Polysulphate® Trial

Lettuce
(Lactuca sativa)
on perlite

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

Objective
To evaluate Polysulphate as calcium source for lettuce, using a greenhouse soilless production system.
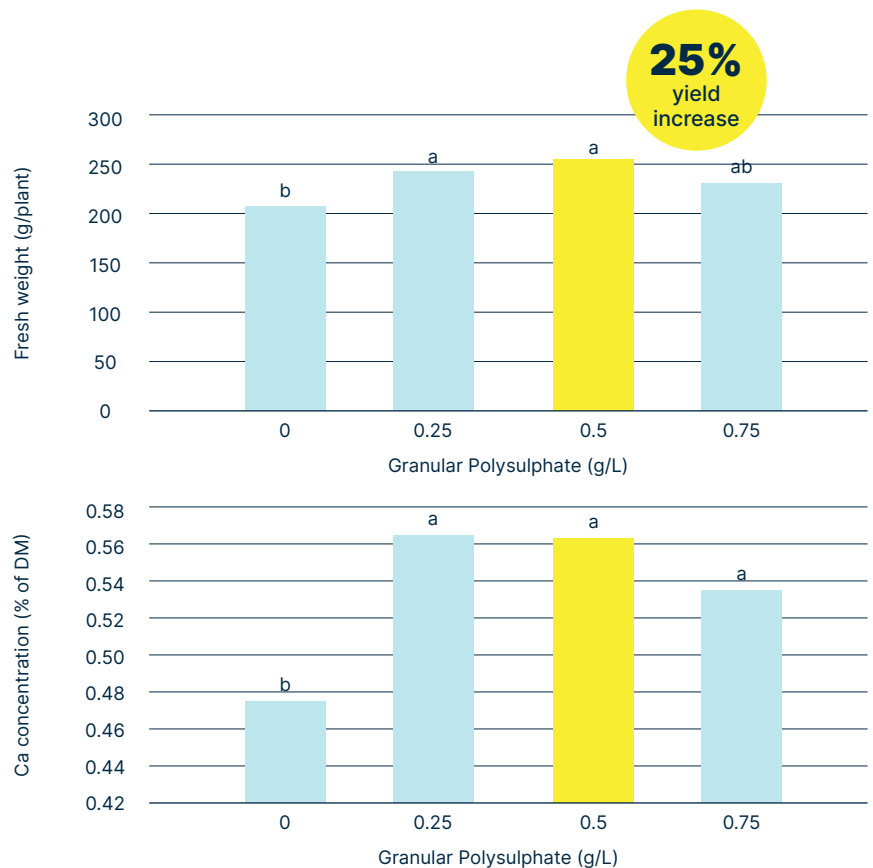
Treatments
The experiment was designed in complete random blocks, with six replicates consisting of five pots each. Plants were grown under controlled greenhouse conditions in 4 L pots filled with perlite. Treatments included four rates of granular Polysulphate: 0 (control), 0.25, 0.50, and 0.75 g/L that were thoroughly mixed with the perlite before planting.

Water used for irrigation was desalinated using reverse osmosis to a level of 0.6 mEq Ca/L. Plants in all treatments were fertigated throughout the experiment with NPK 5:3:8 + $MgSO_4$. Irrigation was scheduled three times a day for 10 minutes per irrigation (approx. 1 L/day).

Results
- Polysulphate application significantly increased lettuce fresh and dry biomass, adding up to 25% to the fresh weight of the plants.
- Ca and S concentrations in the leaves were significantly higher with Polysulphate application, but no response was observed to the nutrient dose.
- Polysulphate application can ensure enough available Ca to satisfy lettuce requirements and guarantee high produce quality.

25% yield increase

Similar letters indicate no significant differences between treatments at p <0.05.