



# Biotechnica

## First in Bioagronomy

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# BIO Sulphur

Liquid soil flocculent and ultra-fine colloidal sulphur source

A unique formulation that improves both the nutritional status of the plant, and the structure and chemistry of the soil. In addition to being a biologically available source of sulphur, calcium and nitrogen, **BioSulphur** also aids soil flocculation, which is damaged by compaction and the over-supply of fertilizers/salts. **BioSulphur** can also act to correct soil pH issues, bringing soils at both extremes of acidity and alkalinity back to a more neutral pH.

## Why choose BioSulphur?

### Improves soil structure

**BioSulphur** reduces soil compaction by the same chemical mechanism as granular gypsum ('Clay Breaker'), with the added bonus that **BioSulphur** delivers this in a liquid form.

This is especially important in excessively saline or over fertilized soils where flocculation is the most crucial remediation step and should be performed before any rinsing with water. In addition, nitrogen fertilization, like that in **BioSulphur**, is known to be key to allowing plants to overcome growth difficulties in saline soils.

This is especially useful when a foliar application is desired, with gypsum being largely insoluble and unsuitable for foliar application.

### Balances soil pH

**BioSulphur** selectively releases either sulphides (to correct alkalinity) or calcium/ammonium (to correct acidity) according to the conditions it encounters and adjusts the pH towards neutral.

### Corrects in-crop sulphur deficiencies

Sulphur is an essential plant nutrient and a deficiency prevents the correct uptake of nitrogen and the building of proteins. Sulphur rarely needed to be added to the soil in the 20<sup>th</sup> Century as coal burning power stations used to provide plenty to the atmosphere replenishing the soil each time it rained. With increasing utilization of renewable energy and Flue Gas Desulphurization (FGD) at power plants, sulphur emissions have been dramatically cut and many growers are starting to experience sulphur deficiency problems. **BioSulphur** makes sulphur readily available to the plant.

Because the sulphur in **BioSulphur** is held in a colloidal state, the particle size of sulphur when released in the soil is 0.01 microns, making it 10,000 times more active in terms of surface area than ground sulphur.

## Application protocols

**BioSulphur** can be applied as both a soil drench and a foliar spray.

### For soil conditioning

Apply as a soil drench at 20-40 litres / ha in 300 litres of water. Apply with **PanBuster** at 1.2 litres / ha to aid the improvement in soil structure.

### For correcting in-crop sulphur deficiency

Apply as a foliar spray at 2–3 litres/ha diluted in 200L of water to given good coverage of the foliage.

Visible symptoms of sulphur deficiency are normally only apparent in severe circumstances when yield will already be affected. Therefore apply **BioSulphur** if sulphur deficiencies are expected from past experience or soil analysis. The normal most obvious symptom of sulphur deficiency is chlorosis (yellowing) of young leaves, reduced yield and sickly looking plants.

In addition to being a stand-alone product, **BioSulphur** is also a component of the Biotechnica **BioAgronomy** Programme.

### Incompatibilities

We cannot predict or guarantee tank mix success for any product; always conduct a bucket test to confirm compatibility.

Spot-check on a small area before foliar treatments.

Avoid application in drought conditions and always add **BioSulphur** to water and mix well.

### Precautions

This product is intended for agricultural use only.

Harmful if swallowed. If swallowed seek medical advice immediately and show Safety Data Sheet (SDS).

In case of contact with eyes, rinse immediately with plenty of clean water (at least 15 minutes) and seek medical advice.

Due to its high sulphur content, **BioSulphur** has a strong odour but this quickly disperses. When using in glasshouses or covered areas, ensure adequate ventilation.

### Storage

Store in a cool dry place, away from heat and free from freezing.

Keep sealed in container and secured away from unauthorised users, children, wildlife and pets.

STORE AWAY FROM ACIDS.

### Handling

Wear suitable protective clothing, gloves and eye/face protection.

When mixing or exposed to spray, wear full protective clothing including: facemask, eye shields, gloves and footwear. Wash off any skin contact thoroughly with soap and water.

Consult Safety Data Sheet (SDS) for further information.

For more information on any of our products see [www.biotechnica.co.uk](http://www.biotechnica.co.uk)