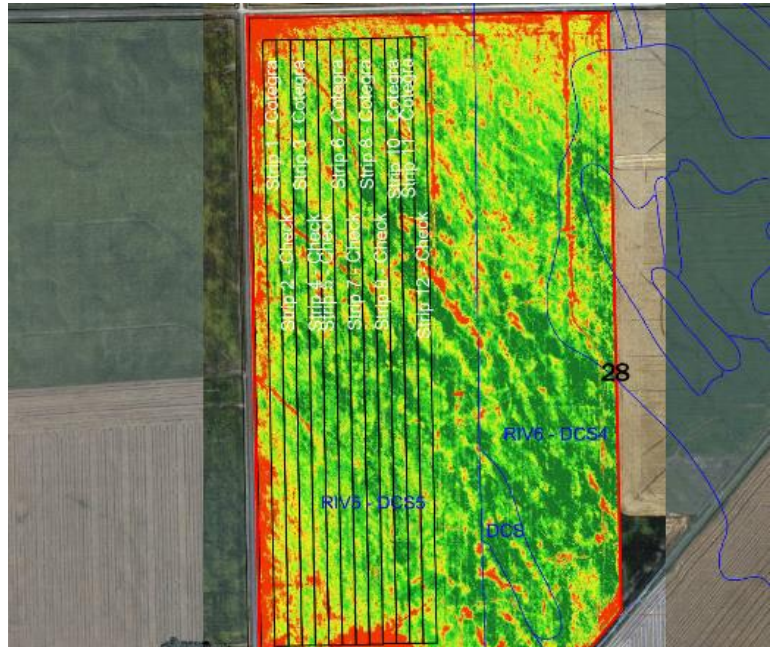
WM = White Mould, BS = Brown Spot

<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection)

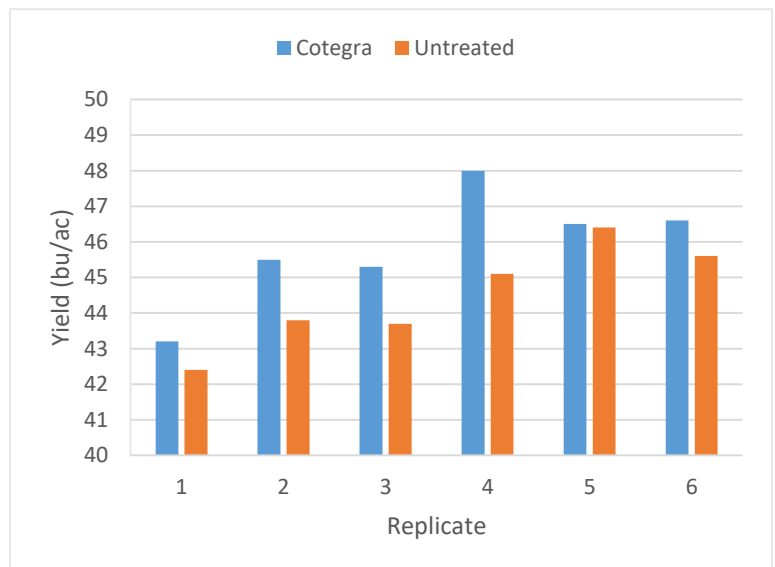
### OVERALL YIELD

	Mean (bu/ac)
<b>Cotegra</b>	45.9
<b>Untreated</b>	44.5
<b>Yield Difference</b>	1.4
<b>P-Value</b>	0.0181
<b>CV</b>	3.6%
<b>Significance</b>	Yes

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was a significant yield difference of 1.4 bu/ac between a single application of Cotegra and untreated check strips applied at R2 (full flower). Cotegra significantly reduced the brown spot incidence and severity within the trial compared to untreated strips. There was no white mould found within the trial when rated at growth stage R6.



## Soybean Foliar Fungicide Trial

Trial ID: 2017-SF06 – R.M. of Westlake-Gladstone

**Objective:** Quantify the agronomic and economic impacts of foliar fungicide in soybean fields. A single application of Cotegra was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Cotegra vs. Untreated
<b>Rural Municipality</b>	Westlake-Gladstone
<b>Previous Crop</b>	Spring Wheat
<b>Soil Description</b>	Clayey Lacustrine
<b>Tillage</b>	Cultivate 2x
<b>Planting Date</b>	May 16, 2017
<b>Variety</b>	24-10RY
<b>Row Spacing</b>	10"
<b>Plant Stand @ Harvest</b>	-
<b>Application Date</b>	July 15, 2017
<b>Application Timing</b>	R2 – Full Flower
<b>Application Rate</b>	280 ml/ac
<b>Harvest Date</b>	September 30, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
<b>Rainfall</b>	31.7	78.9	34.0	21.8
<b>Normal</b>	56.3	87.9	74.4	65.9

<sup>†</sup> Growing season precipitation (mm)

### DISEASE RATING @ GROWTH STAGE R6

	WM Incidence	BS Incidence	BS Severity <sup>†</sup>
<b>Cotegra</b>	0.8%	39%	1.1
<b>Untreated</b>	0.8%	60%	1.3
<b>P-Value</b>	n/a	0.0566	0.0444
<b>Significance</b>	n/a	No	Yes

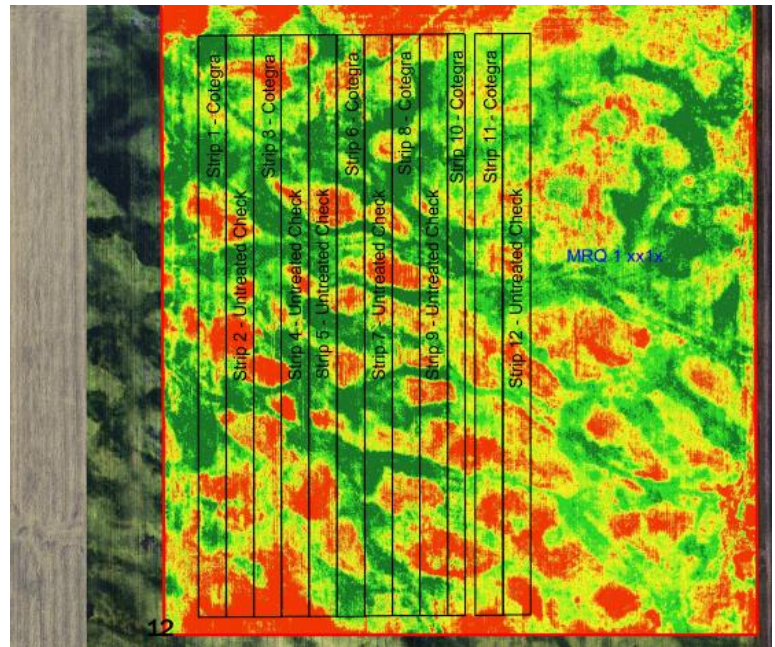
WM = White Mould, BS = Brown Spot

<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection)

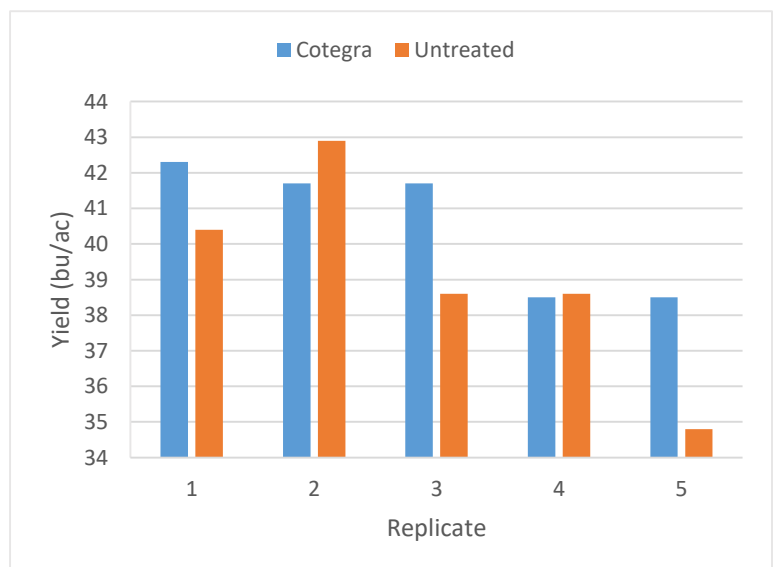
### OVERALL YIELD

	Mean (bu/ac)
<b>Cotegra</b>	40.5
<b>Untreated</b>	39.1
<b>Yield Difference</b>	1.4
<b>P-Value</b>	0.1878
<b>CV</b>	6.2%
<b>Significance</b>	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between a single application of Cotegra and untreated check strips applied at R2 (full flower). Cotegra significantly reduced the brown spot severity within the trial; however, there was no significant difference in incidence compared to untreated strips. Only trace amounts of white mould were found within the trial when rated at growth stage R6.

MPSG would like to thank BASF for providing the chemical for this trial and Tone Ag Consulting for conducting the research

## Soybean Foliar Fungicide Trial

Trial ID: 2017-SF07 – R.M. of Hanover

**Objective:** Quantify the agronomic and economic impacts of foliar fungicide in soybean fields. A single application of Delaro was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Delaro vs. untreated
<b>Rural Municipality</b>	Hanover
<b>Previous Crop</b>	Corn
<b>Soil Description</b>	Clayey Lacustrine
<b>Tillage</b>	Zero Till
<b>Planting Date</b>	-
<b>Variety</b>	Long 6 RR1
<b>Row Spacing</b>	20"
<b>Plant Stand @ Harvest</b>	166,000 plants/ac
<b>Application Date</b>	July 13, 2017
<b>Application Timing</b>	R2 – Full Flower
<b>Application Rate</b>	260 ml/ac
<b>Harvest Date</b>	October 6, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
<b>Rainfall</b>	25.9	58.5	57.0	24.6
<b>Normal</b>	59.8	99.7	91.7	72.4

<sup>†</sup> Growing season precipitation (mm)

### DISEASE RATING @ GROWTH STAGE R6

	WM Incidence	BS Incidence	BS Severity <sup>†</sup>
<b>Delaro</b>	0%	35%	1.0
<b>Untreated</b>	0%	55%	1.2
<b>P-Value</b>	n/a	0.0753	0.0301
<b>Significance</b>	n/a	No	Yes

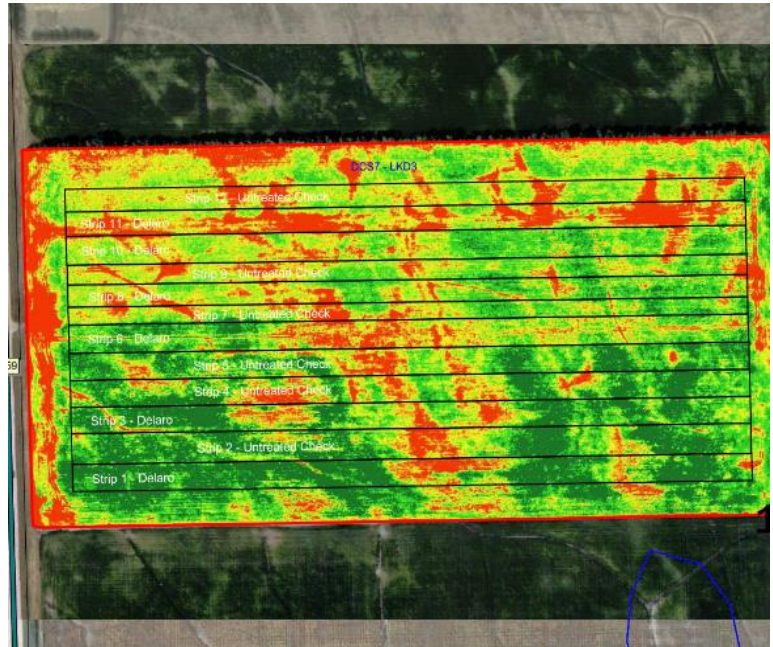
WM = White Mould, BS = Brown Spot

<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection)

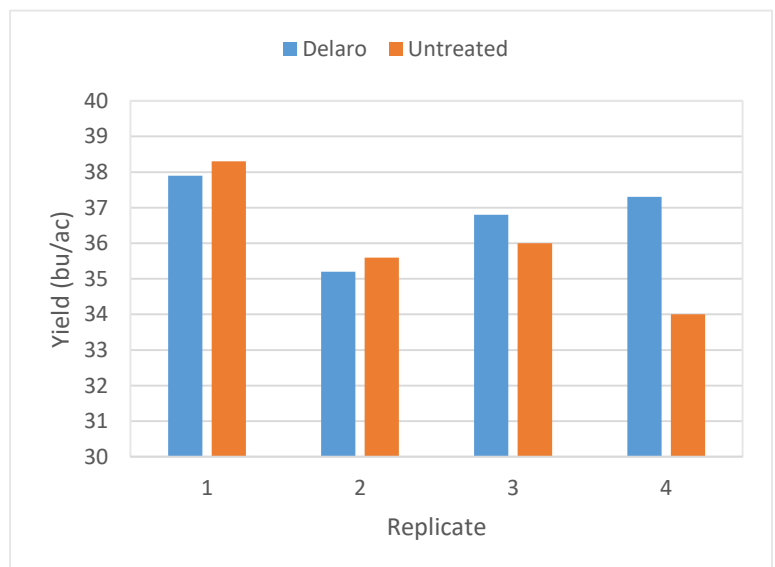
### OVERALL YIELD

	Mean (bu/ac)
<b>Delaro</b>	36.8
<b>Untreated</b>	36.0
<b>Yield Difference</b>	0.8
<b>P-Value</b>	0.4140
<b>CV</b>	4.0%
<b>Significance</b>	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between a single application of Delaro and untreated check strips applied at R2 (full flower). Delaro significantly reduced the brown spot severity within the trial; however, there was no significant difference in incidence compared to untreated strips. There was no white mould found within the trial when rated at growth stage R6.



## Soybean Foliar Fungicide Trial

Trial ID: 2017-SF08 – R.M. of Grey

**Objective:** Quantify the agronomic and economic impacts of foliar fungicide in soybean fields. A single application of Cotegra was compared to an untreated check strip.

### TRIAL INFORMATION

Treatment	Cotegra vs. Untreated
Rural Municipality	Grey
Previous Crop	Oats
Soil Description	Clayey Lacustrine
Tillage	Joker 1x
Planting Date	May 10, 2017
Variety	24-10RY
Row Spacing	20"
Plant Stand @ Harvest	120,000 plants/ac
Application Date	July 14, 2017
Application Timing	R2 – Full Flower
Application Rate	280 ml/ac
Harvest Date	September 12, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	28.3	70.8	23.9	14.1
Normal	57.5	84.1	76.5	74.5

<sup>†</sup> Growing season precipitation (mm)

### DISEASE RATING @ GROWTH STAGE R6

	WM Incidence	BS Incidence	BS Severity <sup>†</sup>
Cotegra	0%	7%	1.0
Untreated	0%	23%	1.0
P-Value	n/a	0.0009	n/a
Significance	n/a	Yes	n/a

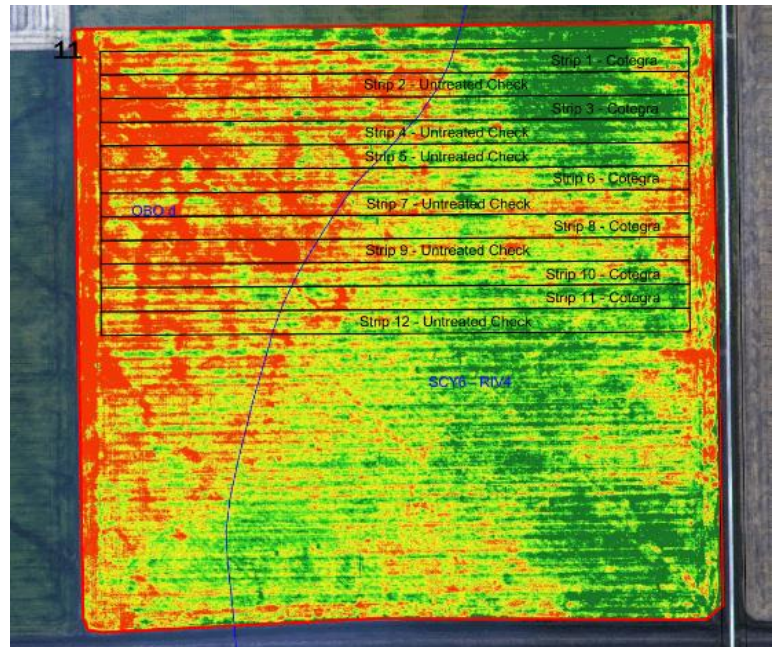
WM = White Mould, BS = Brown Spot

<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection)

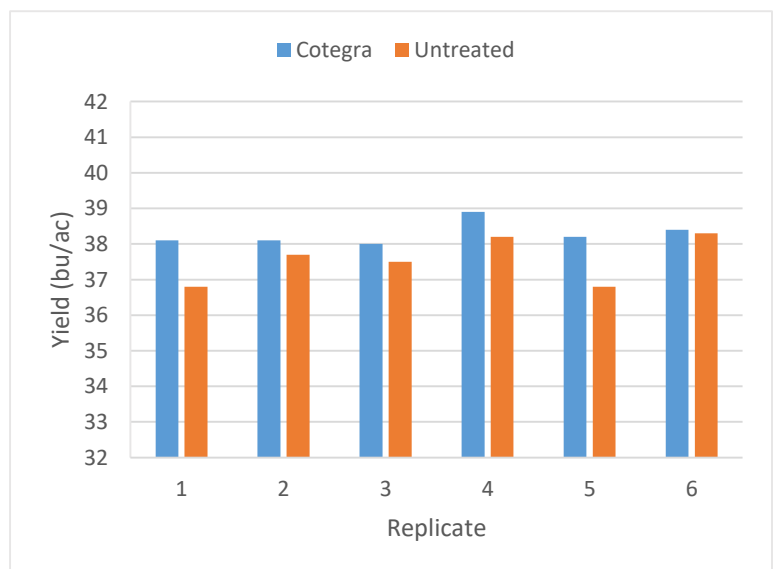
### OVERALL YIELD

	Mean (bu/ac)
Cotegra	38.3
Untreated	37.6
Yield Difference	0.7
P-Value	0.0177
CV	1.6%
Significance	Yes

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was a significant yield difference of 0.7 bu/ac between a single application of Cotegra and untreated check strips applied at R2 (full flower). Cotegra significantly reduced the brown spot incidence; however, there was no difference between brown spot severity within the trial compared to untreated strips. There was no white mould found within the trial when rated at growth stage R6.

MPSG would like to thank BASF for providing the chemical for this trial and Tone Ag Consulting for conducting the research



## Soybean Foliar Fungicide Trial

Trial ID: 2017-SF09 – R.M. of St Clements

**Objective:** Quantify the agronomic and economic impacts of foliar fungicide in soybean fields. A single application of Cotegra was compared to an untreated check strip.

### TRIAL INFORMATION

Treatment	Cotegra vs. Untreated
Rural Municipality	St Clements
Previous Crop	Wheat
Soil Description	Clayey Lacustrine
Tillage	Conventional
Planting Date	May 5, 2017
Variety	24-10RY
Row Spacing	10"
Plant Stand @ Harvest	150,000 plants/ac
Application Date	July 7, 2017
Application Timing	R2 – Full Flower
Application Rate	280 ml/ac
Harvest Date	October 7, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	22.4	51.3	74.8	42.3
Normal	55.0	87.5	87.1	76.3

<sup>†</sup> Growing season precipitation (mm)

### DISEASE RATING @ GROWTH STAGE R6

	WM Incidence	BS Incidence	BS Severity <sup>†</sup>
Cotegra	0%	38%	1.0
Untreated	0%	100%	2.3
P-Value	n/a	<0.0001	<0.0001
Significance	n/a	Yes	Yes

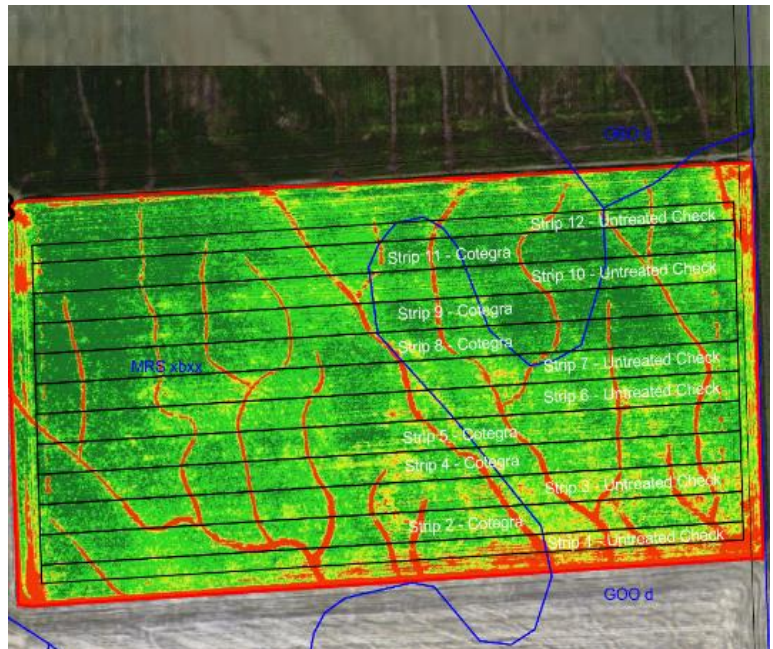
WM = White Mould, BS = Brown Spot

<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection)

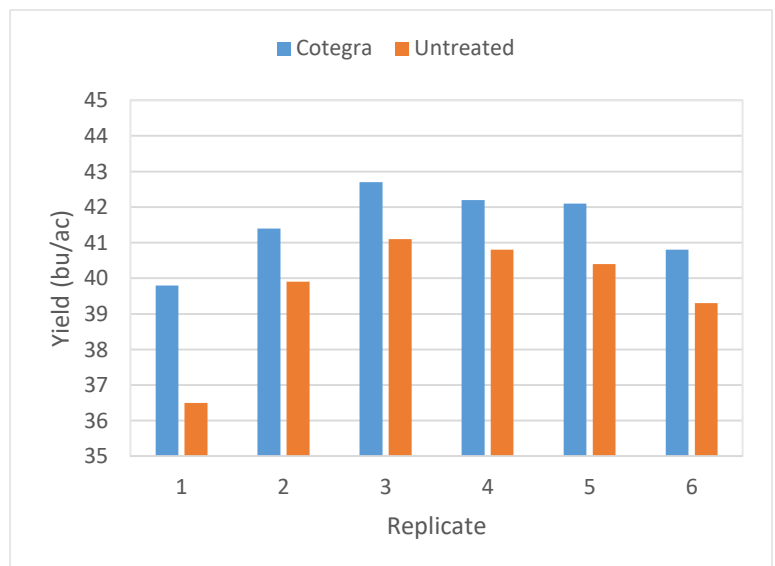
### OVERALL YIELD

	Mean (bu/ac)
Cotegra	41.5
Untreated	39.7
Yield Difference	1.8
P-Value	0.0016
CV	4.1%
Significance	Yes

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was a significant yield difference of 1.8 bu/ac between a single application of Cotegra and untreated check strips applied at R2 (full flower). Cotegra significantly reduced the brown spot incidence and severity within the trial compared to untreated strips. There was no white mould found within the trial when rated at growth stage R6.

