Polysulphate

Trial

- S — 48% SO_3 (19.2% S)
- K — 14% K_2O (11.6% K)
- Mg — 6% MgO (3.6% Mg)
- Ca — 17% CaO (12.2% Ca)

Cauliflower *(Brassica oleracea var. botrytis)* on a sandy clay 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

ICL Fertilizers

Polysulphate

When

- Sowing: October 2013
- Harvest: March 2014

Where

Hessaraghatta, Karnataka, India

Crop

Cauliflower *(Brassica oleracea* var. *botrytis)* cv. Unathi

Soil type

Sandy clay loam (Typic haplustepts)

Measurements

- Yield
- Quality
- Growth parameters
- Nutrient uptake

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

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

www.polysulphate.com

Polysulphate

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Fertilizerplus
Premium plant nutrition from ICL Fertilizers

Objective

To test the efficacy of Polysulphate as a sulphur source on the performance of cauliflower crop in India.

Treatments

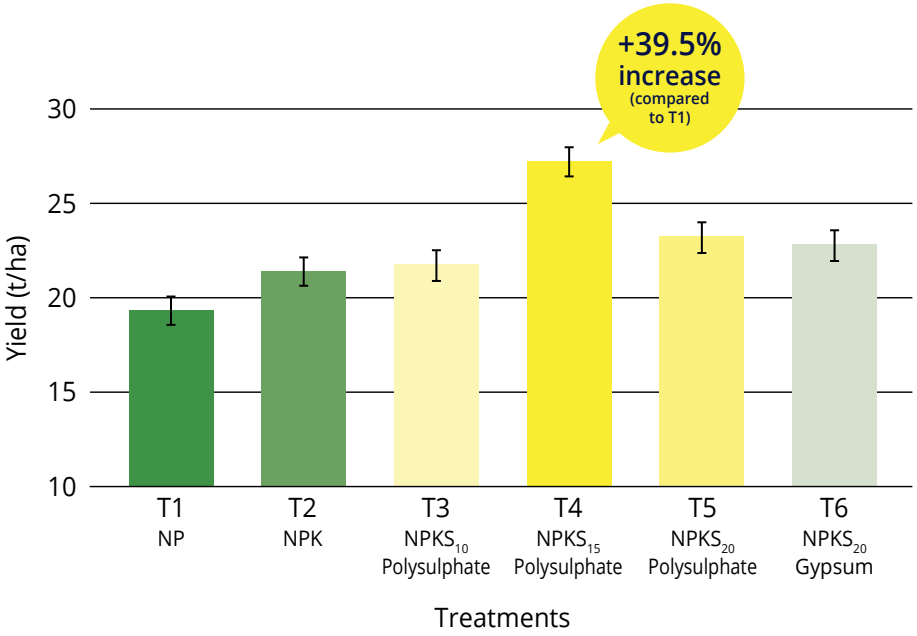
The experiment was laid out in a randomized block design with three replicates and included six treatments:

- T1: Control without S and K fertilization (100% NP through urea and DAP only)
- T2: 100% NPK (urea, DAP, Muriate of Potash (MOP))
- T3: 100% NP + 50% S through Polysulphate (10 kg S ha^{-1}) (balanced K through MOP to make 100% K)
- T4: 100% NP + 75% S through Polysulphate (15 kg S ha^{-1}) (balanced K through MOP to make 100% K)
- T5: 100% NP + 100% S through Polysulphate (20 kg S ha^{-1}) (balanced K through MOP to make 100% K)
- T6: 100% NPK (urea, DAP, MOP) + 100% S through gypsum (20 kg S ha^{-1})

The recommended dose of fertilizers: 150 kg N, 100 kg P_2O_5, 125 kg K_2O ha^{-1} and 20 kg S ha^{-1} was applied as per the treatments. Farm yard manure (FYM) was also applied at 25 t ha^{-1} in the last plough.

Results

- S application significantly contributed to increased yield and quality (curd diameter and compactness at harvest) of cauliflower.
- S application in the form of Polysulphate, up to 75% of the recommended S dose (T4), enhanced plant growth and development, improving plant height and number of leaves.
- N, K, Ca, and S uptake by cauliflower crop was highest when S was applied in the form of Polysulphate, up to 75% of the recommended S dose (T4).
- The highest yield was obtained with a full dose N-P-K and 75% S dose delivered through Polysulphate (T4), which gave rise to 39.5% increase in the yield of cauliflower, compared to the non-fertilized control (T1).



Bars indicate LSD at P<0.05.

** From research funded by the International Potash Institute www.ipipotash.org.*