Polysulphate®

Trial

Black pepper
(Piper nigrum L.) on an acidic soil

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

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)

ICL

Fertilizerplus®
Premium plant nutrition from ICL Fertilizers

When

- January 2016
- December 2017

Garden planted in 2012

Where

Gia Lai province, Central Highlands, Vietnam

Crop

Black pepper *(Piper nigrum L.)*

Soil type

Acidic reddish brown soil

Measurements

- Yield and quality
- Vegetative growth
- Diagnostic leaves
- Mealybugs infestation

Objective

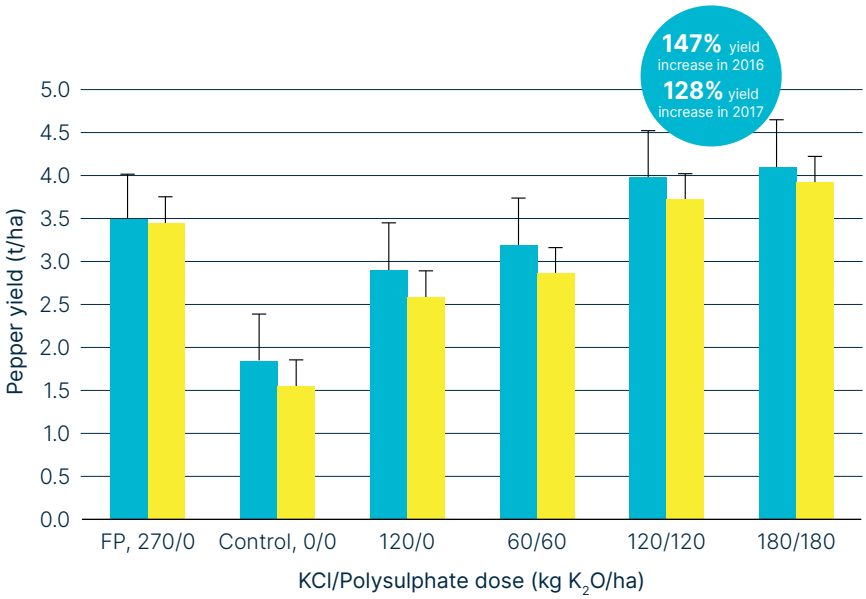
To evaluate the effectiveness of Polysulphate as a supplementary fertilizer on black pepper performance, yield, quality, and economic efficiency under the conditions of the Central Highlands of Vietnam.

Treatments

The experiment was set according to a randomized complete block design (RCBD) with four replications. Polysulphate was examined in combination with MOP (KCl), in equal proportions, to provide doses of 120, 240 and 360 kg K_2O/ha/yr, split into six applications during the year. These treatments were compared to doses of zero (control), 120, and 270 (farmers' practice) kg K_2O/ha applied solely as MOP. Standard N and P fertilizers were applied in all treatments.

Results

- Fruit weight, volume and density increased with Polysulphate application combined with MOP, while fruit shedding rates reduced.
- Elongation of primary branches and number of secondary branches increased with Polysulphate application combined with MOP, while premature fruit abscission dramatically reduced.
- The combined MOP and Polysulphate applications significantly reduced mealybug infestation.
- Plants supplied with combined MOP and Polysulphate showed increased levels of leaf K, S, Ca, and Mg as compared with the unfertilized control.
- Combined MOP and Polysulphate applied at the doubled dose (240 kg K_2O/ha) gave rise to the best crop performance and to the highest yield, produce quality, and profit.



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

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

Polysulphate

fertilizers.sales@icl-group.com
icl-growingsolutions
@iclgrowingsolutions
@ICLGrowingSolutions

http://icl-growingsolutions.com

For more information consult http://icl-growingsolutions.com/contact-office/ for your contact in your region.