

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 K₂O and compared to untreated check strips.

TRIAL INFORMATION

Treatment	Broadcast – 120 lbs/ac K ₂ 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[†]

Soil Test Sample Timing	Spring
Soil K Level	107 ppm

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

PRECIPITATION[†]

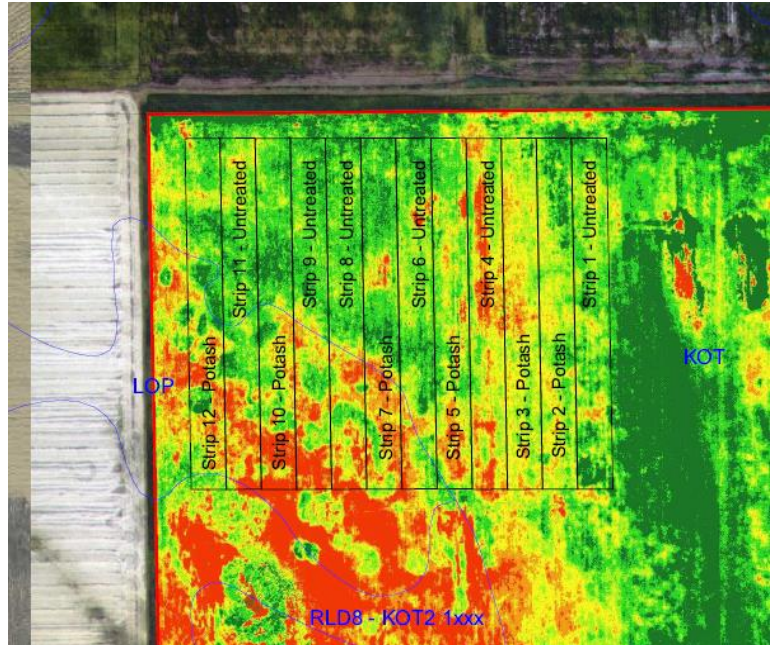
	May	June	July	Aug
Rainfall	28.3	70.8	23.9	14.1
Normal	57.5	84.1	76.5	74.5

[†] Growing season precipitation (mm)

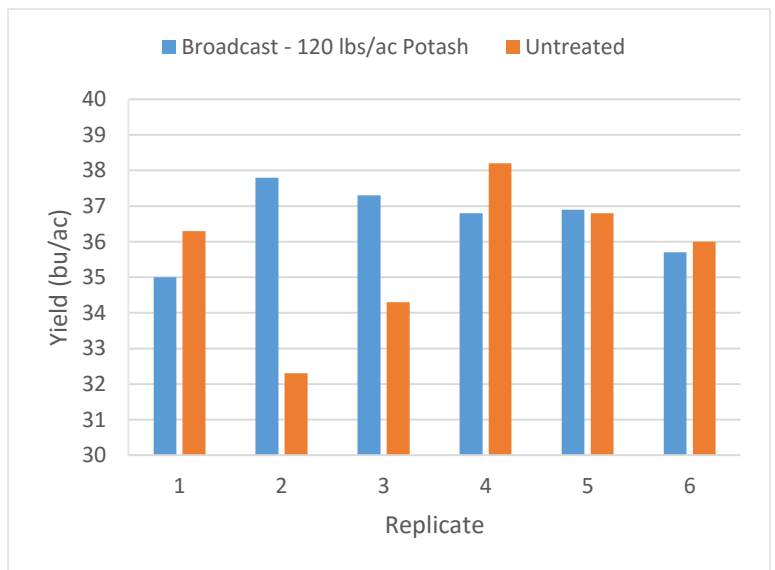
OVERALL YIELD

	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 – AUG. 29, 2017



STRIP YIELD



Summary: There was no significant yield difference between potash fertilizer broadcast and incorporated at 120 lbs/ac K₂O and untreated check strips. The soil test K level was 107 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.