## Soybean Foliar Fungicide Trial

Trial ID: 2017-SF10 – R.M. of Dufferin

**Objective:** Quantify the agronomic and economic impacts of foliar fungicide in soybean fields. A single application of Acapela was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Acapela vs. Untreated
<b>Rural Municipality</b>	Dufferin
<b>Previous Crop</b>	Soybeans
<b>Soil Description</b>	Sandy Loam Lacustrine
<b>Tillage</b>	Zero Till
<b>Planting Date</b>	May 12, 2017
<b>Variety</b>	NSC Richer RR2Y
<b>Row Spacing</b>	15"
<b>Plant Stand @ Harvest</b>	157,000 plants/ac
<b>Application Date</b>	July 13, 2017
<b>Application Timing</b>	R2 – Full Flower
<b>Application Rate</b>	355 ml/ac
<b>Harvest Date</b>	October 4, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
<b>Rainfall</b>	29.1	65.5	27.4	24.0
<b>Normal</b>	67.7	96.4	78.6	74.8

<sup>†</sup> Growing season precipitation (mm)

### DISEASE RATING @ GROWTH STAGE R6

	WM Incidence	BS Incidence	BS Severity <sup>†</sup>
<b>Acapela</b>	0%	13%	1.0
<b>Untreated</b>	1.7%	25%	1.1
<b>P-Value</b>	0.0725	0.0612	0.0401
<b>Significance</b>	No	No	Yes

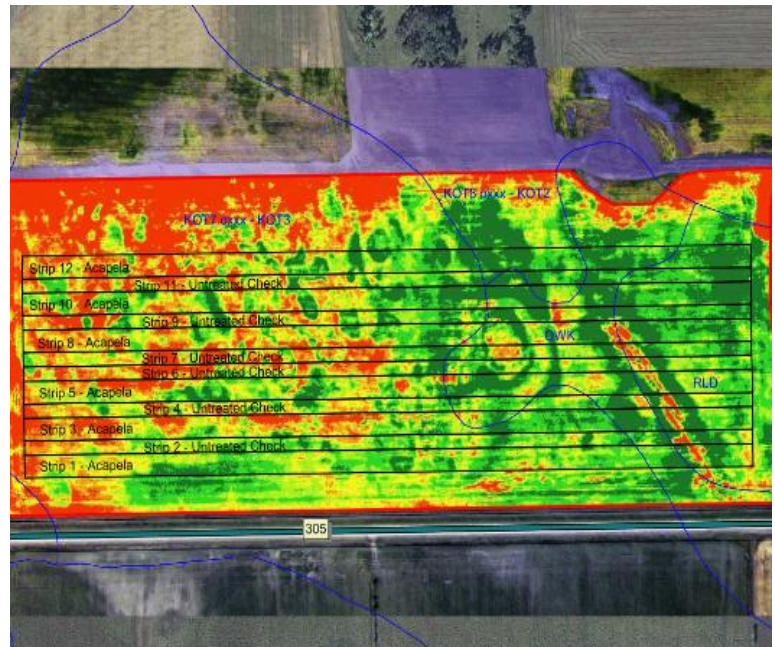
WM = White Mould, BS = Brown Spot

<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection)

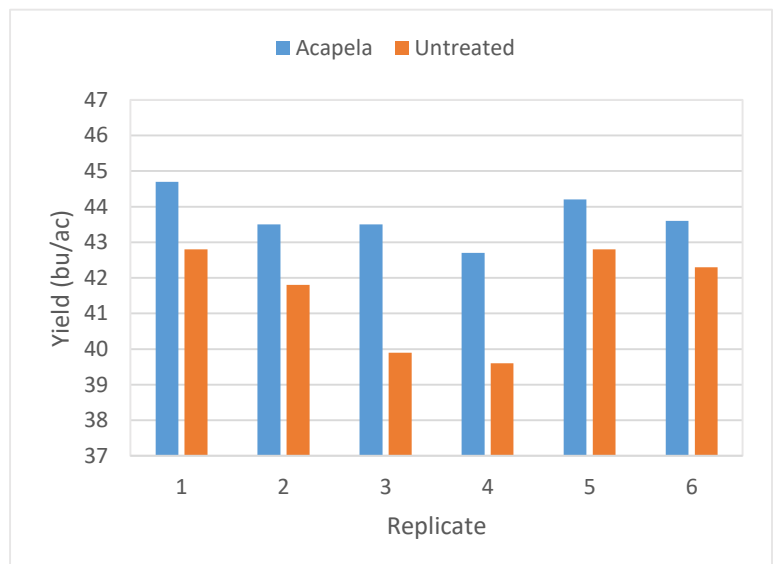
### OVERALL YIELD

	Mean (bu/ac)
<b>Acapela</b>	43.7
<b>Untreated</b>	41.5
<b>Yield Difference</b>	2.2
<b>P-Value</b>	0.0026
<b>CV</b>	3.7
<b>Significance</b>	Yes

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was a significant yield difference of 2.2 bu/ac between a single application of Acapela and untreated check strips applied at R2 (full flower). Acapela significantly reduced the brown spot severity; however, there was no difference between brown spot incidence within the trial compared to untreated strips. Only trace amounts of white mould were found when rated at growth stage R6.

MPSG would like to thank DuPont for providing the chemical for this trial and Tone Ag Consulting for conducting the research

## Soybean Foliar Fungicide Trial

Trial ID: 2017-SF11 – R.M. of Dufferin

**Objective:** Quantify the agronomic and economic impacts of foliar fungicide in soybean fields. A single application of Delaro was compared to an untreated check strip.

### TRIAL INFORMATION

Treatment	Delaro vs. Untreated
Rural Municipality	Dufferin
Previous Crop	Corn
Soil Description	Clayey Lacustrine
Tillage	Conventional
Planting Date	May 20, 2017
Variety	0066 XR
Row Spacing	20"
Plant Stand @ Harvest	152,000 plants/ac
Application Date	July 13, 2017
Application Timing	R2 – Full Flower
Application Rate	260 ml/ac
Harvest Date	October 2, 2017

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	29.1	65.5	27.4	24.0
Normal	67.7	96.4	78.6	74.8

<sup>†</sup> Growing season precipitation (mm)

### DISEASE RATING @ GROWTH STAGE R6

	WM Incidence	BS Incidence	BS Severity <sup>†</sup>
Delaro	0%	42%	1.0
Untreated	0%	29%	1.0
P-Value	n/a	0.0260	n/a
Significance	n/a	Yes	n/a

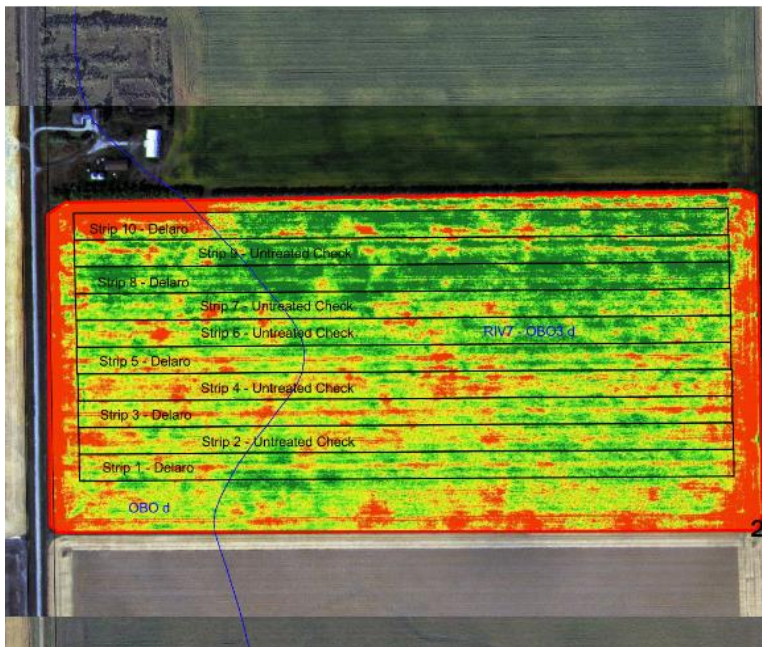
WM = White Mould, BS = Brown Spot

<sup>†</sup> Rated on a scale of 0-5 (0 = no disease, 5 = full infection)

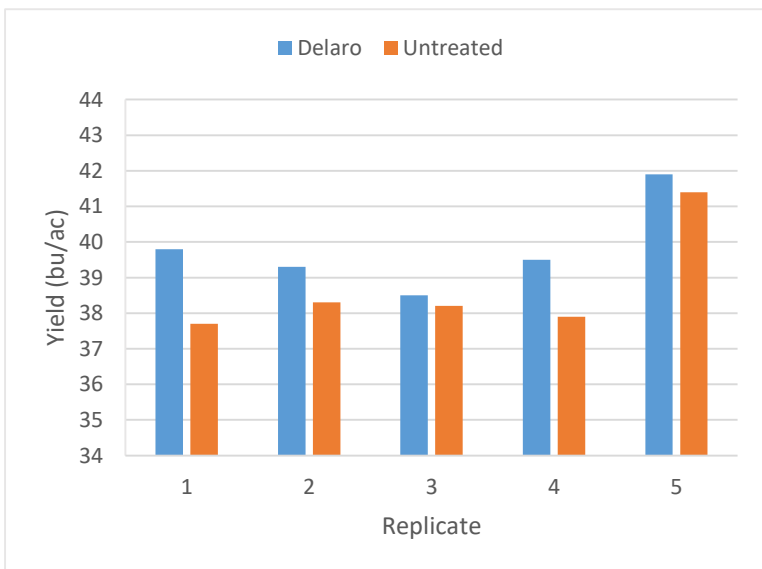
### OVERALL YIELD

	Mean (bu/ac)
Delaro	39.8
Untreated	38.7
Yield Difference	1.1
P-Value	0.0307
CV	3.7%
Significance	Yes

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was a significant yield difference of 1.1 bu/ac between a single application of Delaro and untreated check strips applied at R2 (full flower). Delaro significantly reduced the brown spot incidence; however, there was no difference in brown spot severity within the trial compared to untreated strips. There was no white mould found within the trial when rated at growth stage R6.

MPSG would like to thank Bayer for providing the chemical for this trial and Tone Ag Consulting for conducting the research



# Soybean Seed Treatment Trial

Soybean seed treatment trial information and yield response for nine On-Farm Network trials across Manitoba in 2017.

Trial ID	Rural Municipality	Variety	Previous Crop	Seeding Date	Seeding Rate	Plant Stand @ V1		Yield		Yield Difference	Seed Treatment	Statistically Significant @ 95%
						With	W/O	With	W/O			
					'000/ac	'000/ac		bu/ac		bu/ac		
2017-SST03	Cartwright-Roblin	P005T13R	Canola	May 19	185	152	136	45.8	46.6	-0.8	CMVB	No
2017-SST05	St Andrews	24-10RY	Soybeans	May 20	180	170	166	29.6	30.3	-0.7	EG	No
2017-SST06	Morris	DKB008-81	Canola	May 11	200	161	167	34.7	35.0	-0.3	CMVB	No
2017-SST07	Macdonald	25-10RY	Wheat	May 12	170	94	90	30.5	30.4	0.1	EG	No
2017-SST08	Brokenhead	24-10RY	Wheat	May 18	180	166	171	32.3	32.0	0.3	EG	No
2017-SST09	Oakland-Wawanesa	Barron R2X	Wheat	May 22	210	154	174	43.7	43.4	0.3	EG	No
2017-SST04	Woodlands	NSC Richer RR2Y	Grass/Hay	May 14	200	216	182	25.8	25.4	0.4	CMVB	No
2017-SST02	Brokenhead	LS 003R24N	Oats	May 15	190	166	170	38.6	38.0	0.5	EG	No
2017-SST01	Glenella-Lansdowne	LS 003R24N	Corn	May 15	172	158	162	49.5	48.7	0.9	EGSS	No
						<b>160</b>	<b>158</b>	<b>36.7</b>	<b>36.6</b>	<b>0.1</b>		<b>0/9</b>

CMVB = Cruiser Maxx Vibrance Beans; EGSS = EverGol Energy + Stress Shield; EG = EverGol Energy

## Evaluation of Seed Treatment in Soybeans

Trial ID: 2017-SST01 – R.M. of Glenella-Lansdowne

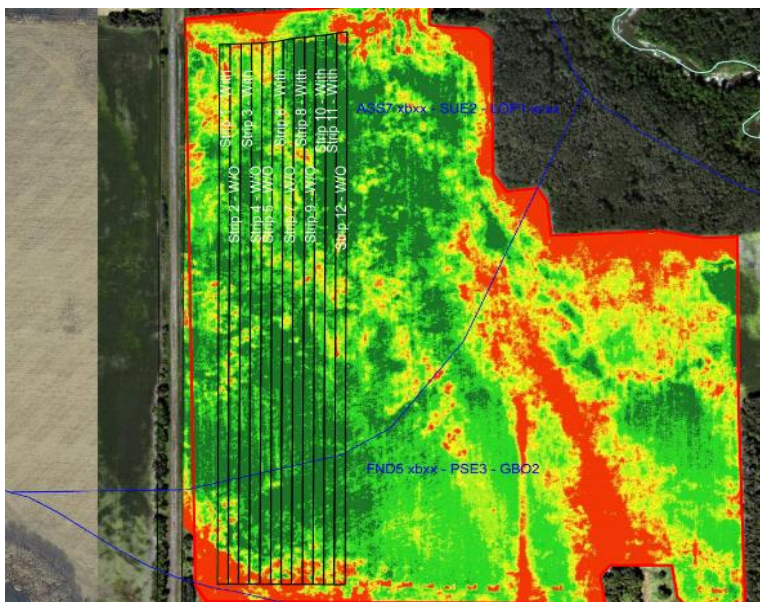
**Objective:** Quantify the agronomic and economic impacts of a seed treatment in soybean fields. A fungicide and insecticide seed treatment was compared to an untreated check strip.

### TRIAL INFORMATION

Treatment	EverGol Energy + Stress Shield
Rural Municipality	Glenella-Lansdowne
Previous Crop	Corn
Soil Description	Loamy/Sandy Lacustrine
Tillage	Disc 2x
Planting Date	May 15, 2017
Variety	LS 003R24N
PRR Gene	1c, 1k
Row Spacing	20"
Seeding Rate	172,000 seeds/ac
Plant Stand @V1 (With)	158,000 plants/ac
Plant Stand @V1 (W/O)	162,000 plants/ac
Harvest Date	September 29, 2017

With = Treated, W/O = Untreated, PRR = Phytophthora Root Rot

### FIELD IMAGE



### PRECIPITATION†

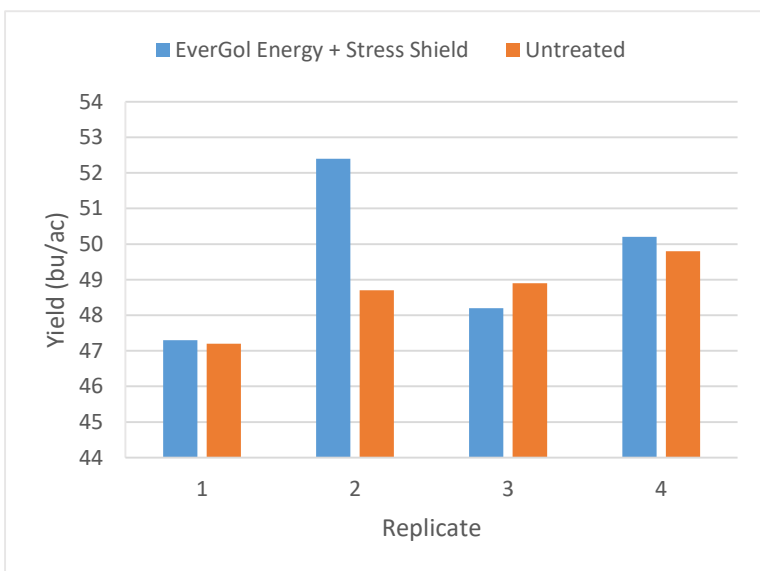
	May	June	July	Aug
Rainfall	31.7	78.9	34.0	21.8
Normal	63.1	82.4	76.6	63.9

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
EverGol Energy + Stress Shield	49.5
Untreated	48.7
Yield Difference	0.8
P-Value	0.4335
CV	3.5%
Significance	No

### STRIP YIELD



**Summary:** There was no significant yield difference between EverGol Energy + Stress Shield seed treatment and untreated check strips. The plant stand at growth stage V1 (first trifoliolate) was not significantly different between treatments.

## Evaluation of Seed Treatment in Soybeans

Trial ID: 2017-SST02 – R.M. of Brokenhead

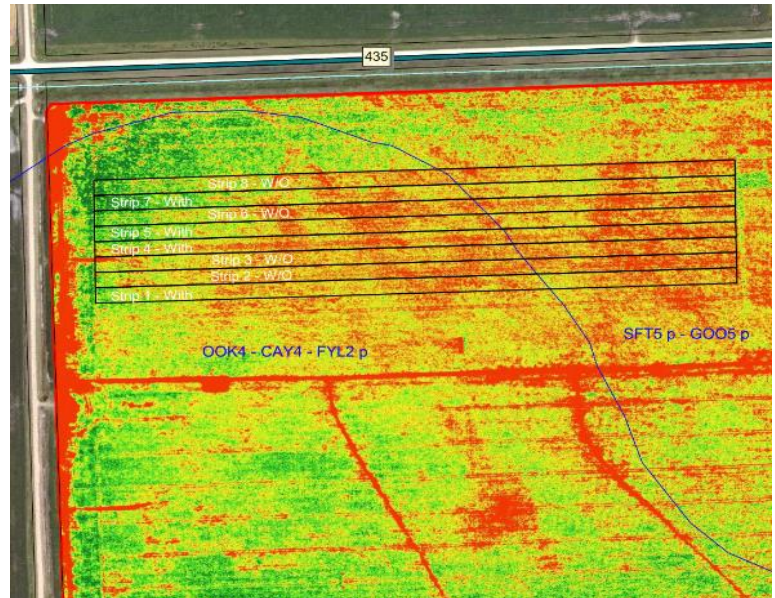
**Objective:** Quantify the agronomic and economic impacts of a seed treatment in soybean fields. A fungicide seed treatment was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	EverGol Energy
<b>Rural Municipality</b>	Brokenhead
<b>Previous Crop</b>	Oats
<b>Soil Description</b>	Shallow Organic Forest Peat
<b>Tillage</b>	Deep Tillage 1x
<b>Planting Date</b>	May 15, 2017
<b>Variety</b>	LS 003R24N
<b>PRR Gene</b>	1c, 1k
<b>Row Spacing</b>	10"
<b>Seeding Rate</b>	190,000 seeds/ac
<b>Plant Stand @V1 (With)</b>	166,000 plants/ac
<b>Plant Stand @V1 (W/O)</b>	170,000 plants/ac
<b>Harvest Date</b>	October 4, 2017

With = Treated, W/O = Untreated, PRR = Phytophthora Root Rot

### FIELD IMAGE



### PRECIPITATION†

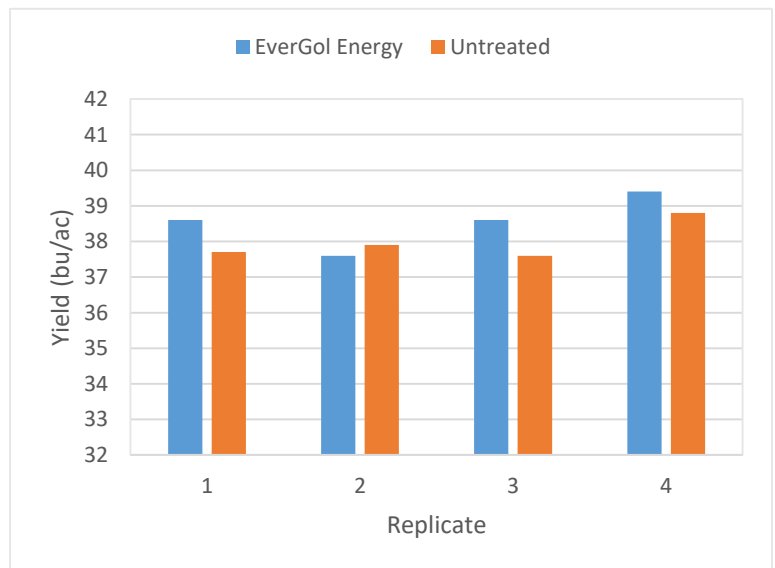
	May	June	July	Aug
<b>Rainfall</b>	22.4	51.3	74.8	42.3
<b>Normal</b>	55	87.5	87.1	76.3

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
<b>EverGol Energy</b>	38.6
<b>Untreated</b>	38.0
<b>Yield Difference</b>	0.6
<b>P-Value</b>	0.1599
<b>CV</b>	1.7%
<b>Significance</b>	No

### STRIP YIELD



**Summary:** There was no significant yield difference between EverGol Energy seed treatment and untreated check strips. The plant stand at growth stage V1 (first trifoliate) was not significantly different between treatments.



## Evaluation of Seed Treatment in Soybeans

Trial ID: 2017-SST03 – R.M. of Cartwright-Roblin

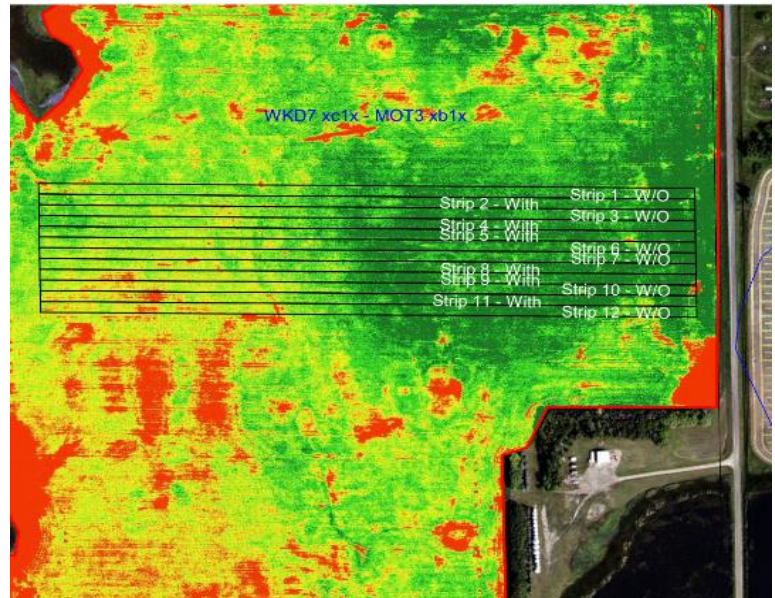
**Objective:** Quantify the agronomic and economic impacts of a seed treatment in soybean fields. A fungicide and insecticide seed treatment was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Cruiser Maxx Vibrance Beans
<b>Rural Municipality</b>	Cartwright- Roblin
<b>Previous Crop</b>	Canola
<b>Soil Description</b>	Loamy Till
<b>Tillage</b>	Heavy Harrow 2x
<b>Planting Date</b>	May 19, 2017
<b>Variety</b>	P005T13R
<b>PRR Gene</b>	1c
<b>Row Spacing</b>	15"
<b>Seeding Rate</b>	185,000 seeds/ac
<b>Plant Stand @V1 (With)</b>	152,000 plants/ac
<b>Plant Stand @V1 (W/O)</b>	136,000 plants/ac
<b>Harvest Date</b>	September 13, 2017

With = Treated, W/O = Untreated, PRR = Phytophthora Root Rot

### FIELD IMAGE



### PRECIPITATION†

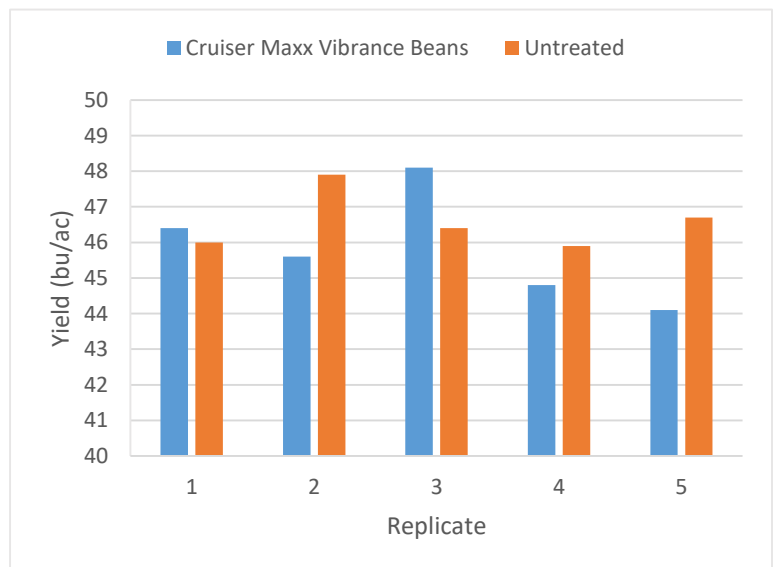
	May	June	July	Aug
<b>Rainfall</b>	18.5	74.3	99.5	32.1
<b>Normal</b>	70.4	92.9	82.1	72.5

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
<b>Cruiser Maxx Vibrance Beans</b>	45.8
<b>Untreated</b>	46.6
<b>Yield Difference</b>	-0.8
<b>P-Value</b>	0.3841
<b>CV</b>	2.7%
<b>Significance</b>	No

### STRIP YIELD



**Summary:** There was no significant yield difference between Cruiser Maxx Vibrance Beans seed treatment and untreated check strips. The plant stand at growth stage V1 (first trifoliate) was not significantly different between treatments.

