



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.

<b>S</b>	19.2% S
<b>K</b>	14% K <sub>2</sub> O
<b>Mg</b>	3.6% Mg
<b>Ca</b>	12.2% Ca



### When

Planting Date:  
April 25, 2021  
Harvest Date:  
September 12, 2021



### Where

Marshall, Michigan  
USA (Mid-Michigan  
Agronomy)



### Crop

Potato  
(*Solanum tuberosum*)



### Soil type

Oshetemo sandy loam



### Measurements

Tuber yield & quality



## Objective

Evaluate performance of Polysulphate fertilizer on potatoes when applied at planting compared to the grower standard practice on tuber yield and quality in Michigan on a sandy loam.

## Treatments

Grower standard practice (GSP) consisted of 10 gallons of 10-34-0 + 360 lbs of pelletized Gypsum (Pel Gyp) in-furrow at planting and MOP applied preplant. Polysulphate treatment consisted of the GSP with either 360 or 720 lbs/acre of Polysulphate with the amount of CaSO<sub>4</sub> and MOP being adjusted to match total applied K<sub>2</sub>O across all treatments. Treatments were evaluated in a randomized complete block design with six replications. Trials were planted in the same field with a long crop rotation to replicate regional grower standard practice for Manistee chips.

## Results

- Polysulphate application increased total tuber yield and quality compared to the grower standard practice (GSP)
- Polysulphate at 320 lbs/A resulted in a 22.1% increase in #1s and 14.2% increase in total yield, improving farm gate economics and storage potential for processors.

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

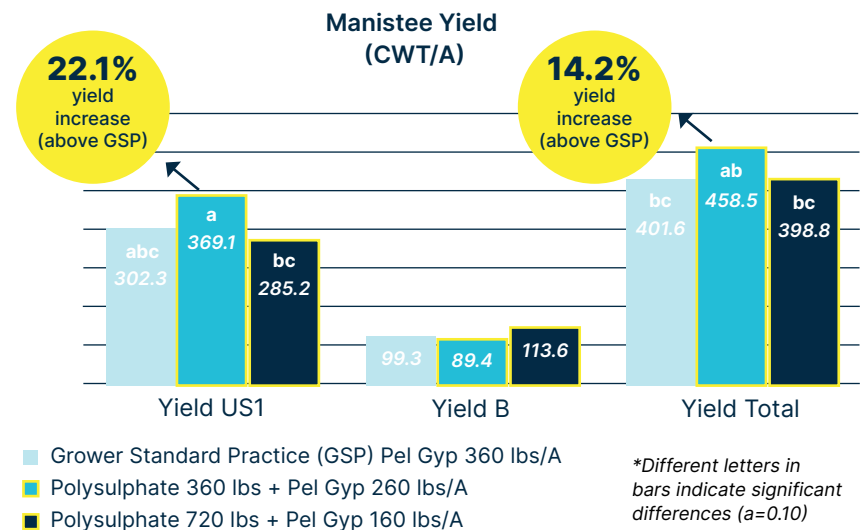


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## Conclusion

- Compared to GSP, Polysulphate (320 lbs/a) increases quality and yield on Manistee potatoes for enhanced grower profitability, including longer term storage for chip processing.
- Balanced fertility by potato variety and farm cropping history should be considered for positive economics.