Fertilizing Potatoes *(Solanum tuberosum)*

with Polysulphate

Polysulphate

www.polysulphate.com

Main features of Polysulphate fertilizer

- Ideal multinutrient sulphur fertilizer with 48% SO_3 plus potassium (14% K_2O), magnesium (6% MgO) and calcium (17% CaO), all in sulphate form.
- Reduced risk of early season sulphate loss through leaching due to its prolonged nutrient release pattern.
- Fully soluble, with all nutrients available for plant uptake during the growth period.
- Excellent spreading characteristics; spreads evenly and accurately in the field up to 36 m.
- Low chloride, very low salinity index, neutral pH, no liming effect.
- Natural mined mineral (polyhalite) approved for organic agriculture.
- UK produced fertilizer with a low carbon footprint.

Functions of S, K, Mg and Ca in potato crops

- Sulphur is an essential constituent of proteins: it is required for the synthesis of three of the amino acids which make up true proteins. Necessary for high nitrogen use efficiency.
- Potassium secures yield and quality, transport of sugars, stomatal control and is a co-factor of many enzymes. It reduces susceptibility to plant diseases and the impact of drought, and is essential for efficient use of nitrogen.
- Magnesium is fundamental for photosynthesis, being a central part of chlorophyll molecule.
- Calcium for strong and healthy crops; it is a major building block in cell walls and reduces susceptibility to diseases. Soluble calcium is important for skin finish.

Practical guidelines for fertilising potatoes with Polysulphate fertilizer

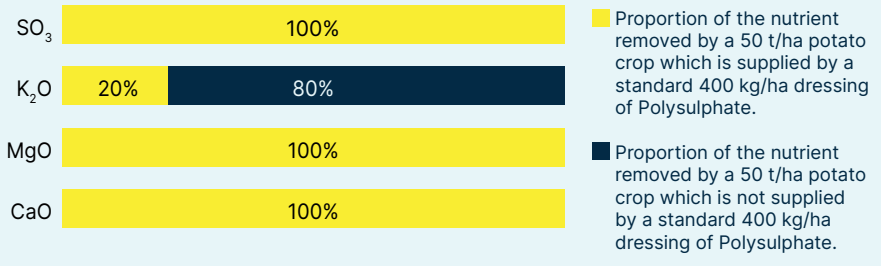
- Low-chloride Polysulphate is a sulphate-based source of water soluble potassium, magnesium and calcium, supplying all of the sulphur, magnesium and calcium needed, and a significant proportion of the potash removed at harvest, without affecting the soil pH.
- Potatoes remove very large amounts of potassium at harvest and the proportion not supplied by Polysulphate can be applied as muriate of potash, ploughed or worked into the soil a month or two before planting. This allows unwanted chloride to move down through the soil with rainfall, and away from the roots of the potato plant.
- 400 kg/ha Polysulphate is generally a suitable dressing for potatoes. Incorporate straight Polysulphate into the seedbed before planting, or apply it as a constituent of a fertilizer blend at planting.
- The prolonged release characteristic of Polysulphate means that as the four macronutrients it contains are released they provide a continuing fresh source to the growing crop.

Estimated nutrient offtakes (removal) by potatoes

Nutrient	Offtakes (kg/t)	Offtakes (kg/ha)
	Potato tubers	50 t/ha potato tubers
K_2O	5.8	290
K	4.8	240
MgO	0.4	20
Mg	0.25	12
CaO	0.5	25
Ca	0.35	17

Sources: UK Fertiliser Manual, PDA and UNIFA

Guideline proportions of nutrients supplied by Polysulphate fertilizer at 400 kg/ha to a 50 t/ha potato crop



Expected benefits

- Higher yields
- Good skin finish
- Improved dry matter
- Increased nitrogen use efficiency

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

www.polysulphate.com

SO_3	K_2O	MgO	CaO
48%	14%	6%	17%

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The above are general rates, for specific recommendations or more information consult www.polysulphate.com/contact/ for your contact in your region.