## Evaluation of Seed Treatment in Soybeans

Trial ID: 2017-SST04 – R.M. of Woodlands

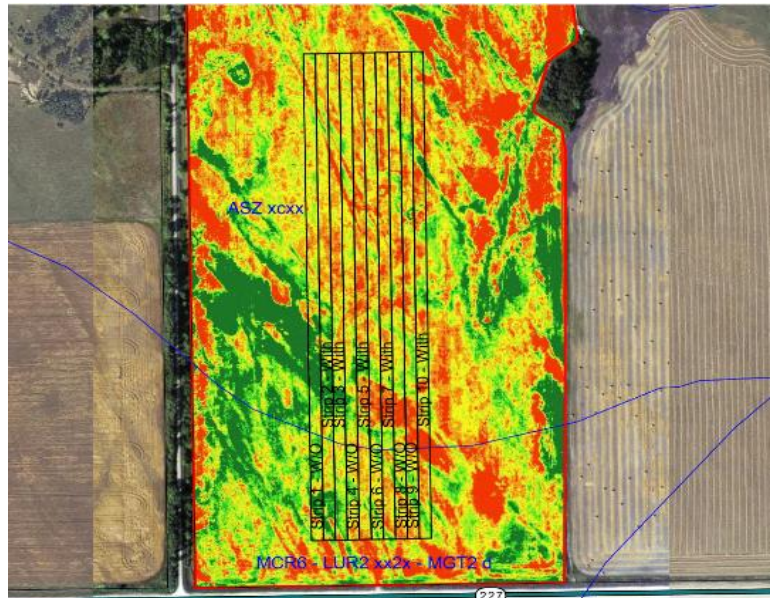
**Objective:** Quantify the agronomic and economic impacts of a seed treatment in soybean fields. A fungicide and insecticide seed treatment was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Cruiser Maxx Vibrance Beans
<b>Rural Municipality</b>	Woodlands
<b>Previous Crop</b>	Grass/Hay
<b>Soil Description</b>	Loamy Lacustrine
<b>Tillage</b>	Disc 3x Harrow 2x
<b>Planting Date</b>	May 14, 2017
<b>Variety</b>	NSC Richer RR2Y
<b>PRR Gene</b>	1c
<b>Row Spacing</b>	10"
<b>Seeding Rate</b>	200,000 seeds/ac
<b>Plant Stand @V1 (With)</b>	197,000 plants/ac
<b>Plant Stand @V1 (W/O)</b>	204,000 plants/ac
<b>Harvest Date</b>	September 30, 2017

With = Treated, W/O = Untreated, PRR = Phytophthora Root Rot

### FIELD IMAGE



### PRECIPITATION†

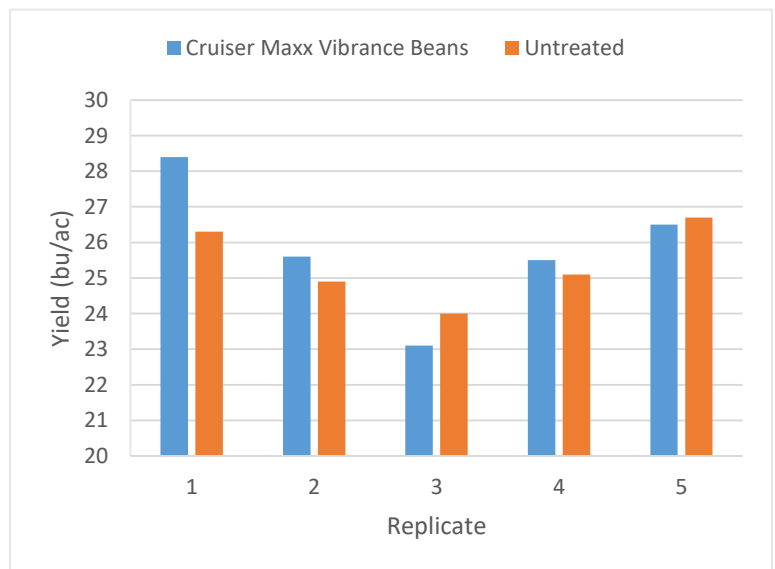
	May	June	July	Aug
<b>Rainfall</b>	27.4	82.1	50.1	38.3
<b>Normal</b>	51.5	87.6	78.8	70.6

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
<b>Cruiser Maxx Vibrance Beans</b>	25.8
<b>Untreated</b>	25.4
<b>Yield Difference</b>	0.4
<b>P-Value</b>	0.4494
<b>CV</b>	5.8%
<b>Significance</b>	No

### STRIP YIELD



**Summary:** There was no significant yield difference between Cruiser Maxx Vibrance Beans seed treatment and untreated check strips. The plant stand at growth stage V1 (first trifoliate) was not significantly different between treatments.

## Evaluation of Seed Treatment in Soybeans

Trial ID: 2017-SST05 – R.M. of St Andrews

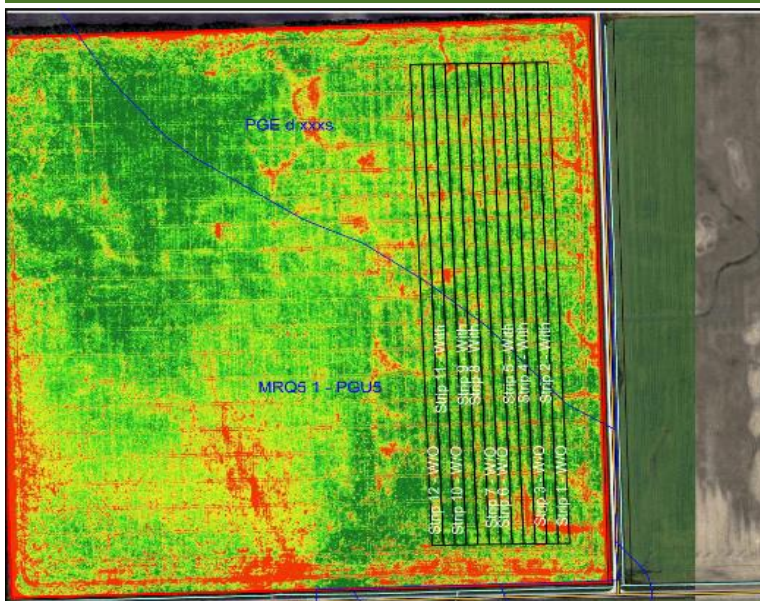
**Objective:** Quantify the agronomic and economic impacts of a seed treatment in soybean fields. A fungicide seed treatment was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	EverGol Energy
<b>Rural Municipality</b>	St Andrews
<b>Previous Crop</b>	Soybeans
<b>Soil Description</b>	Clayey Lacustrine
<b>Tillage</b>	Deep Tillage 2x
<b>Planting Date</b>	May 20, 2017
<b>Variety</b>	24-10 RY
<b>PRR Gene</b>	1k
<b>Row Spacing</b>	10"
<b>Seeding Rate</b>	180,000 seeds/ac
<b>Plant Stand @V1 (With)</b>	170,000 plants/ac
<b>Plant Stand @V1 (W/O)</b>	166,000 plants/ac
<b>Harvest Date</b>	October 11, 2017

With = Treated, W/O = Untreated, PRR = Phytophthora Root Rot

### FIELD IMAGE



### PRECIPITATION†

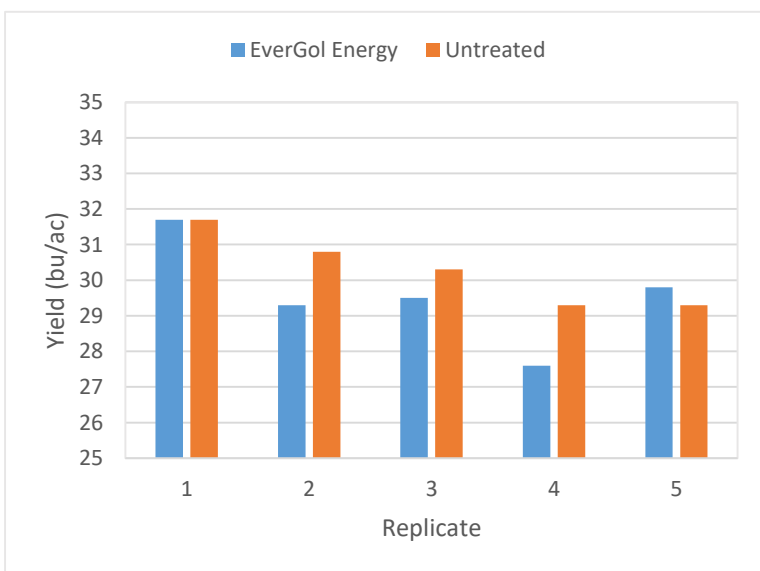
	May	June	July	Aug
<b>Rainfall</b>	22.5	48.8	72.2	38.3
<b>Normal</b>	83.0	107.1	98.0	82.6

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
<b>EverGol Energy</b>	29.6
<b>Untreated</b>	30.3
<b>Yield Difference</b>	-0.7
<b>P-Value</b>	0.1734
<b>CV</b>	4.2%
<b>Significance</b>	No

### STRIP YIELD



**Summary:** There was no significant yield difference between EverGol Energy seed treatment and untreated check strips. The plant stand at growth stage V1 (first trifoliate) was not significantly different between treatments.



## Evaluation of Seed Treatment in Soybeans

Trial ID: 2017-SST06 – R.M. of Morris

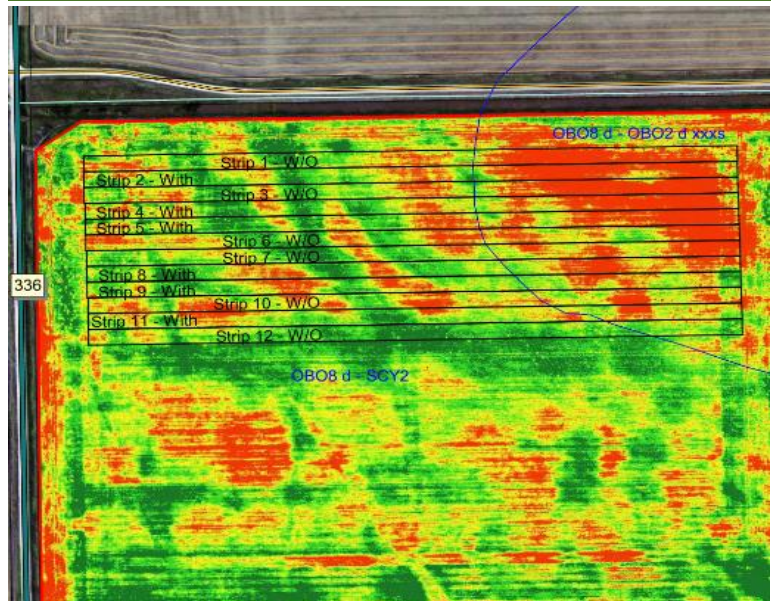
**Objective:** Quantify the agronomic and economic impacts of a seed treatment in soybean fields. A fungicide and insecticide seed treatment was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	Cruiser Maxx Vibrance Beans
<b>Rural Municipality</b>	Morris
<b>Previous Crop</b>	Canola
<b>Soil Description</b>	Clayey Lacustrine
<b>Tillage</b>	Cultivate 1x
<b>Planting Date</b>	May 11, 2017
<b>Variety</b>	DKB008-81
<b>PRR Gene</b>	-
<b>Row Spacing</b>	15"
<b>Seeding Rate</b>	200,000 seeds/ac
<b>Plant Stand @V1 (With)</b>	154,000 plants/ac
<b>Plant Stand @V1 (W/O)</b>	160,000 plants/ac
<b>Harvest Date</b>	September 13, 2017

With = Treated, W/O = Untreated, PRR = Phytophthora Root Rot

### FIELD IMAGE



### PRECIPITATION†

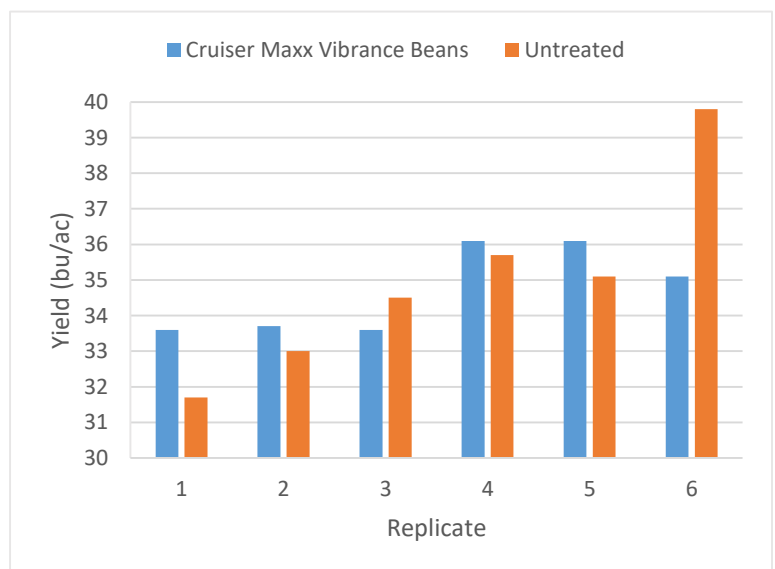
	May	June	July	Aug
<b>Rainfall</b>	29.1	65.5	27.4	24.0
<b>Normal</b>	52.9	106.3	82.5	75.1

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
<b>Cruiser Maxx Vibrance Beans</b>	34.7
<b>Untreated</b>	35.0
<b>Yield Difference</b>	-0.3
<b>P-Value</b>	0.7920
<b>CV</b>	5.9%
<b>Significance</b>	No

### STRIP YIELD



**Summary:** There was no significant yield difference between Cruiser Maxx Vibrance Beans seed treatment and untreated check strips. The plant stand at growth stage V1 (first trifoliate) was not significantly different between treatments.

## Evaluation of Seed Treatment in Soybeans

Trial ID: 2017-SST07 – R.M. of Macdonald

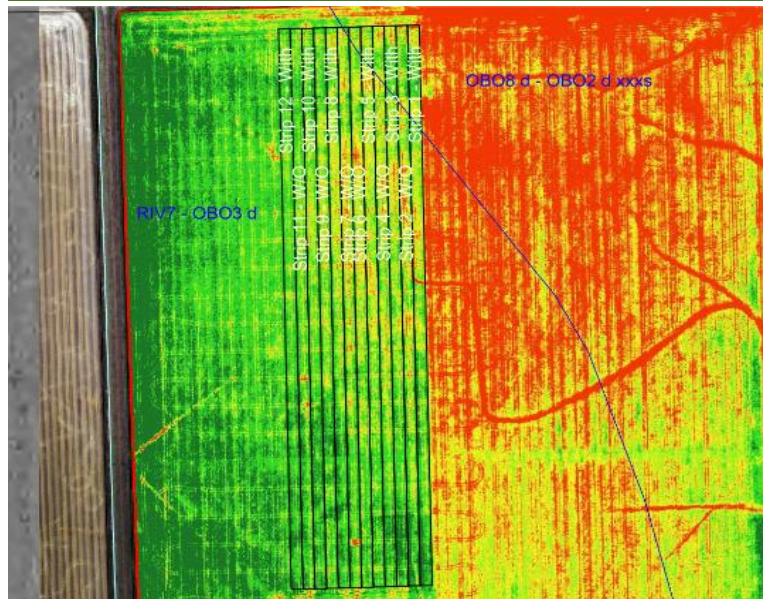
**Objective:** Quantify the agronomic and economic impacts of a seed treatment in soybean fields. A fungicide seed treatment was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	EverGol Energy
<b>Rural Municipality</b>	Macdonald
<b>Previous Crop</b>	Spring Wheat
<b>Soil Description</b>	Clayey Lacustrine
<b>Tillage</b>	Cultivate 1x
<b>Planting Date</b>	May 12, 2017
<b>Variety</b>	25-10RY
<b>PRR Gene</b>	1c
<b>Row Spacing</b>	20"
<b>Seeding Rate</b>	170,000 seeds/ac
<b>Plant Stand @V1 (With)</b>	94,000 plants/ac
<b>Plant Stand @V1 (W/O)</b>	90,000 plants/ac
<b>Harvest Date</b>	October 2, 2017

With = Treated, W/O = Untreated, PRR = Phytophthora Root Rot

### FIELD IMAGE



### PRECIPITATION†

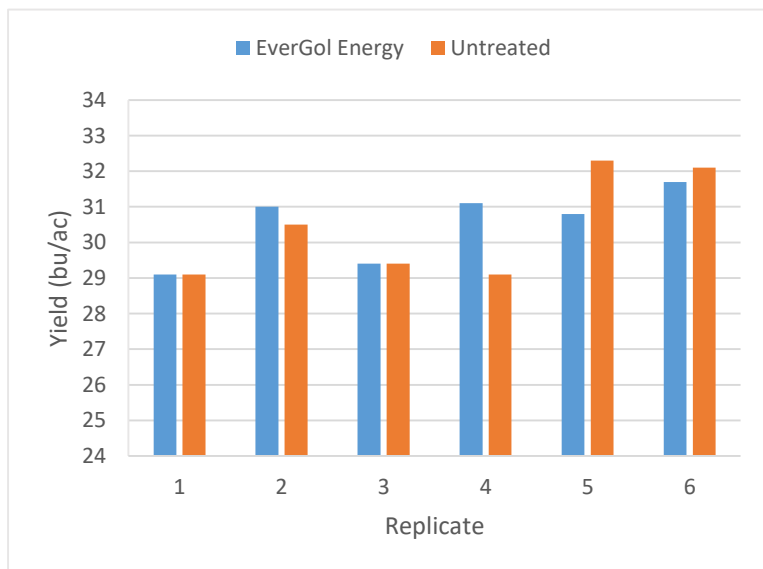
	May	June	July	Aug
<b>Rainfall</b>	27.2	69.2	41.8	15.7
<b>Normal</b>	55.6	98.3	90.8	73.9

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
<b>EverGol Energy</b>	30.5
<b>Untreated</b>	30.4
<b>Yield Difference</b>	0.1
<b>P-Value</b>	0.8396
<b>CV</b>	4.0%
<b>Significance</b>	No

### STRIP YIELD



**Summary:** There was no significant yield difference between EverGol Energy seed treatment and untreated check strips. The plant stand at growth stage V1 (first trifoliate) was not significantly different between treatments.

## Evaluation of Seed Treatment in Soybeans

Trial ID: 2017-SST08 – R.M. of Brokenhead

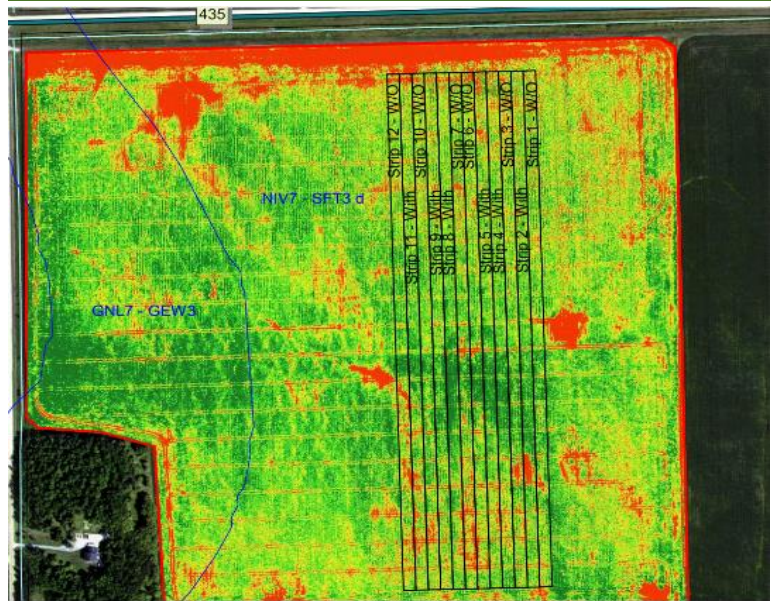
**Objective:** Quantify the agronomic and economic impacts of a seed treatment in soybean fields. A fungicide seed treatment was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	EverGol Energy
<b>Rural Municipality</b>	Brokenhead
<b>Previous Crop</b>	Spring Wheat
<b>Soil Description</b>	Loamy/Clayey Lacustrine
<b>Tillage</b>	Cultivate 1x
<b>Planting Date</b>	May 18, 2017
<b>Variety</b>	24-10RY
<b>PRR Gene</b>	1k
<b>Row Spacing</b>	10"
<b>Seeding Rate</b>	180,000 seeds/ac
<b>Plant Stand @V1 (With)</b>	166,000 plants/ac
<b>Plant Stand @V1 (W/O)</b>	171,000 plants/ac
<b>Harvest Date</b>	October 12, 2017

With = Treated, W/O = Untreated, PRR = Phytophthora Root Rot

### FIELD IMAGE



### PRECIPITATION†

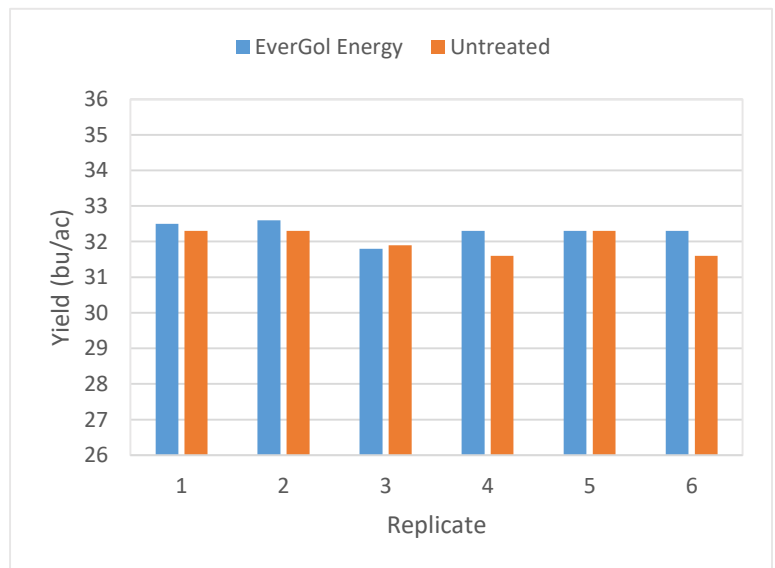
	May	June	July	Aug
<b>Rainfall</b>	22.5	48.8	72.2	38.3
<b>Normal</b>	55.0	87.5	87.1	76.3

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
<b>EverGol Energy</b>	32.3
<b>Untreated</b>	32.0
<b>Yield Difference</b>	0.3
<b>P-Value</b>	0.0834
<b>CV</b>	1.0%
<b>Significance</b>	No

### STRIP YIELD



**Summary:** There was no significant yield difference between EverGol Energy seed treatment and untreated check strips. The plant stand at growth stage V1 (first trifoliate) was not significantly different between treatments.



