

Soybean Potassium Fertility Trial

Trial ID: 2018-SK01 – 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 applied in a band application in the spring at 60 lbs/ac K₂O and compared to an untreated check.

TRIAL INFORMATION	
Treatment	Band application – 60 lbs K ₂ O/ac
Rural Municipality	Portage la Prairie
Previous Crop	Soybeans
Soil Description	Very Fine Sandy Loam
Tillage	Vertical Till
Planting Date	May 29, 2018
Variety	Dugaldo
Row Spacing	15"
Seeding Rate	---
Plant Stand @ V1	101,000 plants/ac
Harvest Date	October 21, 2018

SOIL PROPERTIES [†]	
Soil Test Sample Timing	Spring
Soil K Level	76 ppm

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

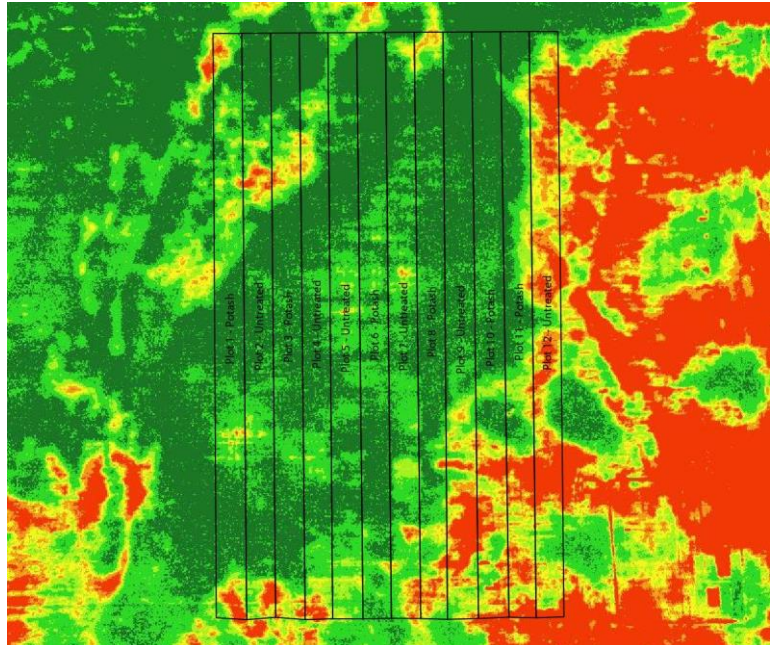
PRECIPITATION [†]				
	May	June	July	Aug
Rainfall	22	110	39	19
Normal	50	79	71	69

[†] Growing season precipitation (mm)

OVERALL YIELD	
	Mean (bu/ac)
Broadcast – 120 lbs/ac Potash	40.8
Untreated	36.0
Yield Difference	4.8
P-Value	0.0168
CV	9.1%
Significance	Yes

Summary: There was a significant yield difference of 4.8 bu/ac to a band application of potash applied immediately before seeding compared to an untreated check strip. Visual potassium deficiency symptoms were observed in season in the untreated check strips. A spatial analysis of the data by soil zone is recommended to determine if there is a response to potash fertilizer by soil texture.

NDVI FIELD IMAGE – AUGUST 13, 2018



STRIP YIELD

