



Polysulphate  
Trial

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

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

<b>S</b>	48% SO <sub>3</sub> (19.2% S)
<b>K</b>	14% K <sub>2</sub> O (11.6% K)
<b>Mg</b>	6% MgO (3.6% Mg)
<b>Ca</b>	17% CaO (12.2% Ca)



### When

- Planting:  
26<sup>th</sup> June 2018
- Harvest:  
14<sup>th</sup> November 2018



### Where

Nakuru, Kenya



### Crop

Potato  
(var. Markies)



### Soil type

Red loam soil



### Measurements

- Yield
- Grading



## Objective

To investigate the efficiency of Polysulphate as a sulfur source which also includes potassium, magnesium, and calcium, and to compare it with the farmers' practice which uses ammonium sulfate nitrate as a source of sulfur for potato crops.

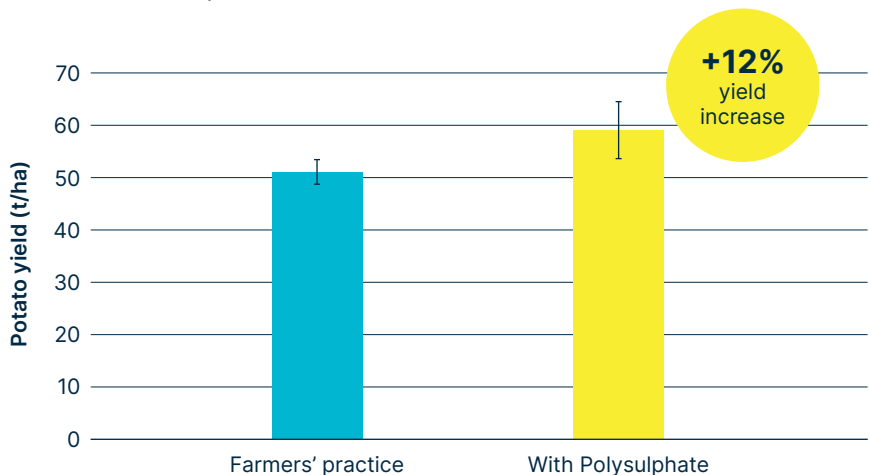
## Treatments

The trial utilized a randomized block design, with 2 treatments and 4 repetitions. The nitrogen and phosphorus applications were maintained at 121 kg N/ha and 92 kg P<sub>2</sub>O<sub>5</sub>/ha in both of the fertilizer treatments.

Treatment	Fertilizer	Dose (kg/ha)	Application	SO <sub>3</sub> (kg/ha)	K <sub>2</sub> O (kg/ha)	Mg (kg/ha)	Ca (kg/ha)
Farmers' practice	DAP	200	At planting	41.2	0	0	32.2
	ASN	150	At planting				
	ASN	150	Top dressing				
	CN + boron	125	Top dressing				
Polysulphate	DAP	200	At planting	62.5	14.5	7.5	21.4
	Urea	80	At planting				
	Polysulphate	125	At planting				
	Urea	106	Top dressing				

## Results

- The application of Polysulphate increased the tuber yield by 12% compared with the farmers' practice
- The distribution of tuber size was similar in both treatments
- The Polysulphate treatment reduced fertilizer costs by 23%
- Polysulphate increased the net income by 13.1% compared with the farmers' practice



\* Bars indicate SE

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



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