

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 K₂O and compared to untreated check strips.

TRIAL INFORMATION

Treatment	Mid Row Band – 60 lbs/ac K ₂ 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[†]

Soil Test Sample Timing	Fall
Soil K Level	52 ppm

[†] Composite soil sample of the field in the fall at 0-6" depth

PRECIPITATION[†]

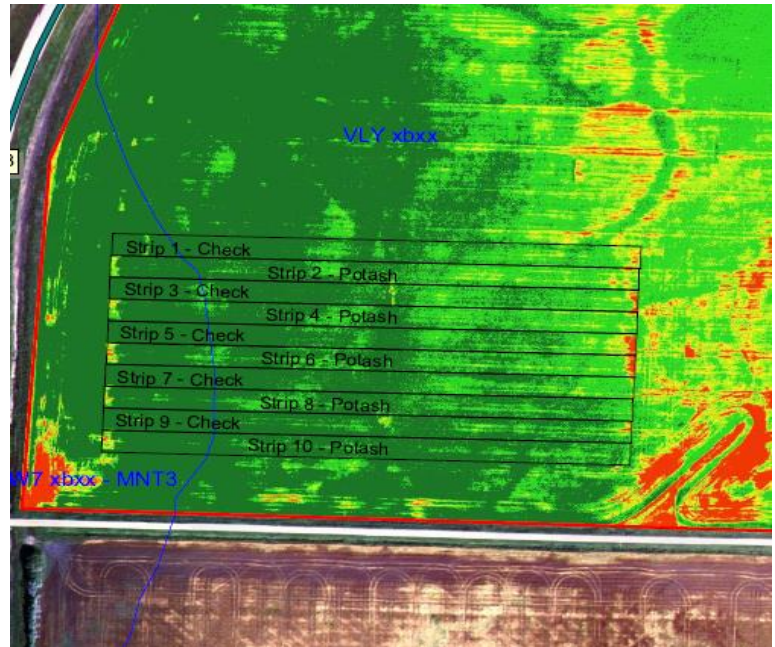
	May	June	July	Aug
Rainfall	32.2	43	51.4	38.7
Normal	50.7	85.4	95.6	76.8

[†] Growing season precipitation (mm)

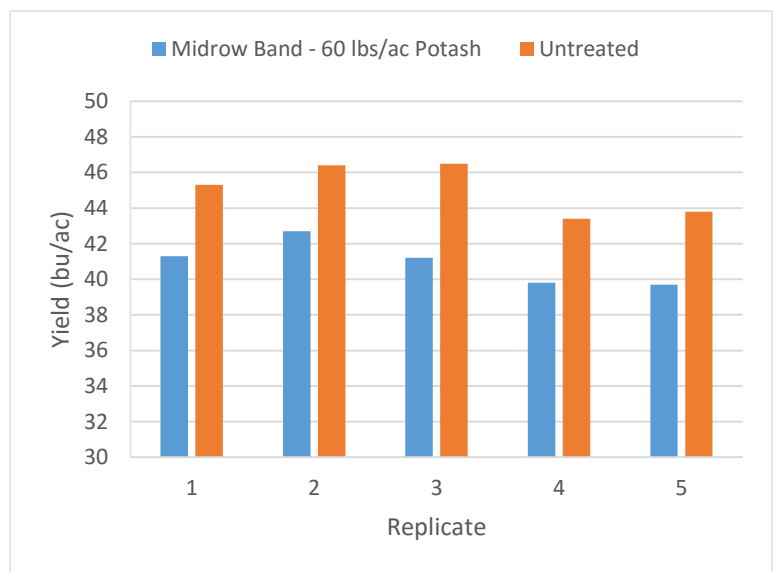
OVERALL YIELD

	Mean (bu/ac)
Midrow Band – 60 lbs/ac Potash	40.9
Untreated	45.1
Yield Difference	-4.2
P-Value	0.0002
CV	5.9%
Significance	Yes

FIELD IMAGE – AUG. 16, 2017



STRIP YIELD



Summary: There was a significant yield difference of -4.1 bu/ac for potash fertilizer mid row banded at 60 lbs/ac K₂O 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 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.