## Evaluation of Seed Treatment in Soybeans

Trial ID: 2017-SST09 – R.M. of Oakland-Wawanesa

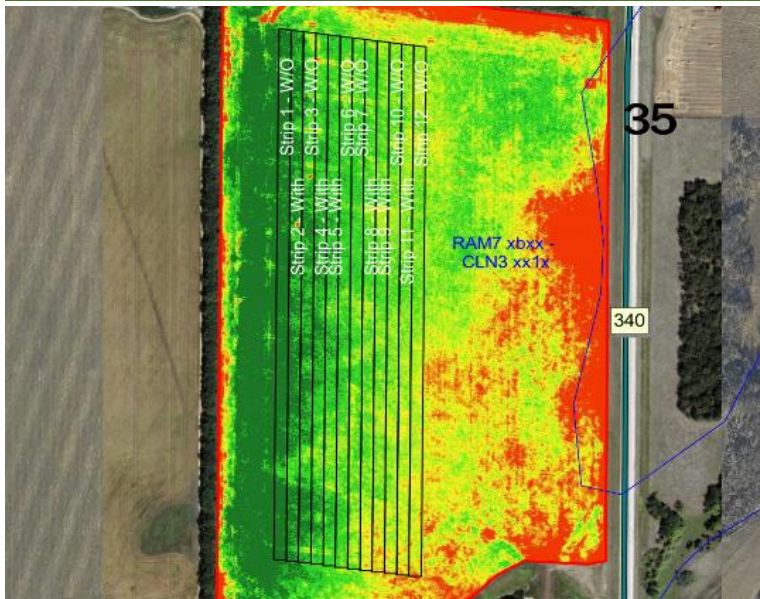
**Objective:** Quantify the agronomic and economic impacts of a seed treatment in soybean fields. A fungicide seed treatment was compared to an untreated check strip.

### TRIAL INFORMATION

<b>Treatment</b>	EverGol Energy
<b>Rural Municipality</b>	Oakland-Wawanesa
<b>Previous Crop</b>	Spring Wheat
<b>Soil Description</b>	Loamy Lacustrine
<b>Tillage</b>	Deep Tillage 1x
<b>Planting Date</b>	May 22, 2017
<b>Variety</b>	Barron R2X
<b>PRR Gene</b>	-
<b>Row Spacing</b>	9"
<b>Seeding Rate</b>	210,000 seeds/ac
<b>Plant Stand @V1 (With)</b>	154,000 plants/ac
<b>Plant Stand @V1 (W/O)</b>	173,000 plants/ac
<b>Harvest Date</b>	September 13, 2017

With = Treated, W/O = Untreated, PRR = Phytophthora Root Rot

### FIELD IMAGE



### PRECIPITATION†

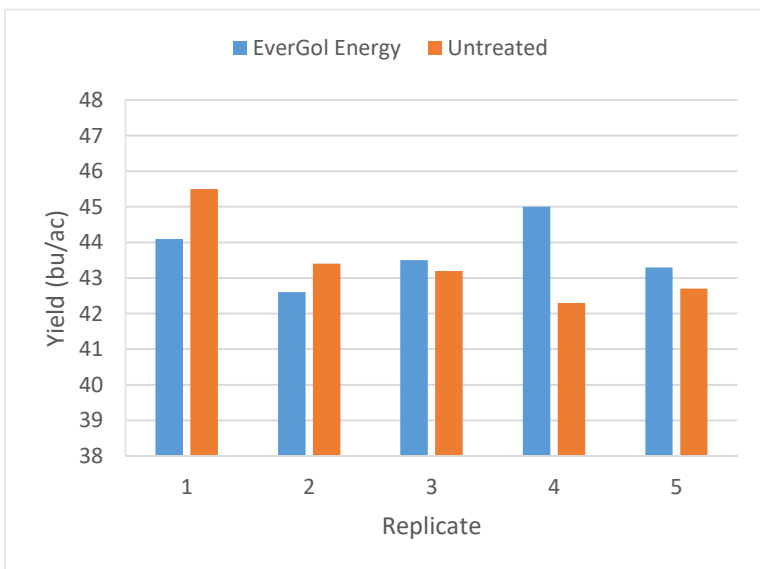
	May	June	July	Aug
<b>Rainfall</b>	26.7	69.3	51.2	35.3
<b>Normal</b>	58.8	96.0	78.9	65.3

† Growing season precipitation (mm)

### OVERALL YIELD

	Mean (bu/ac)
<b>EverGol Energy</b>	43.7
<b>Untreated</b>	43.4
<b>Yield Difference</b>	0.3
<b>P-Value</b>	0.7116
<b>CV</b>	2.4%
<b>Significance</b>	No

### STRIP YIELD



**Summary:** There was no significant yield difference between EverGol Energy seed treatment and untreated check strips. The plant stand at growth stage V1 (first trifoliate) was not significantly different between treatments.

## Soybean Inoculant Trial – Seed Applied Inoculant vs. No Inoculant

Soybean inoculant (seed applied inoculant vs. no inoculant) trial information and yield response for 10 On-Farm Network trials across Manitoba in 2017.

Trial ID	Rural Municipality	Variety	Previous Crop	Last Year of Soybeans	# Previous Soybean Crops	Seeding Date	Seeding Rate	Plant Stand @ V1		Yield		Yield Difference	Statistically Significant @ 95%	N 0-24"	pH	Salts 0-6"	CCE	
								With	W/O	With	W/O							
								'000/ac	bu/ac									
2017-S1In02	Brokenhead	LS 003R24N	Winter Wheat	2014	5	May 11	191	195	210	36.4	37.6	-1.2	No	50	8.1	30	46.9	
2017-S1In01	St Clements	24-10 RY	Soybeans	2016	4	May 08	180	158	183	38.7	39.3	-0.6	No	41	7.1	18	37.1	
2017-S1In07	Taché	25-10 RY	Wheat	2014	1	May 25	175	156	156	32.3	32.4	-0.1	No	31	7.8	34	56	
2017-S1In09	St Andrews	NSC Gladstone RR2Y	Soybeans	2016	3	May 08	140	148	133	34.0	34.0	0.0	No	32	8.2	56	46.2	
2017-S1In04	Grey	23-60 RY	Soybeans	2016	1	May 12	164	153	157	37.3	37.0	0.2	No	89	6.9	24	40.6	
2017-S1In06	Taché	Astro R2	Soybeans	2016	3	May 16	175	163	160	31.0	30.7	0.2	No	153	7.6	96	16.5	
2017-S1In10	Ste Anne	P006T46R	Soybeans	2016	4	May 15	190	163	186	38.2	37.9	0.3	No	60	7.9	26	59.8	
2017-S1In08	Morris	25-10 RY	Wheat	2015	>10	May 18	140	138	135	37.0	36.7	0.3	No	58	7.9	26	43.8	
2017-S1In03	Springfield	Astro R2	Soybeans	2016	4	May 19	185	158	143	36.1	35.8	0.4	No	47	7.2	16	41.4	
2017-S1In05	Lac du Bonnet	P006T46R	Wheat	2015	5	May 07	190	165	160	28.2	27.5	0.7	No	27	6.5	14	21.2	
								<b>160</b>	<b>162</b>	<b>34.9</b>	<b>34.9</b>	<b>0.0</b>	<b>0/10</b>					

## Soybean Inoculant Trial – Seed Applied vs. No Inoculant

Trial ID: 2017-S1In01 – R.M. of St Clements

**Objective:** Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. no inoculant applied in soybean fields. The trial is conducted in the Central, Eastern and Interlake regions of Manitoba and requires a minimum history of three previous soybean crops.

### TRIAL INFORMATION

Treatment	Seed Applied Inoculant
Rural Municipality	St Clements
Previous Crop	Soybeans
Soil Description	Clayey Lacustrine
Tillage	Deep Tillage 1x
Planting Date	May 8, 2017
Variety	24-10 RY
Row Spacing	10"
Seeding Rate	180,000 seeds/ac
Plant Stand @ V1	158,000 plants/ac
# of Years since Soy	2016 – last year
# of Prev. Soy Crops	4 previous soybean crops
Harvest Date	October 7, 2017

### SOIL PROPERTIES

N 0-24"	pH	Salts 0-6"	CCE%
41 lbs/ac	7.1	0.49	0.5

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	22.4	51.3	74.8	42.3
Normal	55.0	87.5	87.1	76.3

<sup>†</sup> Growing season precipitation (mm)

### NODULATION COUNT

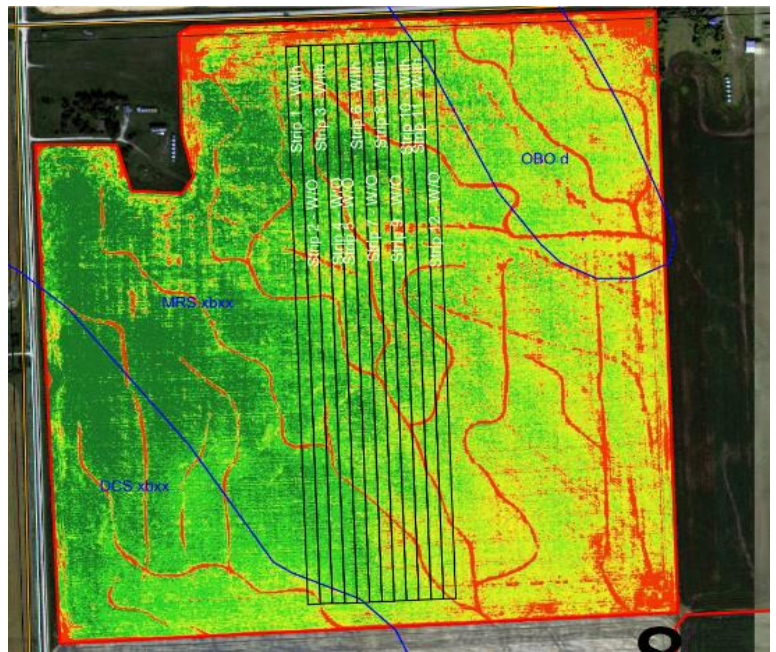
	Average # of Nodules @ R2
Seed Applied Inoculant	26
No Inoculant	28

### OVERALL YIELD

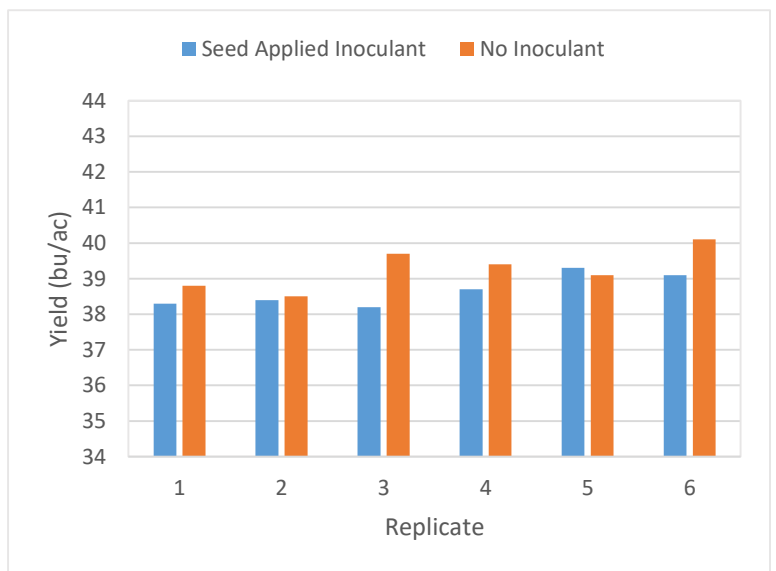
	Mean (bu/ac)
Seed Applied Inoculant	38.7
No Inoculant	39.3
Yield Difference	-0.6
P-Value	0.0619
CV	1.5%
Significance	No

**Summary:** There was no significant difference between seed applied inoculant and no inoculant applied to soybeans. The previous crop was soybeans, and there was a history of four previous soybean crops on this field. Nodulation was high for both treated and untreated strips.

### FIELD IMAGE



### STRIP YIELD





## Soybean Inoculant Trial – Seed Applied vs. No Inoculant

Trial ID: 2017-S1In02 – R.M. of Brokenhead

**Objective:** Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. no inoculant applied in soybean fields. The trial is conducted in the Central, Eastern and Interlake regions of Manitoba and requires a minimum history of three previous soybean crops.

### TRIAL INFORMATION

Treatment	Seed Applied Inoculant
Rural Municipality	Brokenhead
Previous Crop	Winter Wheat
Soil Description	Loamy Lacustrine
Tillage	Cultivate 1x Joker 1x
Planting Date	May 11, 2017
Variety	LS 003R24N
Row Spacing	10"
Seeding Rate	191,000 seeds/ac
Plant Stand @ V1	195,000 plants/ac
# of Years since Soy	2014 – 2 years
# of Prev. Soy Crops	5 previous soybean crops
Harvest Date	October 5, 2017

### SOIL PROPERTIES

N 0-24"	pH	Salts 0-6"	CCE%
50 lbs/ac	8.1	0.45	4.3

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	22.4	51.3	74.8	42.3
Normal	55.0	87.5	87.1	76.3

<sup>†</sup> Growing season precipitation (mm)

### NODULATION COUNT

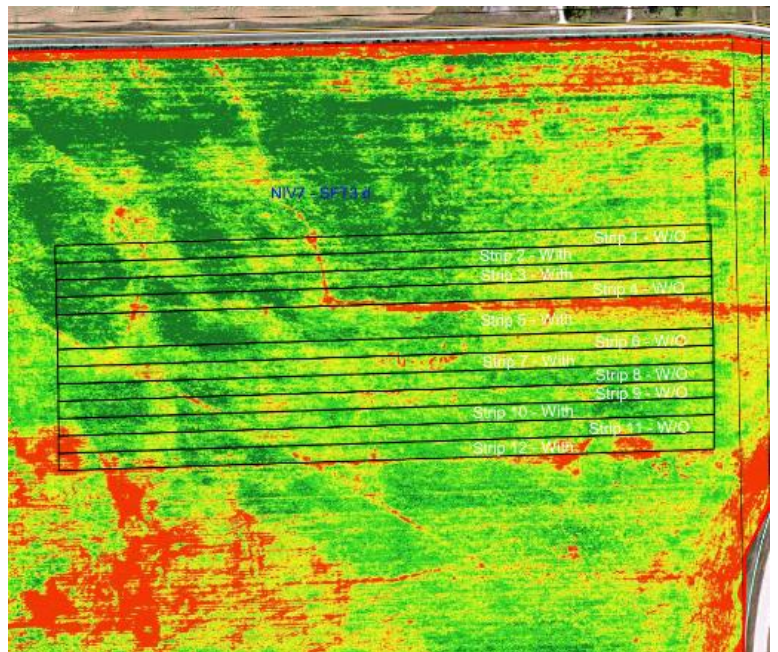
	Average # of Nodules @ R2
Seed Applied Inoculant	34
No Inoculant	28

### OVERALL YIELD

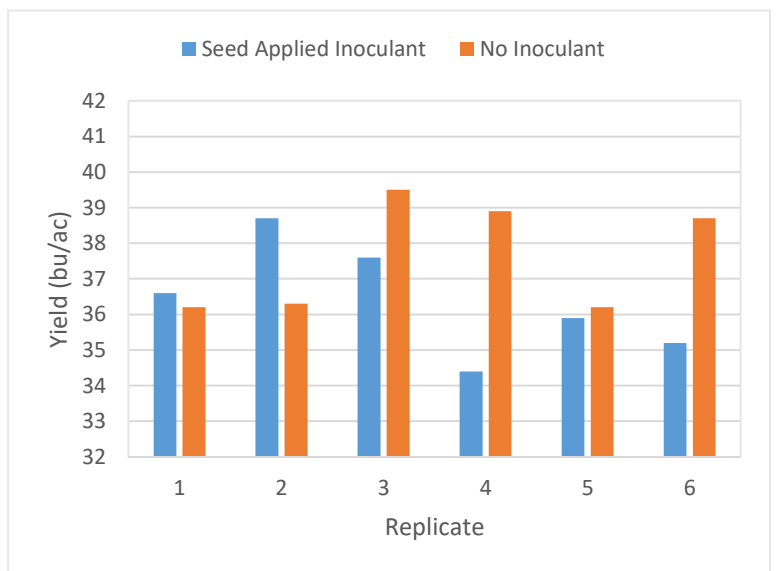
	Mean (bu/ac)
Seed Applied Inoculant	36.4
No Inoculant	37.6
Yield Difference	-1.2
P-Value	0.2925
CV	4.4%
Significance	No

**Summary:** There was no significant difference between seed applied inoculant and no inoculant applied to soybeans. The previous crop was winter wheat, and there was a history of five previous soybean crops on this field. Nodulation was high for both treated and untreated strips.

### FIELD IMAGE



### STRIP YIELD



## Soybean Inoculant Trial – Seed Applied vs. No Inoculant

Trial ID: 2017-S1In03 – R.M. of Springfield

**Objective:** Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. no inoculant applied in soybean fields. The trial is conducted in the Central, Eastern and Interlake regions of Manitoba and requires a minimum history of three previous soybean crops.

### TRIAL INFORMATION

Treatment	Seed Applied Inoculant
Rural Municipality	Springfield
Previous Crop	Soybeans
Soil Description	Clayey Lacustrine
Tillage	Deep Tillage 1x
Planting Date	May 19, 2017
Variety	Astro R2
Row Spacing	10"
Seeding Rate	185,000 seeds/ac
Plant Stand @ V1	158,000 plants/ac
# of Years since Soy	2016 – last year
# of Prev. Soy Crops	4 previous soybean crops
Harvest Date	October 12, 2017

### SOIL PROPERTIES

N 0-24"	pH	Salts 0-6"	CCE%
47 lbs/ac	7.2	0.62	0.2

### PRECIPITATION†

	May	June	July	Aug
Rainfall	24.9	55.5	53.8	27.7
Normal	80.4	107.1	98.0	82.6

† Growing season precipitation (mm)

### NODULATION COUNT

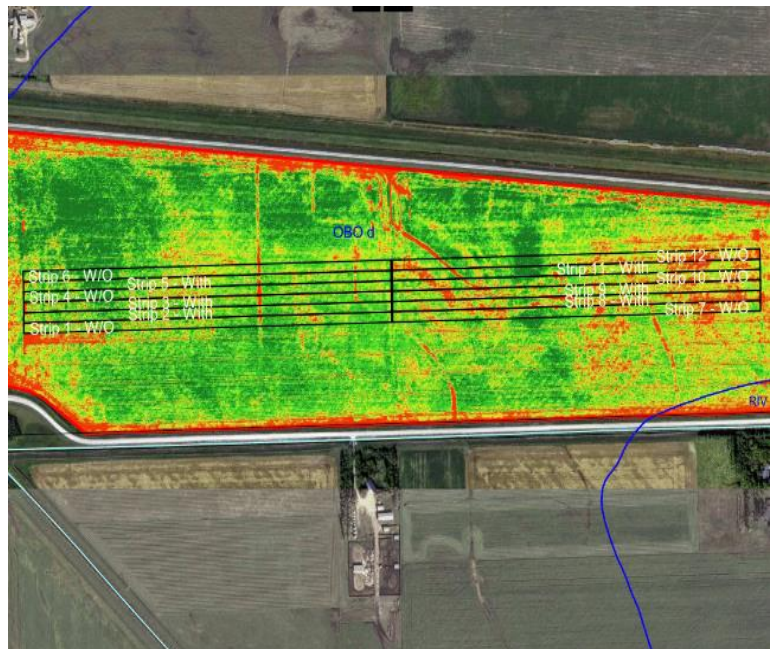
	<b>Average # of Nodules @ R2</b>
Seed Applied Inoculant	27
No Inoculant	24

### OVERALL YIELD

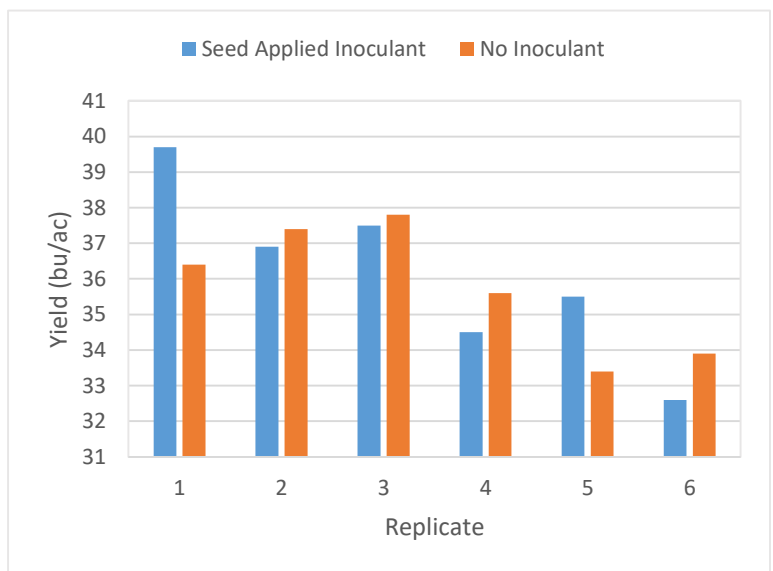
	<b>Mean (bu/ac)</b>
Seed Applied Inoculant	36.1
No Inoculant	35.8
Yield Difference	0.4
P-Value	0.6535
CV	5.8%
Significance	No

**Summary:** There was no significant difference between seed applied inoculant and no inoculant applied to soybeans. The previous crop was soybeans, and there was a history of four previous soybean crops on this field. Nodulation was high for both treated and untreated strips.

### FIELD IMAGE



### STRIP YIELD





## Soybean Inoculant Trial – Seed Applied vs. No Inoculant

Trial ID: 2017-S1In04 – R.M. of Grey

**Objective:** Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. no inoculant applied in soybean fields. The trial is conducted in the Central, Eastern and Interlake regions of Manitoba and requires a minimum history of three previous soybean crops.

### TRIAL INFORMATION

Treatment	Seed Applied Inoculant
Rural Municipality	Grey
Previous Crop	Soybeans
Soil Description	Clayey Lacustrine
Tillage	Zero Tillage
Planting Date	May 12, 2017
Variety	23-60 RY
Row Spacing	20"
Seeding Rate	164,000 seeds/ac
Plant Stand @ V1	153,000 plants/ac
# of Years since Soy	2016 – last Year
# of Prev. Soy Crops	>3 previous soybean crop
Harvest Date	September 9, 2017

### SOIL PROPERTIES

N 0-24"	pH	Salts 0-6"	CCE%
89 lbs/ac	6.9	0.84	0.8

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	28.3	70.8	23.9	14.1
Normal	57.5	84.1	76.5	74.5

<sup>†</sup> Growing season precipitation (mm)

### NODULATION COUNT

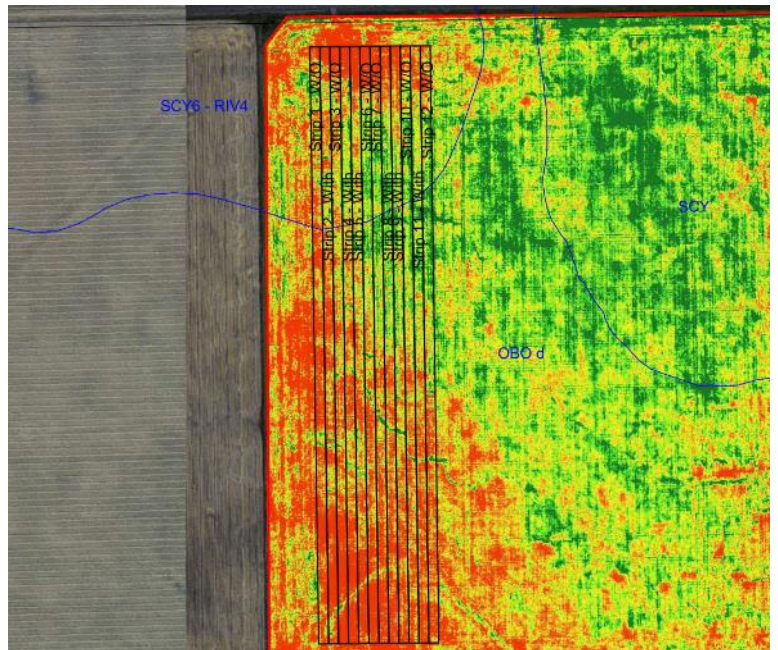
	Average # of Nodules @ R2
Seed Applied Inoculant	21
No Inoculant	16

### OVERALL YIELD

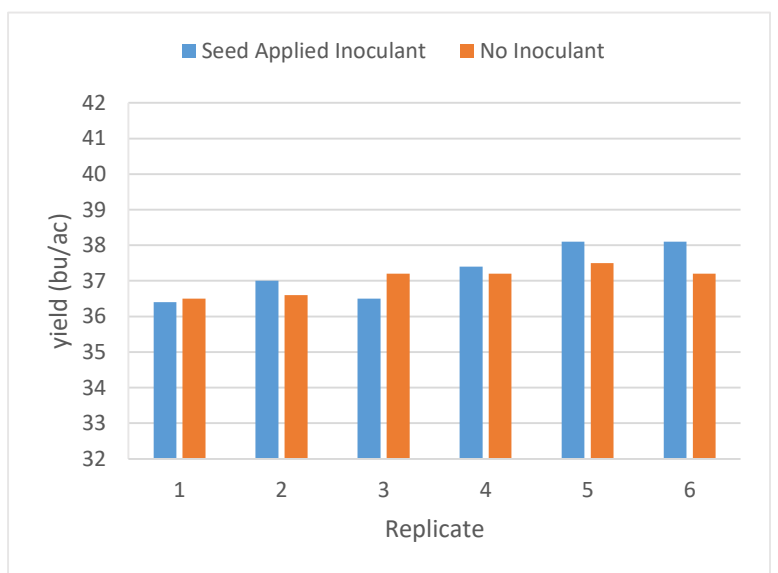
	Mean (bu/ac)
Seed Applied Inoculant	37.3
No Inoculant	37.0
Yield Difference	0.3
P-Value	0.3357
CV	1.6%
Significance	No

**Summary:** There was no significant difference between seed applied inoculant and no inoculant applied to soybeans. The previous crop was soybeans, and there was a history of more than three previous soybean crops on this field. Nodulation was high for both treated and untreated strips.

