



Polysulphate
Trial

Potato
(*Solanum tuberosum*)
on a sandy loam soil

Polysulphate fertilizer is a soluble, easily-absorbed, cost-effective answer to crop nutrition, containing four key plant nutrients: sulfur, potassium, magnesium and calcium.

S 19.2% S

K 14% K₂O

Mg 3.6% Mg

Ca 12.2% Ca



When

Planting Date:
May 14, 2021
Harvest Date:
September 21, 2021



Where

Manitoba, Canada



Crop

Potato
(*Solanum tuberosum*)



Soil type

Sandy loam



Measurements

Yield
French fry quality
after 150 days in
storage

Objective

To investigate the effect of Polysulphate fertilizer as a nutrient source for production of Russet Burbank potatoes, and the influence of Polysulphate on French fry characteristics after 150 days of tuber storage. An additional objective of this study was to understand the availability of secondary macronutrients (Ca, Mg, and S) when applied with other fertilizer sources.

Treatments

All treatments received 200 lb N, 145 lb P₂O₅, and 250 lb K₂O per acre. The grower standard practice (GSP) included urea, MOP, MAP, and ammonium sulfate. Calcium was supplied as gypsum in treatments 5 & 7, while potassium magnesium sulfate was used to provide Mg to treatments 6 & 7. Treatments were evaluated in a randomized complete block design with four replications. Only treatments 1 and 8 are included in the summary.

Results

- All three treatments including Polysulphate had the highest yields and lowest tuber glucose concentration.
- Polysulphate applied at 350 lb/A + grower standard practice N, P, and K increased total tuber yield by 16 cwt/A over the grower standard practice (GSP) alone and had the lightest fry color of all evaluated treatments.
- Tuber glucose concentration decreased by 0.034 percentage points, and mean fry color decreased by 0.28 rating units compared to the grower standard practice (GSP).

Mined in the UK, ICL is the first – and only – producer in the world to mine polyhalite, marketed as Polysulphate.



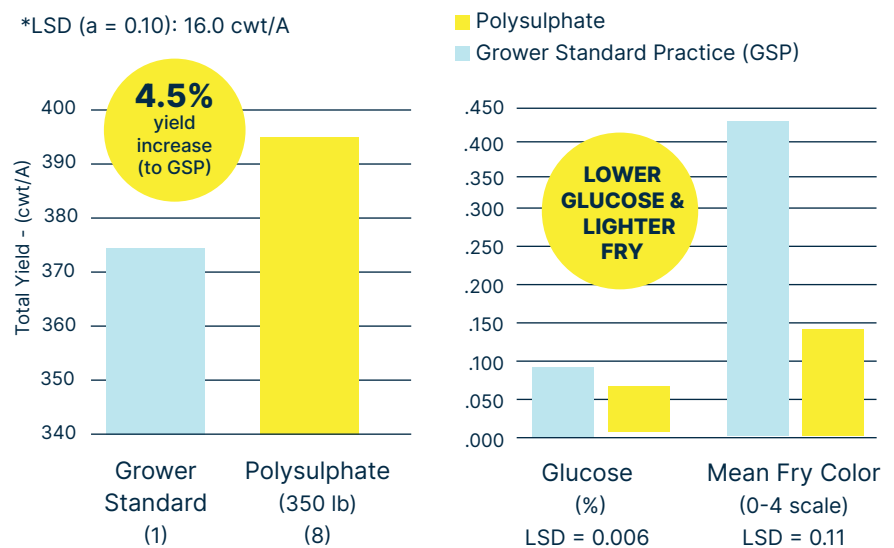
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For more information consult
www.polysulphate.com/us/contact/
for your contact in your region.

*LSD (a = 0.10): 16.0 cwt/A



Conclusion

Potato growers manage for both tuber yield and quality. This study demonstrated that balanced nutrition plays a critical role in both increasing yield and quality factors for French fry providers.