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% K_2O
Mg	3.6% Mg
Ca	12.2% Ca

ICL

When

Planting Date:
May 12, 2021
Harvest Date:
September 15, 2021

Where

Entrican, Michigan
USA (Michigan State University)

Crop

Potato
(Solanum tuberosum)

Soil type

Sandy loam

Measurements

Total tuber yield

Objective

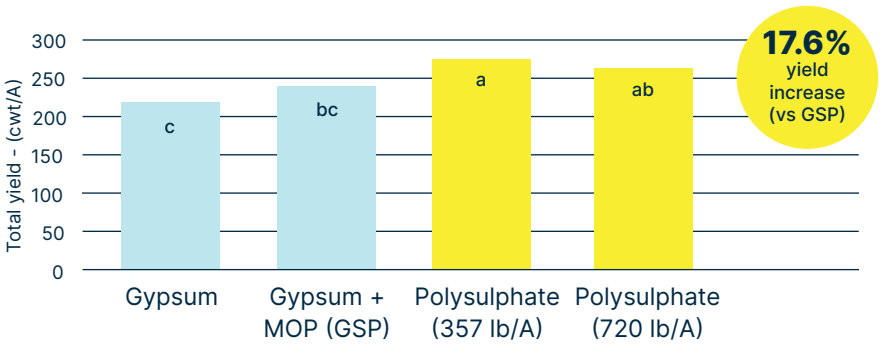
To investigate the effect of Polysulphate fertilizer as a nutrient source for production of 'Lamoka' potatoes in comparison to a grower standard practice consisting of gypsum (calcium sulfate) and MOP.

Treatments

All treatments received 244 lb N, 79 lb P_2O_5, and 200 lb K_2O per acre. The grower standard practice (GSP) included gypsum (1000 lb/A) and MOP (323 lb/A). A gypsum only treatment was included for comparison. Granular Polysulphate was applied at rates of either 357 or 720 lb per acre with the remaining potassium requirement supplied with MOP. The treatments were evaluated in a randomized complete block design with four replications.

Results

- Polysulphate application increased total tuber yield compared to the grower standard practice (GSP), even with greater total calcium and sulfur contributed by gypsum.
- Polysulphate at 357 lb/A resulted in a 17.6% increase that was statistically significant.



**Different letters in bars indicate significant differences (a=0.10)*

Conclusion

- This study demonstrates that nutrient source is important for optimizing potato yield and fertilizer return-on-investment.
- Despite containing 189 lb/A less Ca and 117 lb/A less S compared to the application rate of gypsum used, Polysulphate increased yield compared to the grower standard practice.
- This outcome improves grower profitability through both increased yield as well as potentially reduced fertilizer cost per acre.

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

Polysulphate

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