### FIELD IMAGE



### STRIP YIELD





## Soybean Inoculant Trial – Seed Applied vs. No Inoculant

Trial ID: 2017-S1In05 – R.M. of Lac du Bonnet

**Objective:** Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. no inoculant applied in soybean fields. The trial is conducted in the Central, Eastern and Interlake regions of Manitoba and requires a minimum history of three previous soybean crops.

### TRIAL INFORMATION

Treatment	Seed Applied Inoculant
Rural Municipality	Lac du Bonnet
Previous Crop	Spring Wheat
Soil Description	Clayey Lacustrine
Tillage	Chisel Plowed 1x
Planting Date	May 7, 2017
Variety	P006T46R
Row Spacing	7.5"
Seeding Rate	190,000 seeds/ac
Plant Stand @ V1	165,000 plants/ac
# of Years since Soy	2015 – 1 year
# of Prev. Soy Crops	5 previous soybean crops
Harvest Date	September 19, 2017

### SOIL PROPERTIES

N 0-24"	pH	Salts 0-6"	CCE%
27 lbs/ac	6.5	0.38	0.7

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	22.4	51.3	74.8	42.3
Normal	64.5	98.8	89.1	65.3

<sup>†</sup> Growing season precipitation (mm)

### NODULATION COUNT

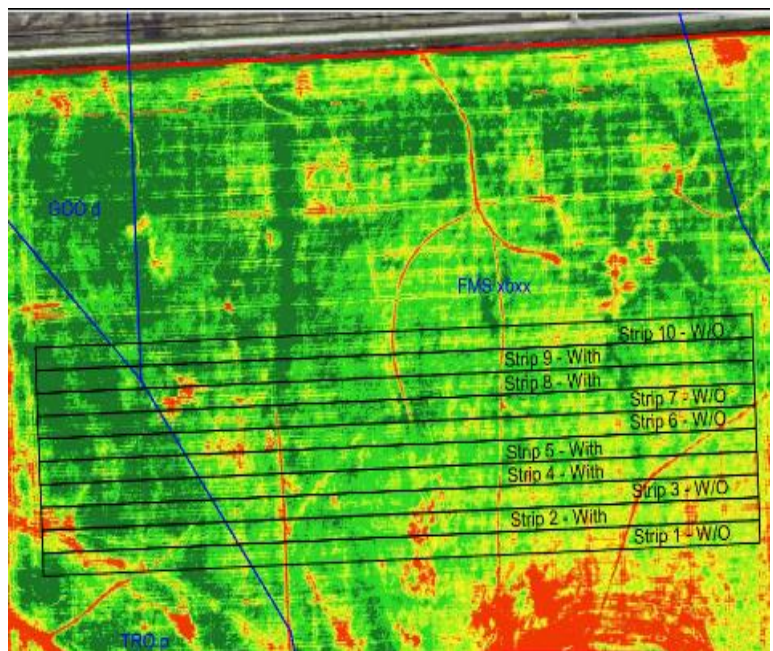
	Average # of Nodules @ R2
Seed Applied Inoculant	39
No Inoculant	36

### OVERALL YIELD

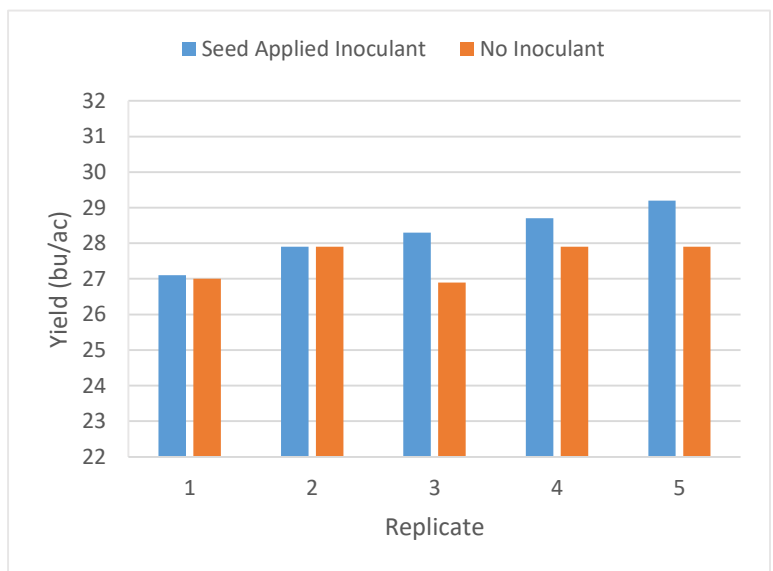
	Mean (bu/ac)
Seed Applied Inoculant	28.2
No Inoculant	27.5
Yield Difference	0.7
P-Value	0.0694
CV	2.7%
Significance	No

**Summary:** There was no significant difference between seed applied inoculant and no inoculant applied to soybeans. The previous crop was wheat, and there was a history of five previous soybean crops on this field. Nodulation was high for both treated and untreated strips.

### FIELD IMAGE



### STRIP YIELD



## Soybean Inoculant Trial – Seed Applied vs. No Inoculant

Trial ID: 2017-S1In06 – R.M. of Taché

**Objective:** Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. no inoculant applied in soybean fields. The trial is conducted in the Central, Eastern and Interlake regions of Manitoba and requires a minimum history of three previous soybean crops.

### TRIAL INFORMATION

Treatment	Seed Applied Inoculant
Rural Municipality	Taché
Previous Crop	Soybeans
Soil Description	Clayey Lacustrine
Tillage	Harrow 1x
Planting Date	May 16, 2017
Variety	Astro R2
Row Spacing	30"
Seeding Rate	175,000 seeds/ac
Plant Stand @ V1	163,000 plants/ac
# of Years since Soy	2016 – last year
# of Prev. Soy Crops	3 previous soybean crops
Harvest Date	October 7, 2017

### SOIL PROPERTIES

N 0-24"	pH	Salts 0-6"	CCE%
153 lbs/ac	7.6	0.85	2.0

### PRECIPITATION†

	May	June	July	Aug
Rainfall	26.7	67.0	47.0	8.2
Normal	67.5	100.1	93.2	73.8

† Growing season precipitation (mm)

### NODULATION COUNT

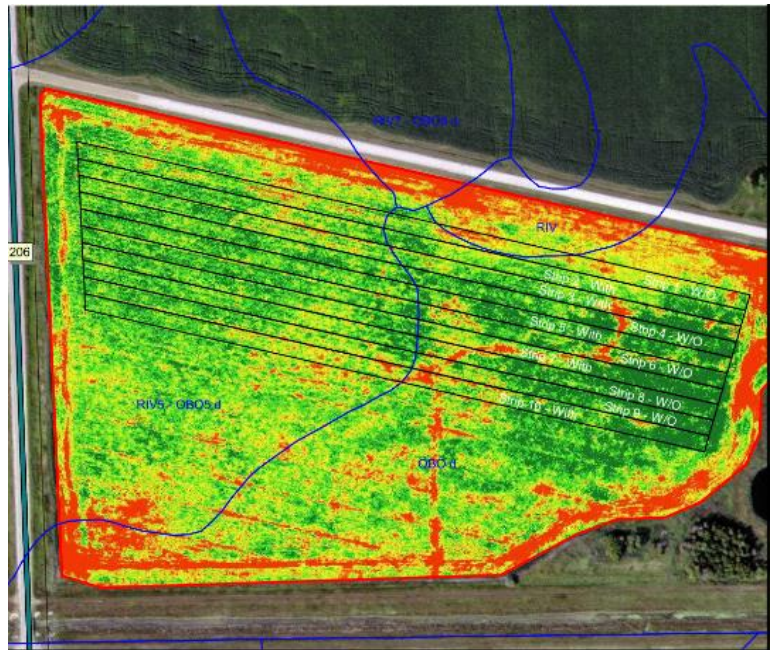
	Average # of Nodules @ R2
Seed Applied Inoculant	22
No Inoculant	20

### OVERALL YIELD

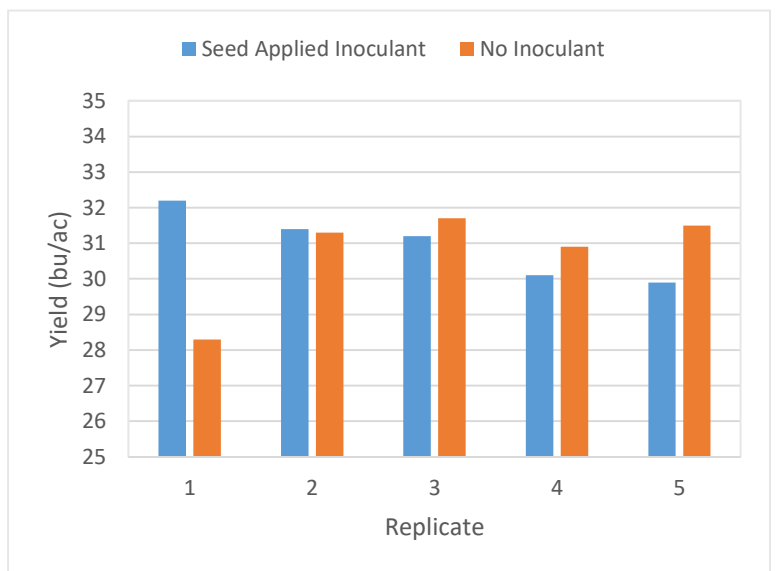
	Mean (bu/ac)
Seed Applied Inoculant	31.0
No Inoculant	30.7
Yield Difference	0.3
P-Value	0.8300
CV	3.7%
Significance	No

**Summary:** There was no significant difference between seed applied inoculant and no inoculant applied to soybeans. The previous crop was soybeans, and there was a history of three previous soybean crops on this field. Nodulation was high for both treated and untreated strips.

### FIELD IMAGE



### STRIP YIELD





## Soybean Inoculant Trial – Seed Applied vs. No Inoculant

Trial ID: 2017-S1In07 – R.M. of Taché

**Objective:** Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. no inoculant applied in soybean fields. The trial is conducted in the Central, Eastern and Interlake regions of Manitoba and requires a minimum history of three previous soybean crops.

### TRIAL INFORMATION

Treatment	Seed Applied Inoculant
Rural Municipality	Taché
Previous Crop	Spring Wheat
Soil Description	Clayey Lacustrine
Tillage	Cultivate 1x
Planting Date	May 25, 2017
Variety	25-10 RY
Row Spacing	20"
Seeding Rate	175,000 seeds/ac
Plant Stand @ V1	155,500 plants/ac
# of Years since Soy	2014 – 2 years
# of Prev. Soy Crops	>3 previous soybean crops
Harvest Date	October 10, 2017

### SOIL PROPERTIES

N 0-24"	pH	Salts 0-6"	CCE%
31 lbs/ac	7.8	0.81	3.2

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	24.9	55.5	53.8	27.7
Normal	54.1	90.0	79.5	77.0

<sup>†</sup> Growing season precipitation (mm)

### NODULATION COUNT

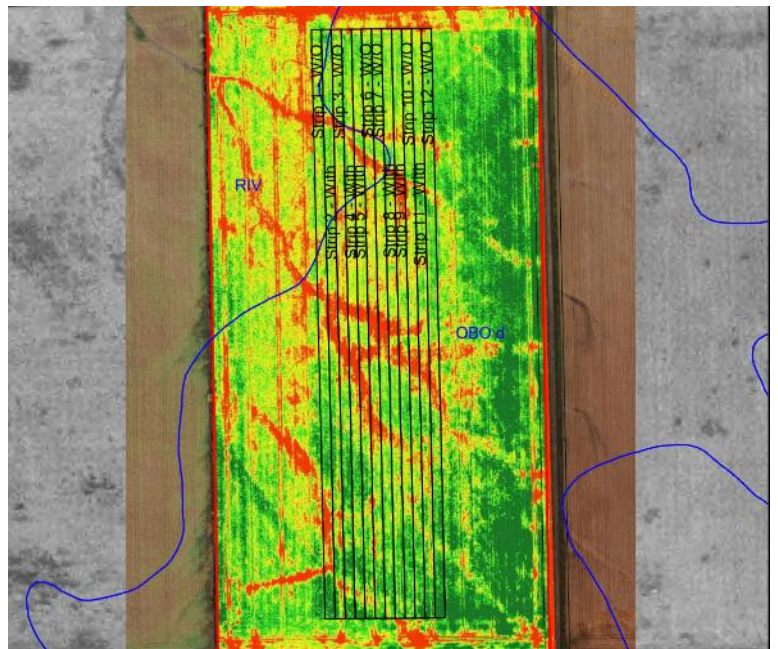
	Average # of Nodules @ R2
Seed Applied Inoculant	44
No Inoculant	48

### OVERALL YIELD

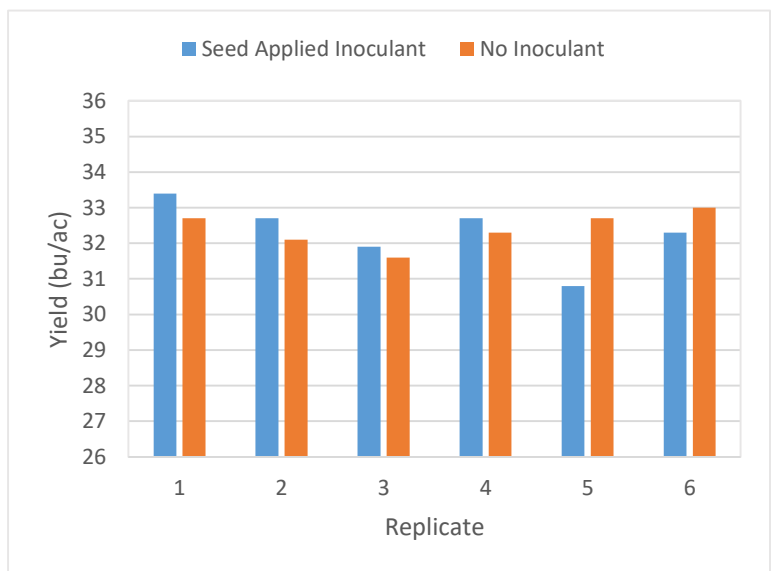
	Mean (bu/ac)
Seed Applied Inoculant	32.3
No Inoculant	32.4
Yield Difference	-0.1
P-Value	0.8187
CV	2.1%
Significance	No

**Summary:** There was no significant difference between seed applied inoculant and no inoculant applied to soybeans. The previous crop was wheat, and there was a history of more than three previous soybean crops on this field. Nodulation was high for both treated and untreated strips.

### FIELD IMAGE



### STRIP YIELD





## Soybean Inoculant Trial – Seed Applied vs. No Inoculant

Trial ID: 2017-S1In08 – R.M. of Morris

**Objective:** Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. no inoculant applied in soybean fields. The trial is conducted in the Central, Eastern and Interlake regions of Manitoba and requires a minimum history of three previous soybean crops.

### TRIAL INFORMATION

Treatment	Seed Applied Inoculant
Rural Municipality	Morris
Previous Crop	Spring Wheat
Soil Description	Clayey Lacustrine
Tillage	Deep Tillage, Heavy Harrow
Planting Date	May 18, 2017
Variety	25-10 RY
Row Spacing	22"
Seeding Rate	140,000 seeds/ac
Plant Stand @ V1	137,000 plants/ac
# of Years since Soy	2015 – 1 year
# of Prev. Soy Crops	10+ previous soybean crops
Harvest Date	October 9, 2017

### SOIL PROPERTIES

N 0-24"	pH	Salts 0-6"	CCE%
58 lbs/ac	7.9	0.73	1.9

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	20.1	49.1	54.3	13.1
Normal	67.6	101.8	85.6	83.9

<sup>†</sup> Growing season precipitation (mm)

### NODULATION COUNT

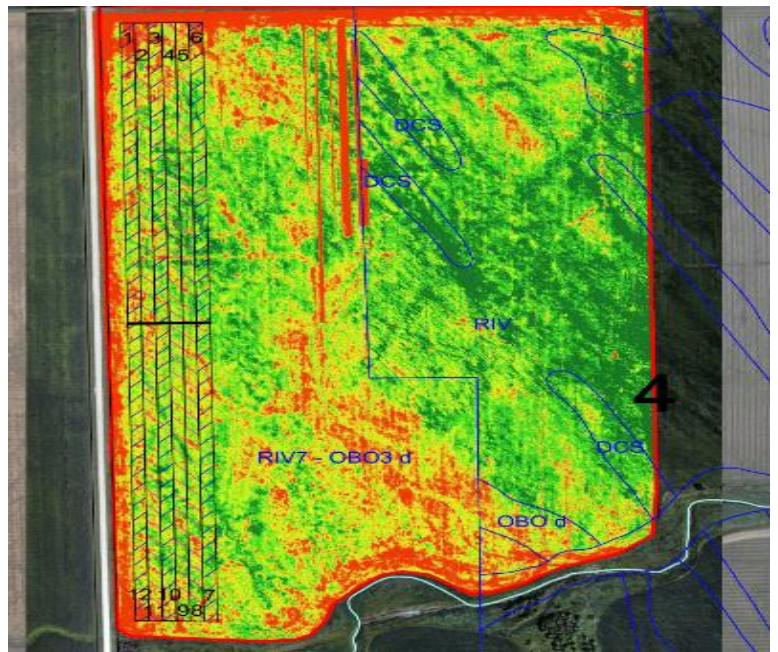
	Average # of Nodules @ R2
Seed Applied Inoculant	34
No Inoculant	31

### OVERALL YIELD

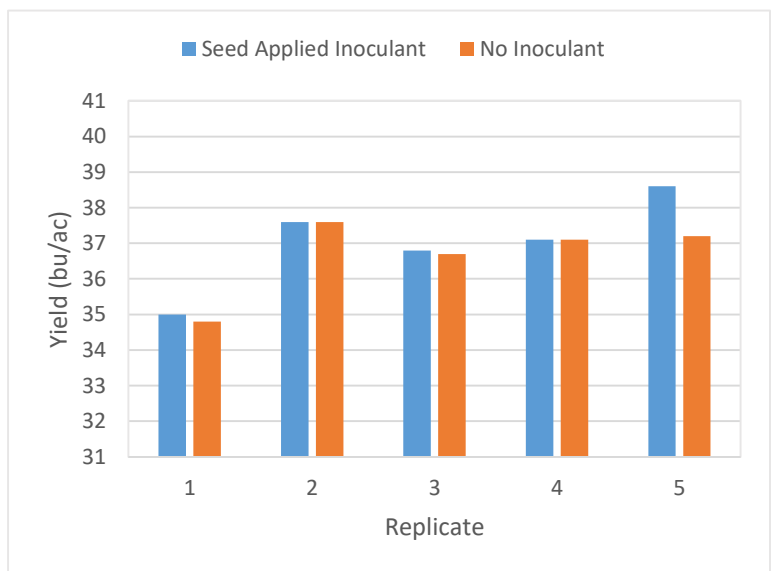
	Mean (bu/ac)
Seed Applied Inoculant	37.0
No Inoculant	36.7
Yield Difference	0.3
P-Value	0.2727
CV	3.1%
Significance	No

**Summary:** There was no significant difference between seed applied inoculant and no inoculant applied to soybeans. The previous crop was wheat, and there was a history of more than ten previous soybean crops on this field. Nodulation was high for both treated and untreated strips.

### FIELD IMAGE



### STRIP YIELD



## Soybean Inoculant Trial – Seed Applied vs. No Inoculant

Trial ID: 2017-S1In09 – R.M. of St Andrews

**Objective:** Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. no inoculant applied in soybean fields. The trial is conducted in the Central, Eastern and Interlake regions of Manitoba and requires a minimum history of three previous soybean crops.

### TRIAL INFORMATION

Treatment	Seed Applied Inoculant
Rural Municipality	St Andrews
Previous Crop	Soybeans
Soil Description	Clayey Lacustrine
Tillage	Disc 1x
Planting Date	May 8, 2017
Variety	NSC Gladstone RR2Y
Row Spacing	10"
Seeding Rate	140,000 seeds/ac
Plant Stand @ V1	148,000 plants/ac
# of Years since Soy	2016 – last year
# of Prev. Soy Crops	3 previous soybean crops
Harvest Date	September 30, 2017

### SOIL PROPERTIES

N 0-24"	pH	Salts 0-6"	CCE%
32 lbs/ac	8.2	0.64	6.4

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	22.5	48.8	72.2	38.3
Normal	54.7	92.4	81.9	75.0

<sup>†</sup> Growing season precipitation (mm)

### NODULATION COUNT

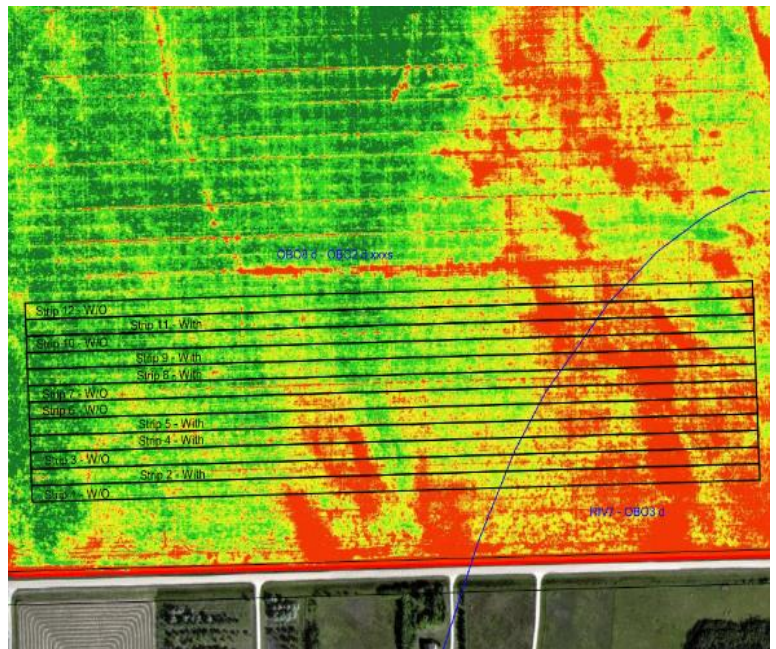
	<b>Average # of Nodules @ R2</b>
Seed Applied Inoculant	65
No Inoculant	59

### OVERALL YIELD

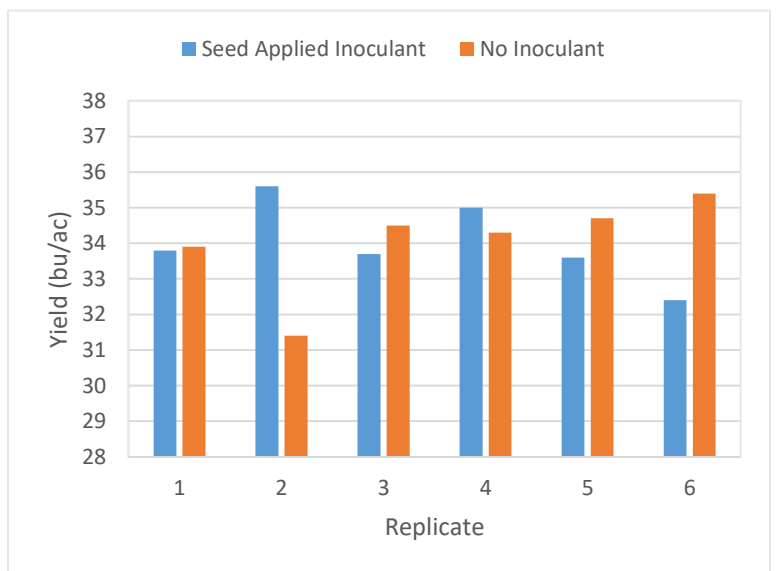
	<b>Mean (bu/ac)</b>
Seed Applied Inoculant	34.0
No Inoculant	34.0
Yield Difference	0.0
P-Value	0.9871
CV	3.5%
Significance	No

**Summary:** There was no significant difference between seed applied inoculant and no inoculant applied to soybeans. The previous crop was soybeans, and there was a history of three previous soybean crops on this field. Nodulation was high for both treated and untreated strips.

