Hybrid Fall Rye Fertility and Seed Rate

Project duration – September 2016 – August 2017
Objectives – To study different fertility and seed rates on varieties Brasetto and Bono
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Results

The average grain yield by variety and the mean yield for all varieties are provided in Figure 1.

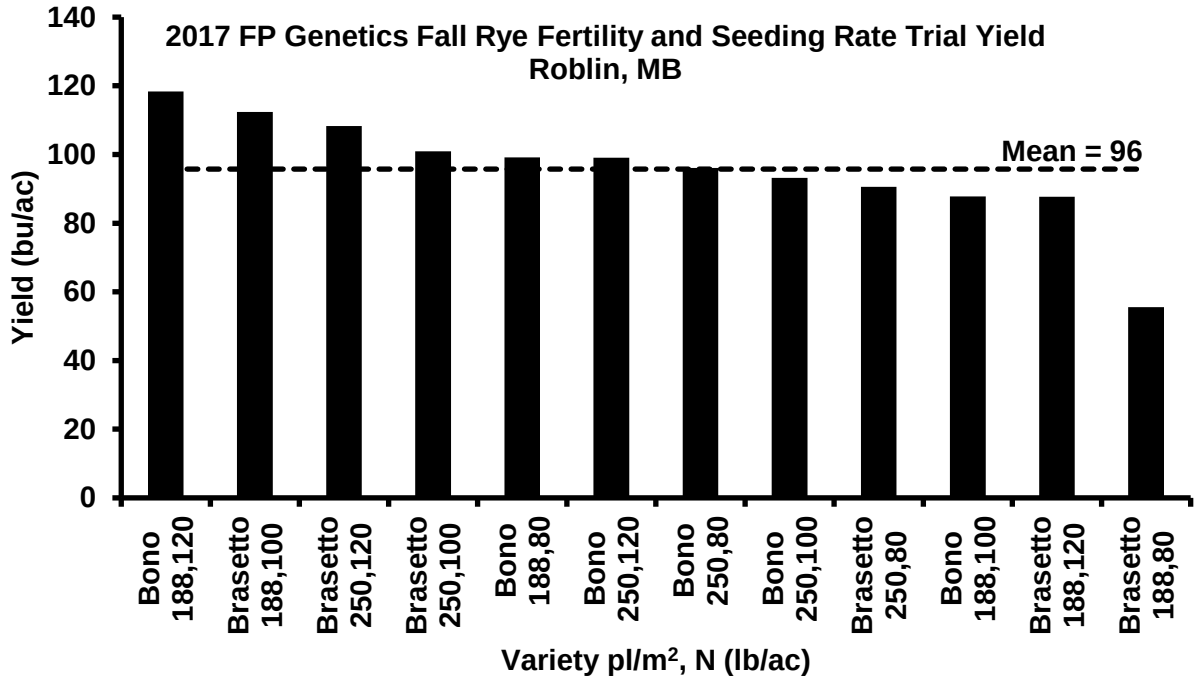

Figure 1. Average hybrid fall rye yield, Roblin, 2017

Project findings

Good soil moisture at seeding and a mild winter, as well as good early-season moisture in 2017, provided excellent growing conditions for fall rye. Dry growing conditions resulted in relatively low incidence of disease, and appeared to hasten maturity. Ripening was more uniform, as compared to open-pollinated (non-hybrid) varieties. The yield results for Roblin 2017 represent only one site year, and should not be used to draw broader conclusions.

Background/References/Additional Resources

The better lodging resistance and more even maturity and height of hybrid fall rye offers many benefits to growers as compared to open-pollinated varieties. This includes a ready market for the high quality bread flour it produces. An improved understanding of seeding and fertility rates will increase producers' ability to capitalize on fall rye production.

Brassetto Fact Sheet
http://fpgenetics.ca/quadrant/media/Fact%20Sheets/BRASETTO_2017.pdf
Bono Fact Sheet
http://fpgenetics.ca/quadrant/media/Fact%20Sheets/KWS_BONO_2017.pdf

Materials & Methods

Experimental Design: Split plot (see Table 1)
Treatments: 2 seeding rates x 2 varieties x 3 fertility rates
Seeding: September 19, 2016
Harvest: August 30, 2017

Table 1: Treatments

Variety	Bono						Brasetto					
Seeding Rate (pl/m2)	188			250			188			250		
Nitrogen Rate (lb/ac)	80	100	120	80	100	120	80	100	120	80	100	100

Data collected and date collected

Spring emergence: April 12
Spring plant counts: May 10
Days to maturity: 121 days
Height: August 25
Grain moisture:
Yield:

Agronomic info

Previous year's crop: Oat barley silage
Soil type: Erickson Loam Clay
Landscape: Rolling with trees to the east
Seedbed preparation: Heavy harrowed twice

Table 2: Fall 2016 Soil Test

	Available
N	42 lb/ac
P	26 ppm
K	302 ppm
S	46 lb/ac

Table 3: Added P and S

Blend	Blend (actual lbs/ac)	Actual lbs N	Actual lbs P	Actual lbs K	Actual lbs S
11-52-0-0	28.8	3.17	15	-	-
21-0-0-24	20.83	4.37	-	-	5
Total		7.54	15	0	5

Banded with seed

Table 4: Added N

Treatment	Target N	Available N lbs/ac	From other sources lbs/ac	Actual N lbs/ac	Blend 46-0-0 lbs/ac
1	100	42	7.54	30.46	66.22
2	120	42	7.54	50.46	109.70
3	120	42	7.54	70.25	153.17

Table 5: Pesticide Application

Stage	Date	Product	Rate
Pre-Emerge	September 12	Roundup WeatherMax	0.67 L/ac
In-crop	-	-	-
Desiccation	August 11	Roundup Transorb	0.67 L/ac