



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.

S 48% SO₃
(19.2% S)

K 14% K₂O
(11.6% K)

Mg 6% MgO
(3.6% Mg)

Ca 17% CaO
(12.2% Ca)



When

Planting:
January 2022
Harvest:
June 2022



Where

La Rinconada, Sevilla,
Spain



Crop

Potato
(*Solanum tuberosum*),
var. Annabelle



Soil type

Sandy loam



Measurements

- Crop height
- NDVI
- Yield
- Quality

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

Polysulphate



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

Objective

To investigate the effectiveness of Polysulphate as a sulfur source for potato crops. In this trial, Polysulphate, which includes sulfur, potassium, magnesium, and calcium is compared with two local farmers' practices that either don't include sulfur or use iron sulfate as the source of sulfur.

Treatments

The trial consisted of 4 treatments and 4 repetitions, in a randomized block design. In the three treatments which received fertilizers, the nitrogen, phosphorus, and potassium applications were maintained at 200 kg N/ha, 110 kg P₂O₅/ha and 275 kg K₂O/ha

Treatment	Fertilizer	Dose (kg/ha)	SO ₃ (kg/ha)	Application
No fertilizer	-	-	-	-
Farmers' practice, Blend without iron sulphate	9-18-27	600	-	Basal
	KCl	190	0	Basal
	NAC	540	-	Spit
Farmers' practice, Blend with iron sulfate	5-10-25	1,100	-	Basal
	NAC	540	127	Spit
Blend with Polysulphate	Polysulphate	1,375	-	Basal
	NAC	500	385	Top dress

Results

- The treatment with Polysulphate resulted in the highest crop height
- The application of Polysulphate resulted in the greatest tuber yield (7.6% greater than the control treatment)
- No differences were observed between the treatments in quality parameters (dry matter and starch content)
- Polysulphate increased the net income by 6.3% as compared with the farmers' practice without iron sulphate application, and by 5.5% as compared with the farmers' practice treatment with iron sulfate.