### FIELD IMAGE



### STRIP YIELD





## Soybean Inoculant Trial – Seed Applied vs. No Inoculant

Trial ID: 2017-S1In10 – R.M. of Ste Anne

**Objective:** Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. no inoculant applied in soybean fields. The trial is conducted in the Central, Eastern and Interlake regions of Manitoba and requires a minimum history of three previous soybean crops.

### TRIAL INFORMATION

Treatment	Seed Applied Inoculant
Rural Municipality	Ste Anne
Previous Crop	Soybeans
Soil Description	Clayey Lacustrine
Tillage	Deep Tillage 2x
Planting Date	May 15, 2017
Variety	P006T46R
Row Spacing	10"
Seeding Rate	190,000 seeds/ac
Plant Stand @ V1	163,000 plants/ac
# of Years since Soy	2016 – last year
# of Prev. Soy Crops	4 previous soybean crops
Harvest Date	September 13, 2017

### SOIL PROPERTIES

N 0-24"	pH	Salts 0-6"	CCE%
60 lbs/ac	7.9	0.74	2.6

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
Rainfall	26.7	67.0	47.0	8.2
Normal	67.5	100.1	93.2	73.8

<sup>†</sup> Growing season precipitation (mm)

### NODULATION COUNT

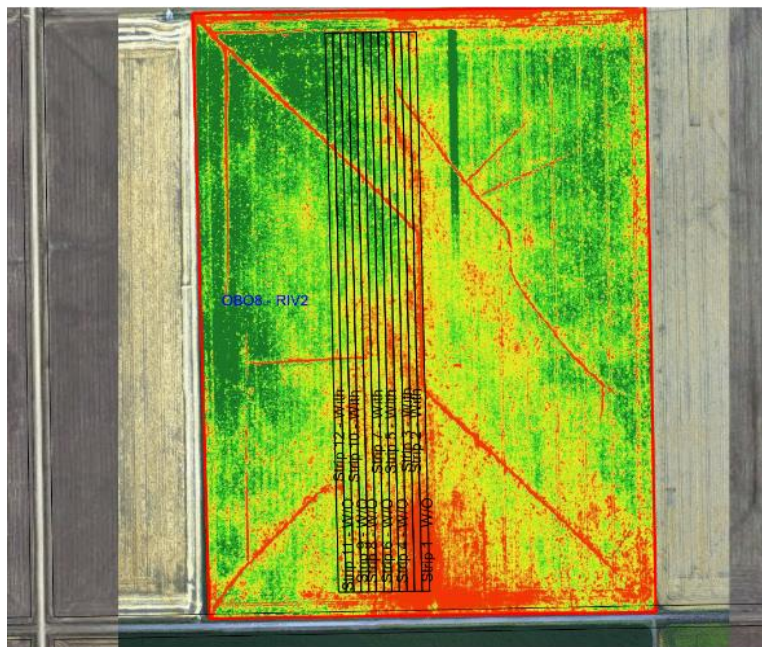
	Average # of Nodules @ R2
Seed Applied Inoculant	41
No Inoculant	41

### OVERALL YIELD

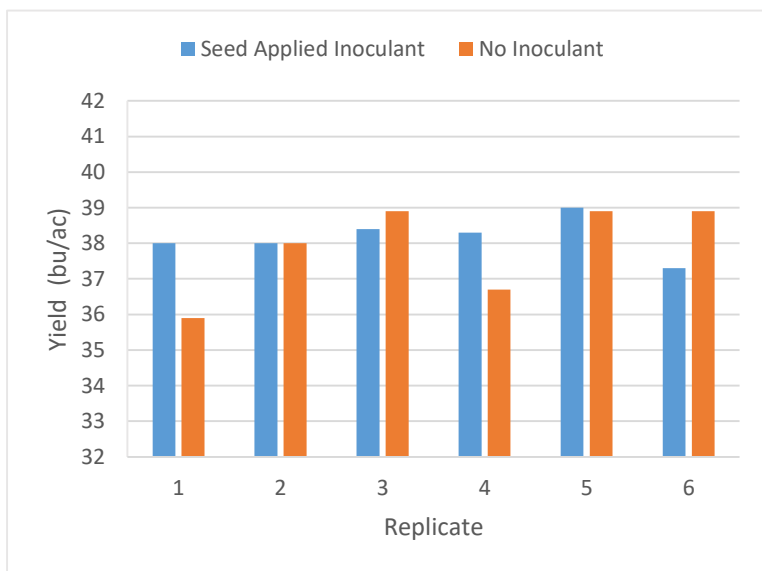
	Mean (bu/ac)
Seed Applied Inoculant	38.2
No Inoculant	37.9
Yield Difference	0.3
P-Value	0.6326
CV	2.5%
Significance	No

**Summary:** There was no significant difference between seed applied inoculant and no inoculant applied to soybeans. The previous crop was soybeans, and there was a history of four previous soybean crops on this field. Nodulation was high for both treated and untreated strips.

### FIELD IMAGE



### STRIP YIELD





# Soybean Potassium Fertility Trial

Soybean potassium fertility trial information and yield response for fields with a soil test K level of <150 ppm at 14 On-Farm Network trials across Manitoba in 2017.

Trial ID	Rural Municipality	Variety	Previous Crop	Seeding Date	Seeding Rate	Plant Stand @ V1	Yield		Yield Difference	Placement	Potash Rate	Statistically Significant @ 95%
							With	W/O				
					'000/ac	'000/ac	bu/ac		bu/ac			
2017-SK10	Swan Valley West	DKB 22-60	Canola	May 21	192	144	40.9	45.1	-4.1	Mid Row Band	60	Yes
2017-SK11	Lac du Bonnet	OAC Prudence	Buckwheat	May 29	300	217	17.7	19.4	-1.8	Broadcast	120	Yes
2017-SK07	Dufferin	NSC Starbuck RRX2	Fall Rye	May 23	175	172	37.5	38.8	-1.3	Mid Row Band	60	No
2017-SK05	Dufferin	Pride 0027	Wheat	May 12	160	110	25.9	27.0	-1.1	Broadcast	120	No
2017-SK01	North Norfolk	Legend Pro 2525	Soybeans	May 20	210	166	32.7	33.3	-0.6	Broadcast	120	No
2017-SK15	Dauphin	Akras R2	Soybeans	May 24	210	146	38.0	38.5	-0.5	Mid Row Band	60	No
2017-SK12	Dauphin	Akras R2	Canola	May 26	183	171	29.6	29.8	-0.3	Side Band	60	No
2017-SK14	Hanover	P009T22R2	Canola	May 06	165	145	17.9	18.1	-0.2	Broadcast	120	No
2017-SK02	Rockwood	NSC Gladstone RR2Y	Soybeans	May 05	180	176	25.2	24.8	0.4	Mid Row Band	60	No
2017-SK03	North Norfolk	P008T70R	Fall Rye	May 20	173	161	39.6	39.2	0.4	Mid Row Band	60	No
2017-SK04	Grey	DKB005-52 RR2X	Oats	May 17	175	115	36.6	35.7	0.9	Broadcast	120	No
2017-SK09	Portage la Prairie	Legend 003R24	Fall Rye	May 11	154.5	145	38.1	36.9	1.2	Pre-Plant Band	60	No
2017-SK13	Alexander	P006T46R	Corn	May 17	191	158	22.1	20.4	1.8	Broadcast	120	Yes
2017-SK06	Two Borders	S007-Y4	Soybeans	May 14	200	157	47.5	45.3	2.2	Broadcast	120	Yes
						<b>156</b>	<b>32.1</b>	<b>32.3</b>	<b>-0.2</b>			

## Soybean Potassium Trial

Trial ID: 2017-SK01 – R.M. of North Norfolk

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

TRIAL INFORMATION	
Treatment	Broadcast – 120 lbs/ac K <sub>2</sub> O
Rural Municipality	North Norfolk
Previous Crop	Soybean
Soil Description	Sandy Lacustrine
Tillage	Heavy Harrow
Planting Date	May 20, 2017
Variety	Legend Pro 2525
Row Spacing	16"
Seeding Rate	210,000 seeds/ac
Plant Stand @ V1	166,000 plants/ac
Harvest Date	October 11, 2017

SOIL PROPERTIES <sup>†</sup>	
Soil Test Sample Timing	Spring
Soil K Level	130 ppm

<sup>†</sup> Composite soil sample of the trial area before seeding at 0-6" depth

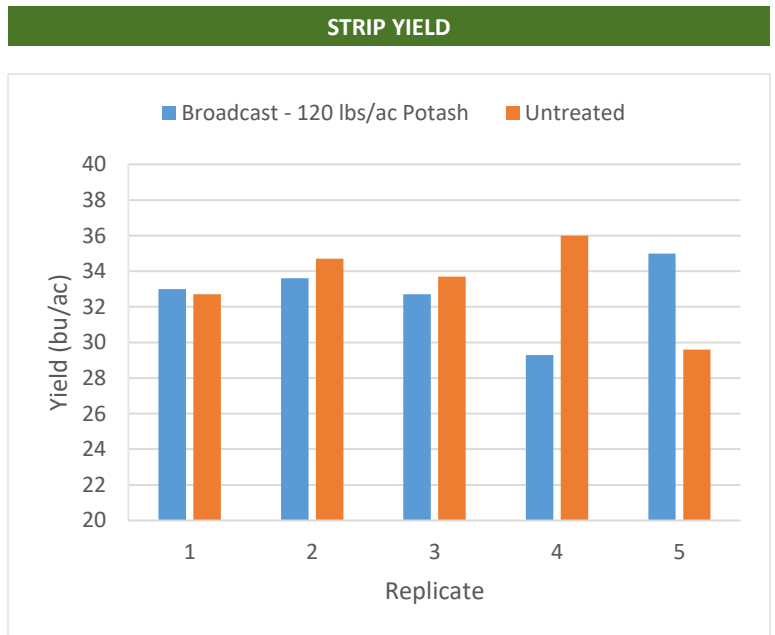
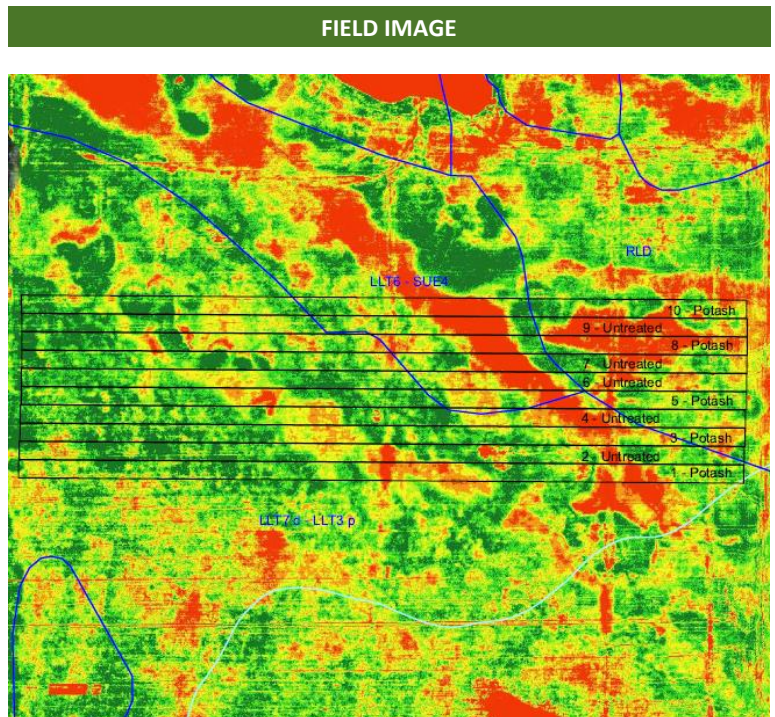
PRECIPITATION <sup>†</sup>				
	May	June	July	Aug
Rainfall	31.7	78.9	34.0	21.8
Normal	57.3	89.4	78.1	65.7

<sup>†</sup> Growing season precipitation (mm)

OVERALL YIELD	
	Mean (bu/ac)
Broadcast – 120 lbs/ac Potash	32.7
Untreated	33.3
Yield Difference	0.6
P-Value	0.7640
CV	6.5%
Significance	No

**Summary:** There was no significant yield difference between potash fertilizer broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and untreated check strips. The soil test K level was 130 ppm based on a composite soil sample before seeding. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.

MPSG would like to thank Agrium for providing the Potash for this trial.



## Soybean Potassium Trial

Trial ID: 2017-SK02 – R.M. of Rockwood

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was mid row banded at 60 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

### TRIAL INFORMATION

<b>Treatment</b>	Mid Row Band – 60 lbs/ac K <sub>2</sub> O
<b>Rural Municipality</b>	Rockwood
<b>Previous Crop</b>	Soybeans
<b>Soil Description</b>	Calcareous Loamy Till
<b>Tillage</b>	Conventional
<b>Planting Date</b>	May 5, 2017
<b>Variety</b>	NSC Gladstone RR2Y
<b>Row Spacing</b>	10"
<b>Seeding Rate</b>	180,000 seeds/ac
<b>Plant Stand @ V1</b>	176,000 plants/ac
<b>Harvest Date</b>	September 28, 2017

### SOIL PROPERTIES<sup>†</sup>

<b>Soil Test Sample Timing</b>	Spring
<b>Soil K Level</b>	235 ppm

<sup>†</sup> Composite soil sample of the trial area before seeding at 0-6" depth

### PRECIPITATION<sup>†</sup>

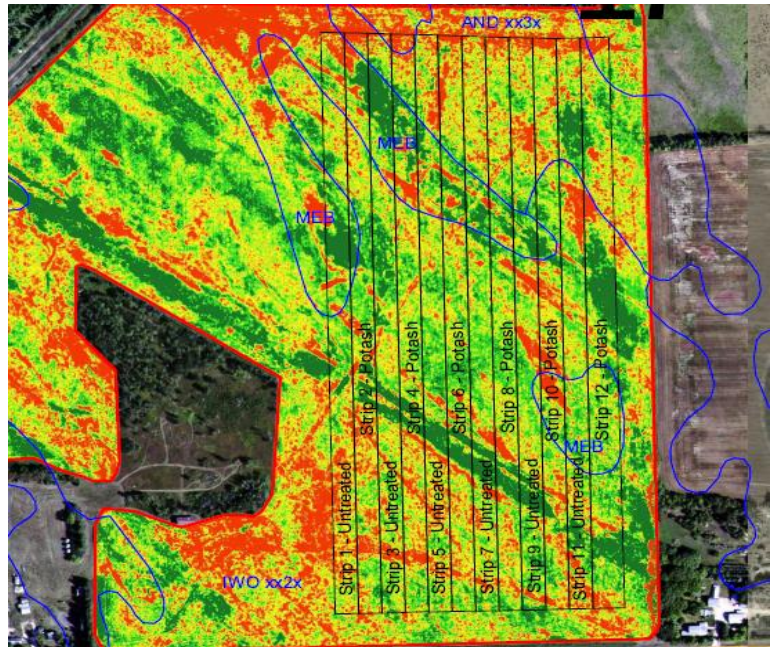
	May	June	July	Aug
<b>Rainfall</b>	24.0	63.6	61.3	32.5
<b>Normal</b>	54.1	90.0	79.5	77.0

<sup>†</sup> Growing season precipitation (mm)

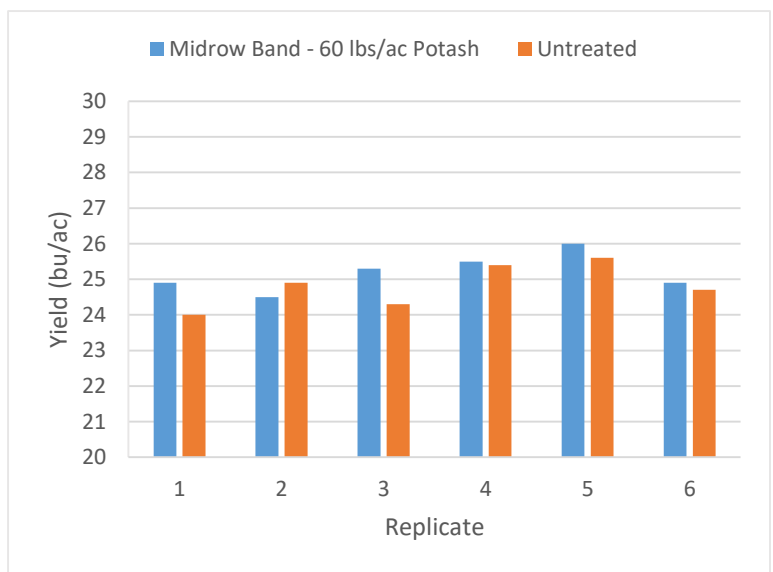
### OVERALL YIELD

	Mean (bu/ac)
<b>Midrow Band – 60 lbs/ac Potash</b>	25.2
<b>Untreated</b>	24.8
<b>Yield Difference</b>	0.4
<b>P-Value</b>	0.1472
<b>CV</b>	2.3%
<b>Significance</b>	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between potash fertilizer mid row banded at 60 lbs/ac K<sub>2</sub>O and untreated check strips. The soil test K level was 235 ppm based on a composite soil sample before seeding. A fall zone sample had at least one zone with a soil test K level of less than 150 ppm. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.

MPSG would like to thank Agrium for providing the Potash for this trial.



## Soybean Potassium Trial

Trial ID: 2017-SK03 – R.M. of North Norfolk

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was mid row banded at 60 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

TRIAL INFORMATION	
Treatment	Mid Row Band – 60 lbs/ac K <sub>2</sub> O
Rural Municipality	North Norfolk
Previous Crop	Fall Rye
Soil Description	Sandy Loam Lacustrine
Tillage	Strip Till
Planting Date	May 20, 2017
Variety	P008T70R
Row Spacing	22"
Seeding Rate	173,000 seeds/ac
Plant Stand @ V1	161,000 plants/ac
Harvest Date	October 5, 2017

SOIL PROPERTIES <sup>†</sup>	
Soil Test Sample Timing	Spring
Soil K Level	105 ppm

<sup>†</sup> Composite soil sample of the trial area before seeding at 0-6" depth

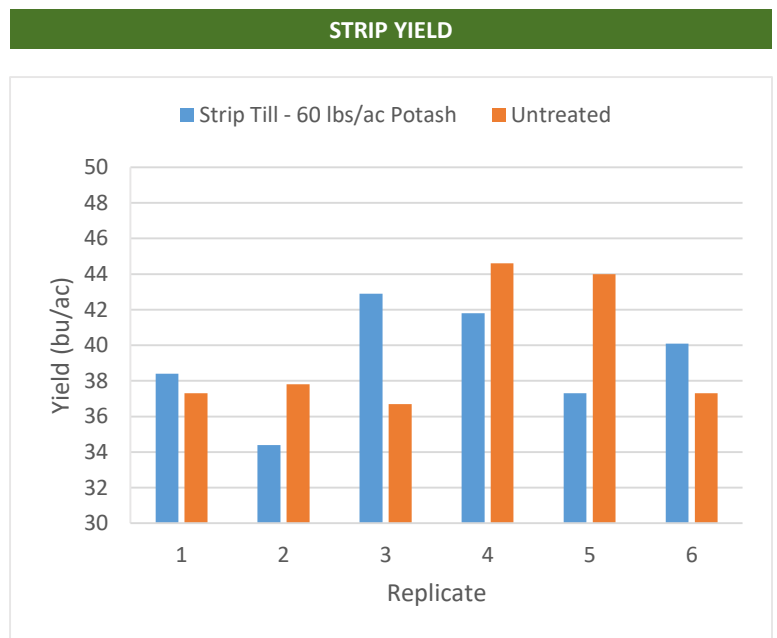
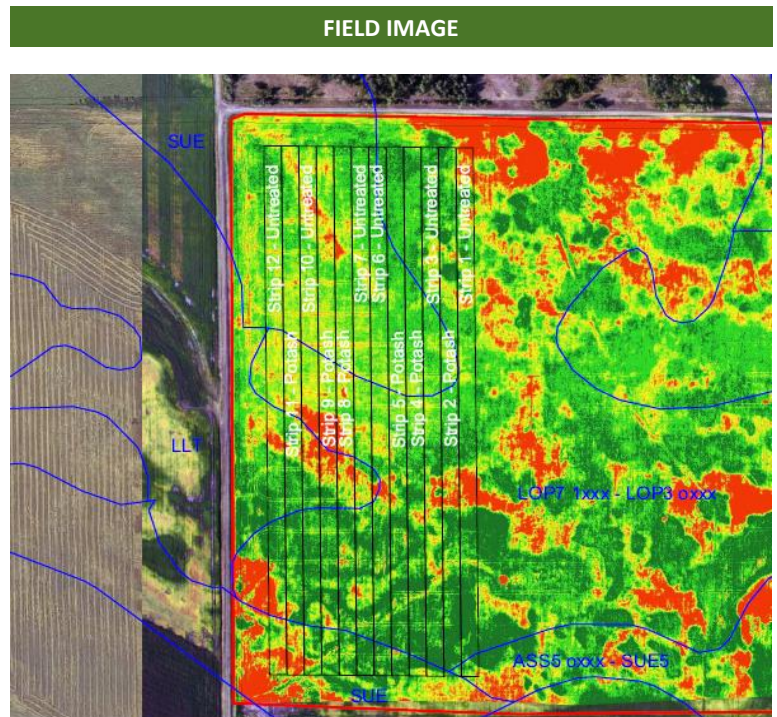
PRECIPITATION <sup>†</sup>				
	May	June	July	Aug
Rainfall	26.9	69.9	29.6	8.9
Normal	54.4	90.0	78.4	68.3

<sup>†</sup> Growing season precipitation (mm)

OVERALL YIELD	
	Mean (bu/ac)
Midrow Band – 60 lbs/ac Potash	39.6
Untreated	39.2
Yield Difference	0.4
P-Value	0.8175
CV	8.2%
Significance	No

**Summary:** There was no significant yield difference between potash fertilizer mid row banded at 60 lbs/ac K<sub>2</sub>O and untreated check strips. The soil test K level was 105 ppm based on a composite soil sample before seeding. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.

MPSG would like to thank Agrium for providing the Potash for this trial.



## Soybean Potassium Trial

Trial ID: 2017-SK04 – R.M. of Grey

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

### TRIAL INFORMATION

Treatment	Broadcast – 120 lbs/ac K <sub>2</sub> O
Rural Municipality	Grey
Previous Crop	Oats
Soil Description	Sandy Loam Lacustrine
Tillage	Super Coulter
Planting Date	May 17, 2017
Variety	DKB0052 RR2X
Row Spacing	30"
Seeding Rate	175,000 seeds/ac
Plant Stand @ V1	115,000 plants/ac
Harvest Date	October 11, 2017

### SOIL PROPERTIES<sup>†</sup>

Soil Test Sample Timing	Spring
Soil K Level	107 ppm

<sup>†</sup> Composite soil sample of the trial area before seeding at 0-6" depth

### PRECIPITATION<sup>†</sup>

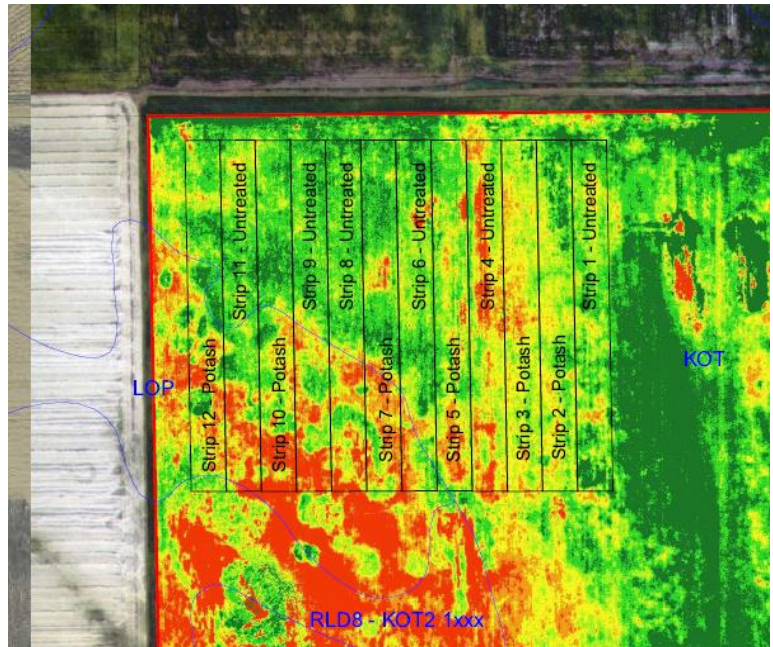
	May	June	July	Aug
Rainfall	28.3	70.8	23.9	14.1
Normal	57.5	84.1	76.5	74.5

<sup>†</sup> Growing season precipitation (mm)

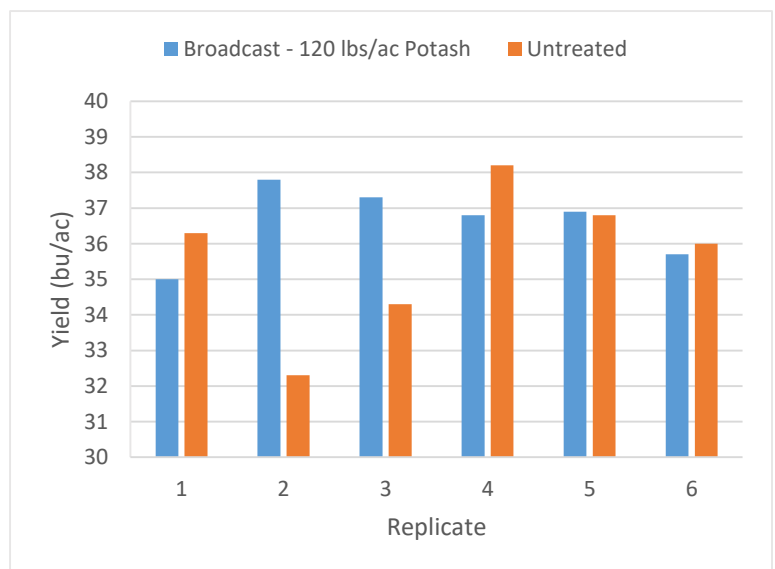
### OVERALL YIELD

	Mean (bu/ac)
Broadcast – 120 lbs/ac Potash	36.6
Untreated	35.7
Yield Difference	0.9
P-Value	0.4434
CV	4.5%
Significance	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between potash fertilizer broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and untreated check strips. The soil test K level was 107 ppm based on a composite soil sample before seeding. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.



## Soybean Potassium Trial

Trial ID: 2017-SK05 – R.M. of Dufferin

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

TRIAL INFORMATION	
Treatment	Broadcast – 120 lbs/ac K <sub>2</sub> O
Rural Municipality	Dufferin
Previous Crop	Wheat
Soil Description	Sandy Lacustrine
Tillage	Joker 1x
Planting Date	May 12, 2017
Variety	Pride 0027
Row Spacing	7.5"
Seeding Rate	160,000 seeds/ac
Plant Stand @ V1	110,000 plants/ac
Harvest Date	September 14, 2017

SOIL PROPERTIES <sup>†</sup>	
Soil Test Sample Timing	Spring
Soil K Level	88 ppm

<sup>†</sup> Composite soil sample of the trial area before seeding at 0-6" depth

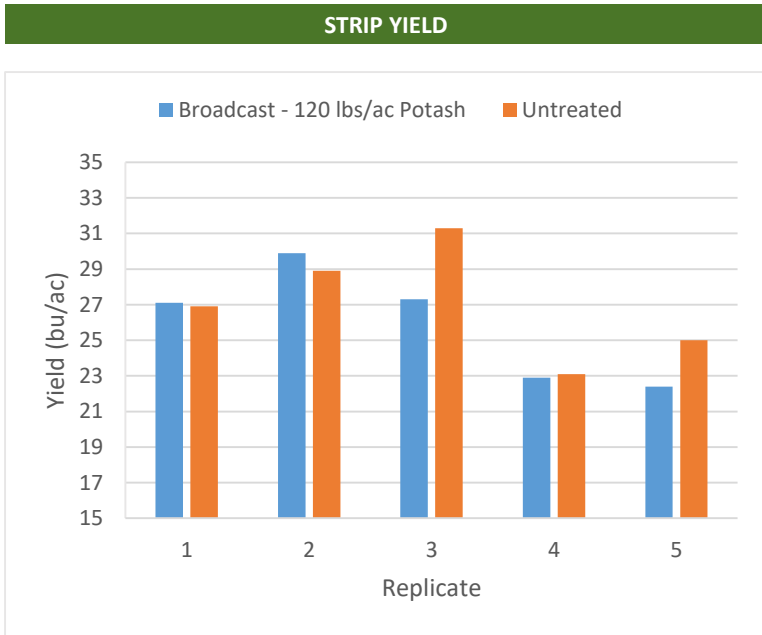
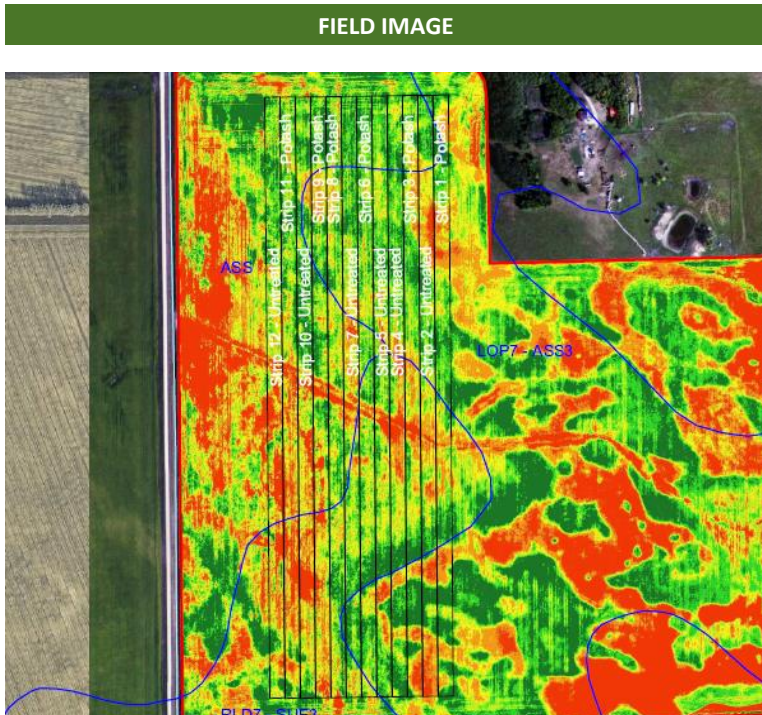
PRECIPITATION <sup>†</sup>				
	May	June	July	Aug
Rainfall	29.1	65.5	27.4	24.0
Normal	54.4	90.0	78.4	68.3

<sup>†</sup> Growing season precipitation (mm)

OVERALL YIELD	
	Mean (bu/ac)
Broadcast – 120 lbs/ac Potash	25.9
Untreated	27.0
Yield Difference	-1.1
P-Value	0.2981
CV	11.6%
Significance	No

**Summary:** There was no significant yield difference between potash fertilizer broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and untreated check strips. The soil test K level was 130 ppm based on a composite soil sample before seeding. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.

MPSG would like to thank Agrium for providing the Potash for this trial.





## Soybean Potassium Trial

Trial ID: 2017-SK06 – R.M. of Two Borders

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

### TRIAL INFORMATION

<b>Treatment</b>	Broadcast – 120 lbs/ac K <sub>2</sub> O
<b>Rural Municipality</b>	Two Borders
<b>Previous Crop</b>	Soybeans
<b>Soil Description</b>	Loamy Lacustrine
<b>Tillage</b>	Minimum Till
<b>Planting Date</b>	May 14, 2017
<b>Variety</b>	S007-Y4
<b>Row Spacing</b>	10"
<b>Seeding Rate</b>	200,000 seeds/ac
<b>Plant Stand @ V1</b>	157,000 plants/ac
<b>Harvest Date</b>	September 20, 2017

### SOIL PROPERTIES<sup>†</sup>

<b>Soil Test Sample Timing</b>	Spring
<b>Soil K Level</b>	155 ppm

<sup>†</sup> Composite soil sample of the trial area before seeding at 0-6" depth

### PRECIPITATION<sup>†</sup>

	May	June	July	Aug
<b>Rainfall</b>	10.7	79.2	8.9	37.7
<b>Normal</b>	51.1	77.7	70.4	51.6

<sup>†</sup> Growing season precipitation (mm)

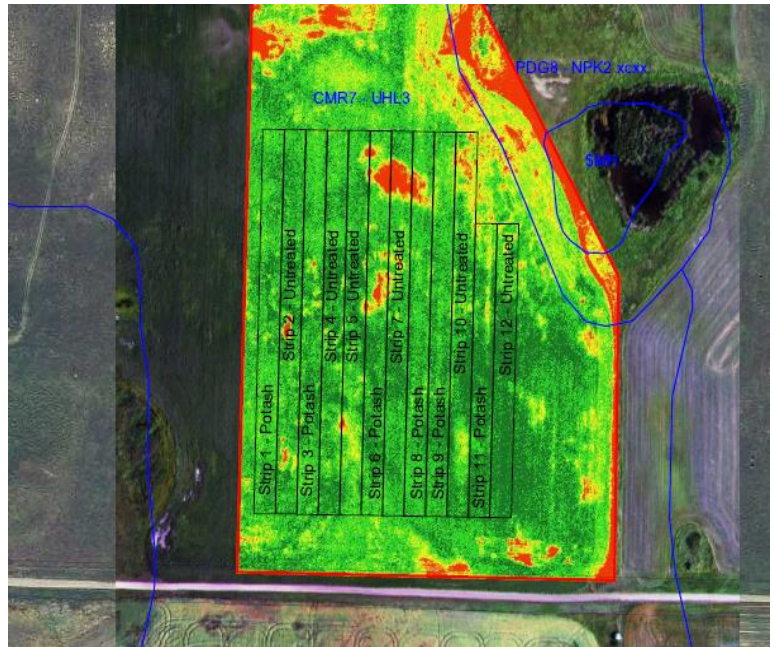
### OVERALL YIELD

	Mean (bu/ac)
<b>Broadcast – 120 lbs/ac Potash</b>	47.5
<b>Untreated</b>	45.3
<b>Yield Difference</b>	2.2
<b>P-Value</b>	0.0428
<b>CV</b>	4.6%
<b>Significance</b>	Yes

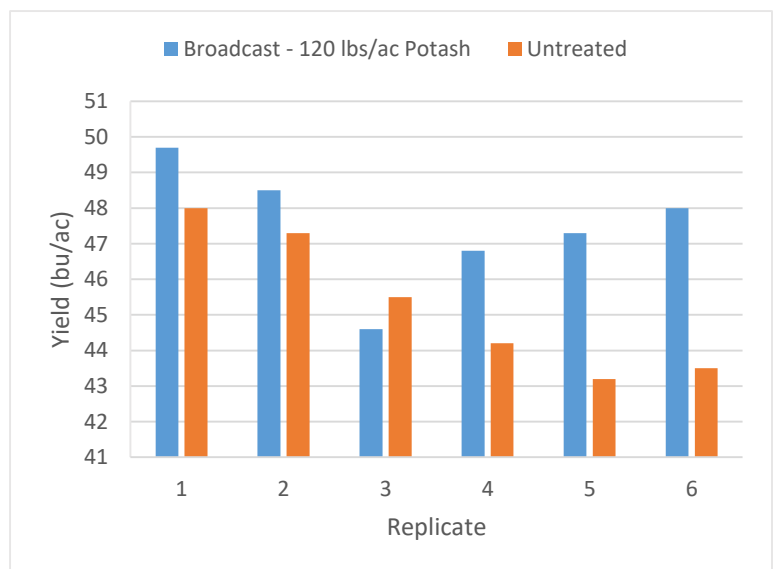
**Summary:** There was a significant yield difference of 2.2 bu/ac for potash fertilizer broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O compared to untreated check strips. The soil test K level was 155 ppm based on a composite soil sample before seeding. This study is part of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.

MPSG would like to thank Agrium for providing the Potash for this trial.

### FIELD IMAGE



### STRIP YIELD



## Soybean Potassium Trial

Trial ID: 2017-SK07 – R.M. of Dufferin

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was mid row banded at 60 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

TRIAL INFORMATION	
Treatment	Mid Row Band – 60 lbs/ac K <sub>2</sub> O
Rural Municipality	Dufferin
Previous Crop	Fall Rye
Soil Description	Loamy/Sandy Lacustrine
Tillage	Conventional
Planting Date	May 23, 2017
Variety	NSC Starbuck RRX2
Row Spacing	15"
Seeding Rate	175,000 seeds/ac
Plant Stand @ V1	172,000 plants/ac
Harvest Date	October 3, 2017

SOIL PROPERTIES <sup>†</sup>	
Soil Test Sample Timing	Spring
Soil K Level	131 ppm

<sup>†</sup> Composite soil sample of the trial area before seeding at 0-6" depth

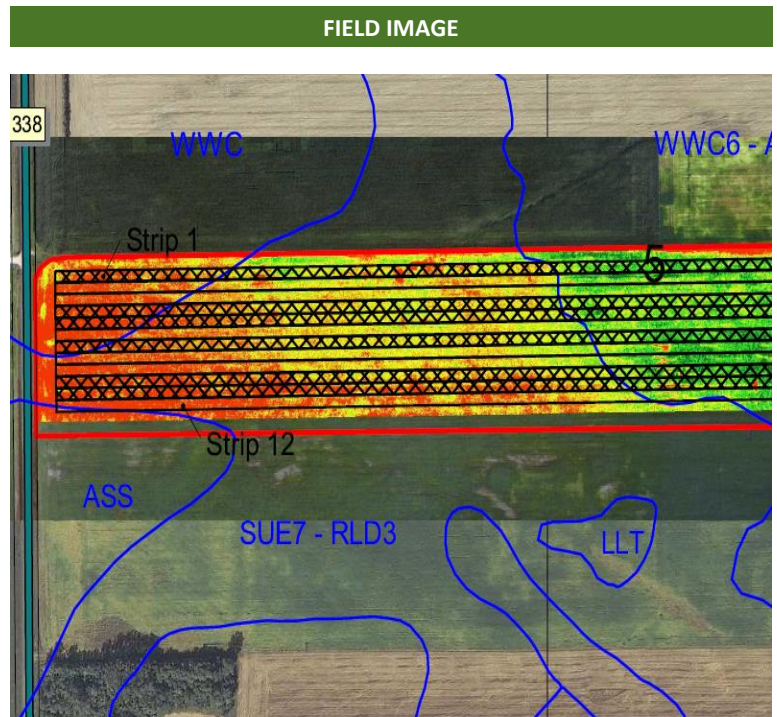
PRECIPITATION <sup>†</sup>				
	May	June	July	Aug
Rainfall	29.1	65.5	27.4	24.0
Normal	67.7	96.4	78.6	74.8

<sup>†</sup> Growing season precipitation (mm)

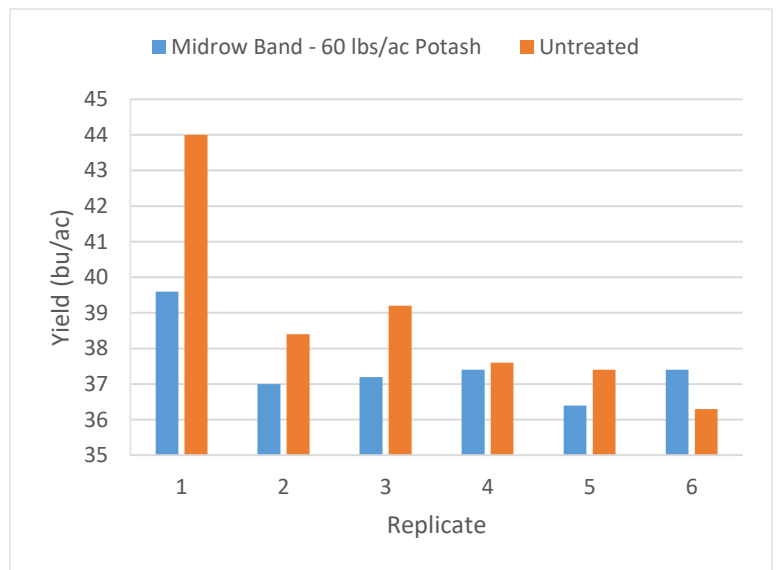
OVERALL YIELD	
	Mean (bu/ac)
Midrow Band – 60 lbs/ac Potash	37.5
Untreated	38.8
Yield Difference	-1.3
P-Value	0.1423
CV	5.5%
Significance	No

**Summary:** There was no significant yield difference between potash fertilizer mid row banded at 60 lbs/ac K<sub>2</sub>O and untreated check strips. The soil test K level was 131 ppm based on a composite soil sample before seeding. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.

MPSG would like to thank Agrium for providing the Potash for this trial.



### STRIP YIELD





## Soybean Potassium Trial

Trial ID: 2017-SK09 – R.M. of Portage la Prairie

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was pre-plant banded at 60 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

### TRIAL INFORMATION

Treatment	Pre-plant Band - 60 lbs/ac K <sub>2</sub> O
Rural Municipality	Portage la Prairie
Previous Crop	Fall Rye
Soil Description	Sandy Lacustrine
Tillage	Conventional
Planting Date	May 11, 2017
Variety	Legend 003R234
Row Spacing	7.5"
Seeding Rate	154,500 seeds/ac
Plant Stand @ V1	145,000 plants/ac
Harvest Date	September 29, 2017

### SOIL PROPERTIES<sup>†</sup>

Soil Test Sample Timing	Spring
Soil K Level	78 ppm

<sup>†</sup> Composite soil sample of the trial area before seeding at 0-6" depth

### PRECIPITATION<sup>†</sup>

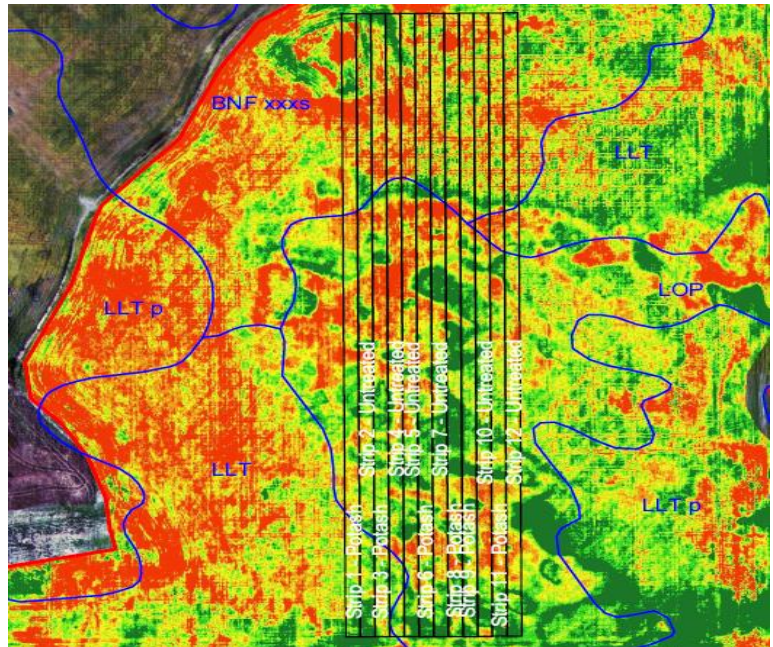
	May	June	July	Aug
Rainfall	26.9	69.9	29.6	8.9
Normal	54.4	90.0	78.4	68.3

<sup>†</sup> Growing season precipitation (mm)

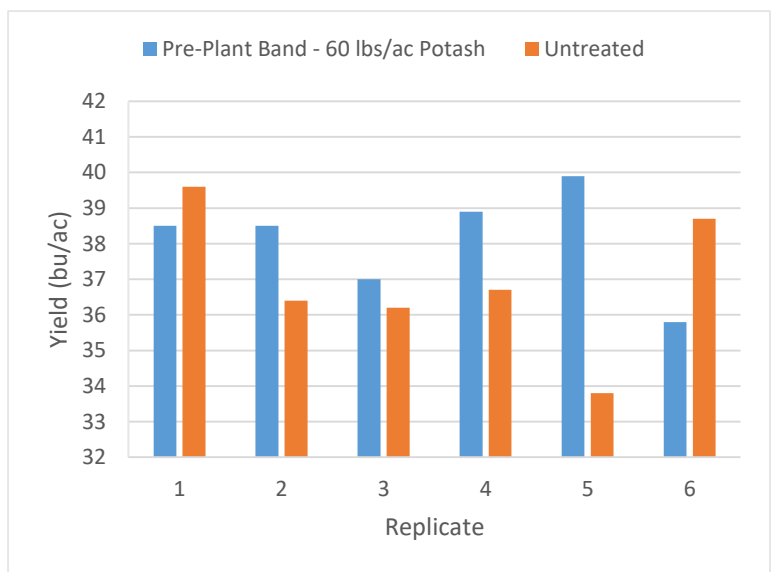
### OVERALL YIELD

	Mean (bu/ac)
Pre-plant Band - 60 lbs/ac Potash	38.1
Untreated	36.9
Yield Difference	1.2
P-Value	0.3867
CV	4.8%
Significance	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between potash fertilizer pre-plant banded at 60 lbs/ac K<sub>2</sub>O and untreated check strips. The soil test K level was 78 ppm based on a composite soil sample before seeding. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.



## Soybean Potassium Trial

Trial ID: 2017-SK10 – R.M. of Swan Valley West

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was mid row banded at 60 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

TRIAL INFORMATION	
Treatment	Mid Row Band – 60 lbs/ac K <sub>2</sub> O
Rural Municipality	Swan Valley West
Previous Crop	Canola
Soil Description	Loamy Lacustrine
Tillage	Conventional
Planting Date	May 21, 2017
Variety	Dekalb 22-60
Row Spacing	10"
Seeding Rate	192,000 seeds/ac
Plant Stand @ V1	144,000 plants/ac
Harvest Date	October 6, 2017

SOIL PROPERTIES <sup>†</sup>	
Soil Test Sample Timing	Fall
Soil K Level	52 ppm

<sup>†</sup> Composite soil sample of the field in the fall at 0-6" depth

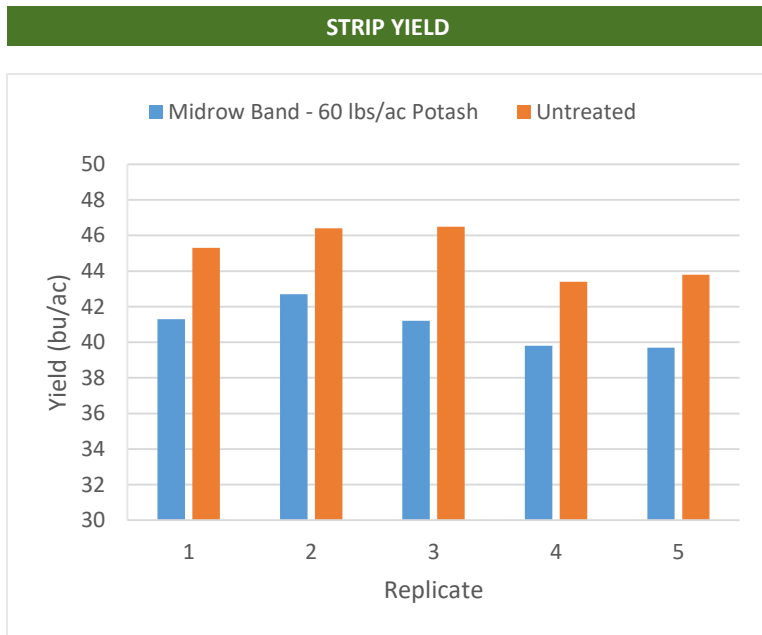
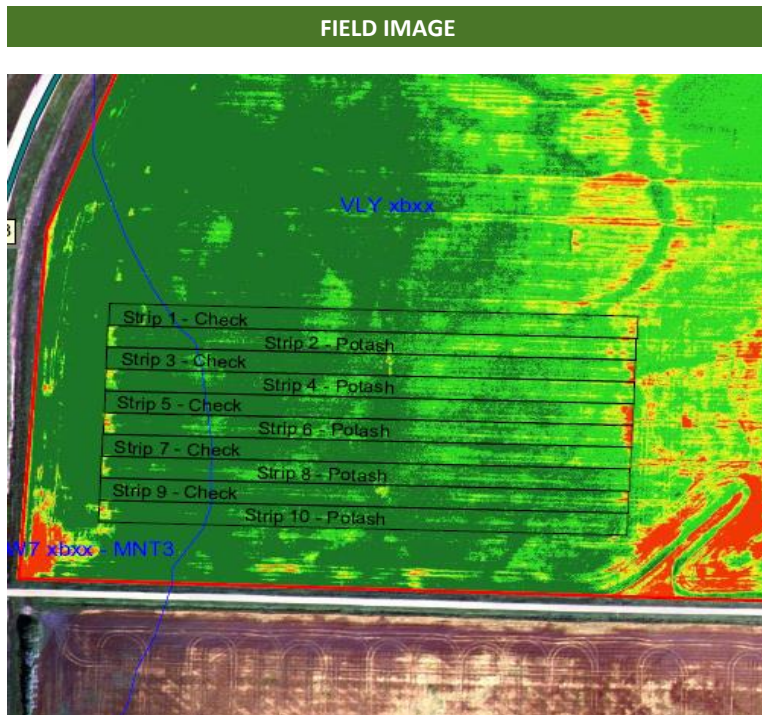
PRECIPITATION <sup>†</sup>				
	May	June	July	Aug
Rainfall	32.2	43	51.4	38.7
Normal	50.7	85.4	95.6	76.8

<sup>†</sup> Growing season precipitation (mm)

OVERALL YIELD	
	Mean (bu/ac)
Midrow Band – 60 lbs/ac Potash	40.9
Untreated	45.1
Yield Difference	-4.1
P-Value	0.0002
CV	5.9%
Significance	Yes

**Summary:** There was a significant yield difference of -4.1 bu/ac for potash fertilizer mid row banded at 60 lbs/ac K<sub>2</sub>O compared to untreated check strips. The soil test K level was 52 ppm based on a composite soil sample in the fall. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.

MPSG would like to thank Agrium for providing the Potash for this trial.



## Soybean Potassium Trial

Trial ID: 2017-SK11 – R.M. of Lac du Bonnet

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

### TRIAL INFORMATION

<b>Treatment</b>	Broadcast – 120 lbs/ac K <sub>2</sub> O
<b>Rural Municipality</b>	Lac du Bonnet
<b>Previous Crop</b>	-
<b>Soil Description</b>	Sandy Loam Lacustrine
<b>Tillage</b>	-
<b>Planting Date</b>	May 29, 2017
<b>Variety</b>	OAC Prudence
<b>Row Spacing</b>	9"
<b>Seeding Rate</b>	300,000 seeds/ac
<b>Plant Stand @ V1</b>	217,000 plants/ac
<b>Harvest Date</b>	October 16, 2017

### SOIL PROPERTIES†

<b>Soil Test Sample Timing</b>	Spring
<b>Soil K Level</b>	87 ppm

† Composite soil sample of the trial area before seeding at 0-6" depth

### PRECIPITATION†

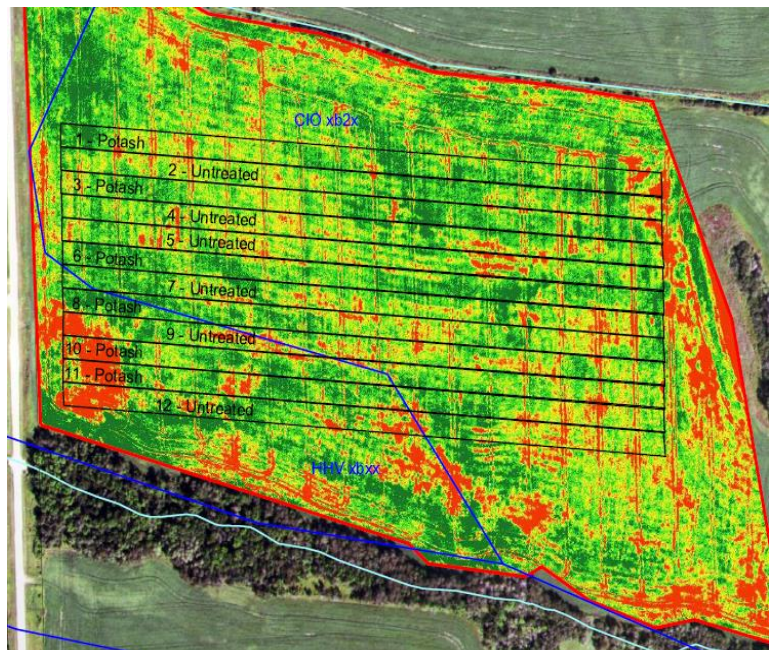
	May	June	July	Aug
<b>Rainfall</b>	22.4	51.3	74.8	42.3
<b>Normal</b>	64.5	98.8	89.1	65.3

† Growing season precipitation (mm)

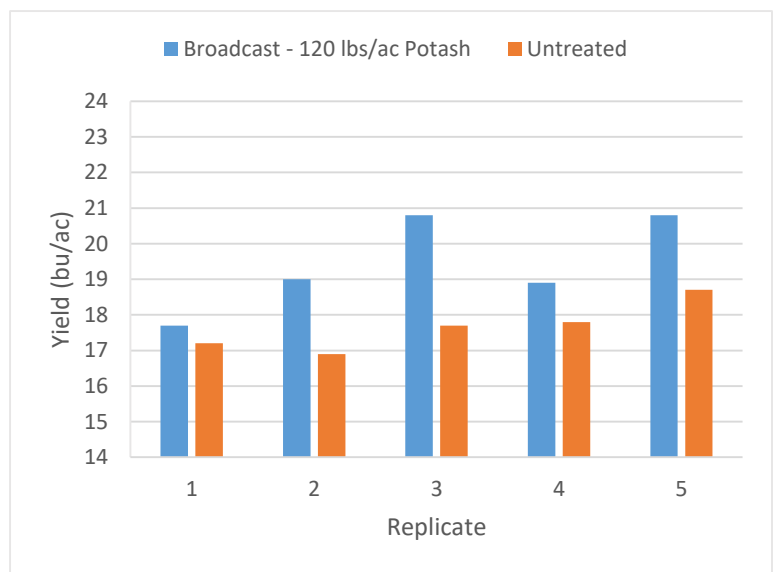
### OVERALL YIELD

	Mean (bu/ac)
<b>Broadcast – 120 lbs/ac Potash</b>	19.4
<b>Untreated</b>	17.6
<b>Yield Difference</b>	1.8
<b>P-Value</b>	0.0167
<b>CV</b>	7.4%
<b>Significance</b>	Yes

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was a significant yield difference of 1.8 bu/ac for potash fertilizer broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O compared to untreated check strips. The soil test K level was 87 ppm based on a composite soil sample before seeding. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.



## Soybean Potassium Trial

Trial ID: 2017-SK12 – R.M. of Dauphin

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was sideband at 60 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

### TRIAL INFORMATION

Treatment	Side Band – 60 lbs/ac K <sub>2</sub> O
Rural Municipality	Dauphin
Previous Crop	Canola
Soil Description	Calcareous Loamy Till
Tillage	Harrow
Planting Date	May 26, 2017
Variety	Akras R2
Row Spacing	10"
Seeding Rate	183,000 seeds/ac
Plant Stand @ V1	161,000 plants/ac
Harvest Date	October 13, 2017

### SOIL PROPERTIES†

Soil Test Sample Timing	Spring
Soil K Level	105 ppm

† Composite soil sample of the trial area before seeding at 0-6" depth

### PRECIPITATION†

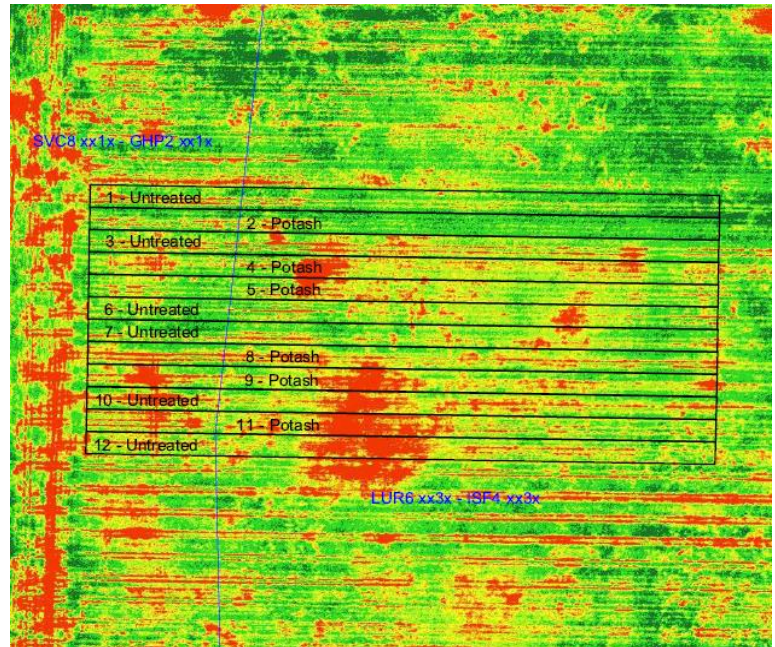
	May	June	July	Aug
Rainfall	47.6	65.8	90.6	19.3
Normal	52.9	81.7	73.1	61.3

† Growing season precipitation (mm)

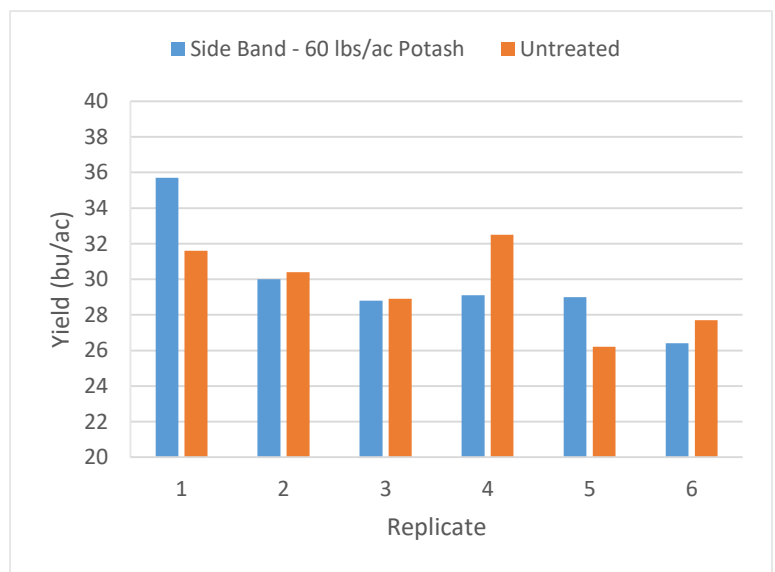
### OVERALL YIELD

	Mean (bu/ac)
Side Band – 60 lbs/ac Potash	29.8
Untreated	29.6
Yield Difference	0.2
P-Value	0.8103
CV	8.9%
Significance	No

### FIELD IMAGE



### STRIP YIELD



**Summary:** There was no significant yield difference between potash fertilizer side banded at 60 lbs/ac K<sub>2</sub>O and untreated check strips. The soil test K level was 105 ppm based on a composite soil sample before seeding. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.



## Soybean Potassium Trial

Trial ID: 2017-SK13 – R.M. of Alexander

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

TRIAL INFORMATION	
Treatment	Broadcast – 120 lbs/ac K <sub>2</sub> O
Rural Municipality	Alexander
Previous Crop	Corn
Soil Description	Shallow Organic Fen Peat
Tillage	Conventional
Planting Date	May 17, 2017
Variety	P006T46R
Row Spacing	10"
Seeding Rate	191,000 seeds/ac
Plant Stand @ V1	166,000 plants/ac
Harvest Date	October 7, 2017

SOIL PROPERTIES†	
Soil Test Sample Timing	Spring
Soil K Level	183 ppm

† Composite soil sample of the trial area before seeding at 0-6" depth

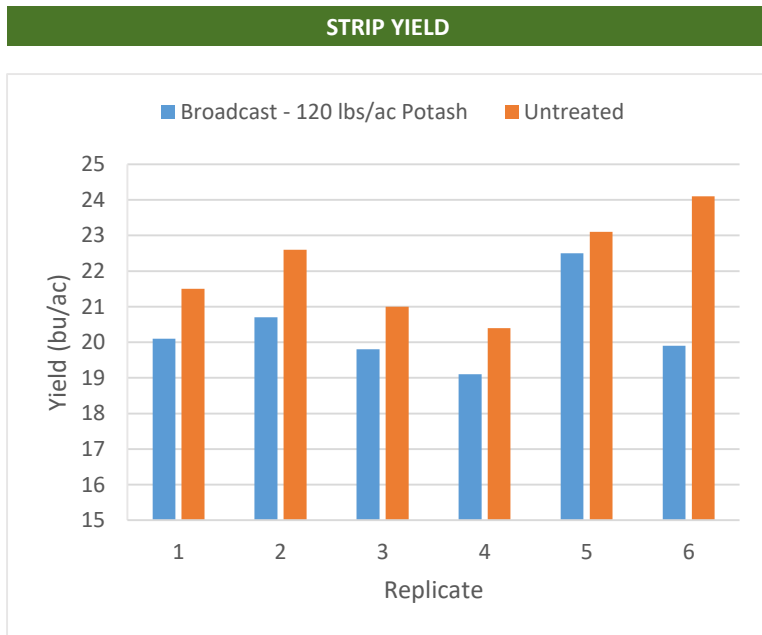
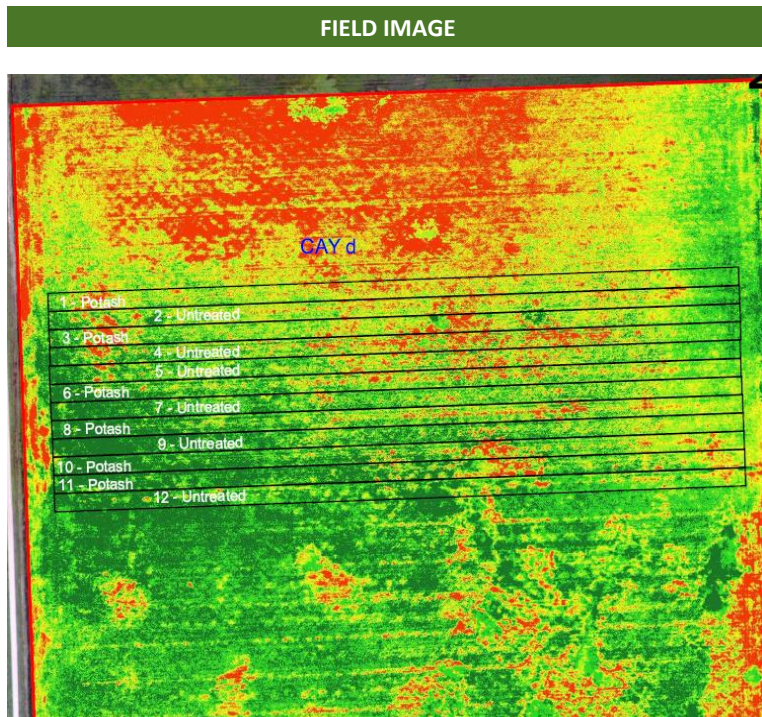
PRECIPITATION†				
	May	June	July	Aug
Rainfall	22.4	51.3	74.8	42.3
Normal	55.0	87.5	87.1	76.3

† Growing season precipitation (mm)

OVERALL YIELD	
	Mean (bu/ac)
Broadcast – 120 lbs/ac Potash	20.4
Untreated	22.1
Yield Difference	-1.7
P-Value	0.0187
CV	7.2%
Significance	Yes

**Summary:** There was a significant yield difference of -1.7 bu/ac for potash fertilizer broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and untreated check strips. The soil test K level was 183 ppm based on a composite soil sample before seeding. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.

MPSG would like to thank Agrium for providing the Potash for this trial.



## Soybean Potassium Trial

Trial ID: 2017-SK14 - R.M. of Hanover

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

TRIAL INFORMATION	
Treatment	Broadcast – 120 lbs/ac K <sub>2</sub> O
Rural Municipality	Hanover
Previous Crop	Canola
Soil Description	Sandy Lacustrine
Tillage	-
Planting Date	May 6, 2017
Variety	P009T22R2
Row Spacing	30"
Seeding Rate	165,000 seeds/ac
Plant Stand @ V1	145,000 plants/ac
Harvest Date	September 28, 2017

SOIL PROPERTIES <sup>†</sup>	
Soil Test Sample Timing	Spring
Soil K Level	114 ppm

<sup>†</sup> Composite soil sample of the trial area before seeding at 0-6" depth

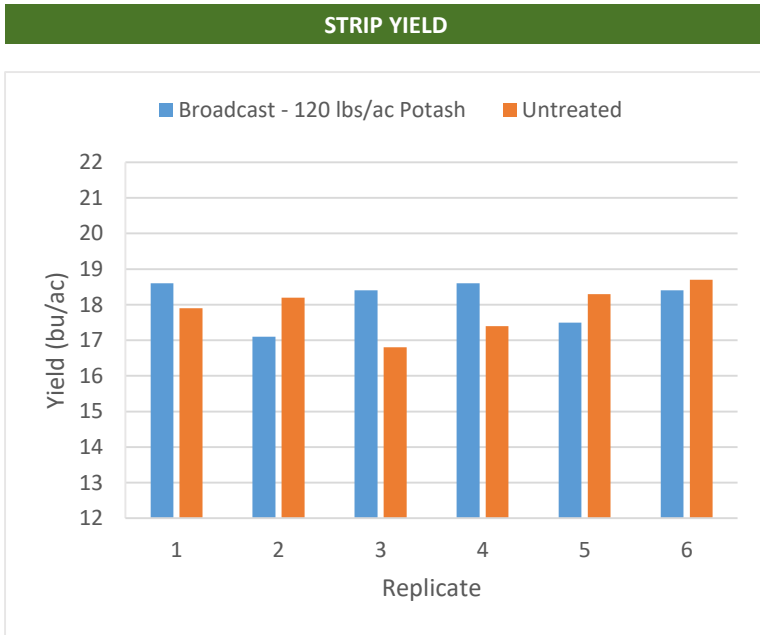
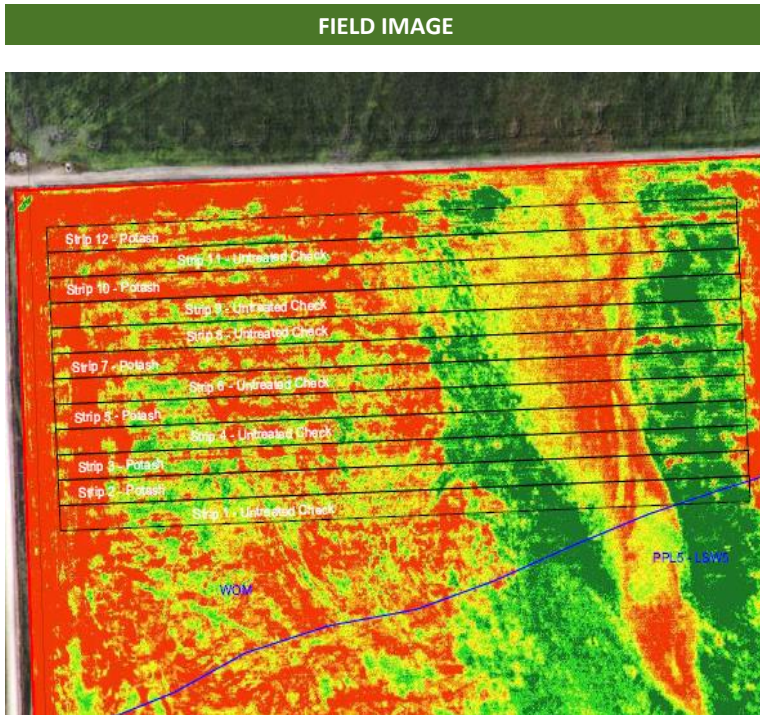
PRECIPITATION <sup>†</sup>				
	May	June	July	Aug
Rainfall	29.3	54.4	36.2	10.1
Normal	61.6	101.1	89.3	72.4

<sup>†</sup> Growing season precipitation (mm)

OVERALL YIELD	
	Mean (bu/ac)
Broadcast – 120 lbs/ac Potash	18.1
Untreated	17.9
Yield Difference	0.2
P-Value	0.6524
CV	3.6%
Significance	No

**Summary:** There was no significant yield difference between potash fertilizer broadcast and incorporated at 120 lbs/ac K<sub>2</sub>O and untreated check strips. The soil test K level was 114 ppm based on a composite soil sample before seeding. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.

MPSG would like to thank Agrium for providing the Potash for this trial.





## Soybean Potassium Trial

Trial ID: 2017-SK15 – R.M. of Dauphin

**Objective:** Quantify the agronomic and economic impacts of potassium fertilizer on soybean fields with <150 ppm soil test K in Manitoba. Potash was midrow band at 60 lbs/ac K<sub>2</sub>O and compared to untreated check strips.

TRIAL INFORMATION	
Treatment	Mid Row Band – 60 lbs/ac K <sub>2</sub> O
Rural Municipality	Dauphin
Previous Crop	Soybeans
Soil Description	Calcareous Loamy Till
Tillage	Heavy Harrow
Planting Date	May 24, 2017
Variety	Akras R2
Row Spacing	10"
Seeding Rate	210,000 seeds/ac
Plant Stand @ V1	146,000 plants/ac
Harvest Date	October 13, 2017

SOIL PROPERTIES†	
Soil Test Sample Timing	Spring
Soil K Level	139 ppm

† Composite soil sample of the trial area before seeding at 0-6" depth

PRECIPITATION†				
	May	June	July	Aug
Rainfall	47.6	65.8	90.6	19.3
Normal	52.9	81.7	73.1	61.3

† Growing season precipitation (mm)

OVERALL YIELD	
	Mean (bu/ac)
Midrow Band – 60 lbs/ac Potash	38.5
Untreated	38.1
Yield Difference	0.4
P-Value	0.4836
CV	8.6%
Significance	No

**Summary:** There was no significant yield difference between potash fertilizer mid row banded at 60 lbs/ac K<sub>2</sub>O and untreated check strips. The soil test K level was 139 ppm based on a composite soil sample before seeding. This study is apart of a more detailed University of Manitoba small plot study which compares multiple rates and placements of potash fertilizer in soybeans. Potassium fertilization recommendations will not be made until this study is complete in 2018.

MPSG would like to thank Agrium for providing the Potash for this trial.

