



i n t r o d u c i n g
A NEW GRANULAR SULPHATE FERTILISER FOR BETTER CROPS

BIOkSUPA™



- CONCENTRATED FOR LOW APPLICATION RATES.
- READILY AVAILABLE SULPHUR PLUS POTASH, CALCIUM AND MAGNESIUM.
- NATURALLY OCCURRING BIOGRO CERTIFIED PRODUCT.
- Readily available – already in its soluble, sulphate form for rapid uptake.
- Essentially a straight form of sulphur, offering flexibility to tailor application to field requirements.
- Concentrated, so has a low storage requirement and is quick to spread.
- A source of potash, magnesium and calcium – an added bonus.
- Low in chloride, so suitable for chloride-sensitive crops.
- Environmentally benign as it is used in its natural state – no processing or waste product, and non-acidifying.

Providing sulphur in a plant available form immediately after application, BioKsupa is a low chloride fertiliser, and being a natural product with no chemical processing makes it suitable as an organic source of nutrients.

Nitrogen and sulphur are both essential constituents of plant and animal protein, so wherever nitrogen fertilisers are applied there is likely to be a need for a balancing sulphate fertiliser to ensure yield and quality. Legumes such as peas, beans and clover, which rely on atmospheric nitrogen but are deprived of atmospheric sulphur, will respond to a sulphate fertiliser. **BioKsupa** has 48% SO₃, and will provide a reliable and readily available source of sulphate.

Like arable crops, grassland needs sulphate fertiliser - it's a vital input to ensure a healthy ruminant diet.

A shortage of sulphate fertiliser will reduce grass yield and efficient nitrogen utilisation, increase nitrate loss and reduce sugar content and digestibility. Grass grown for silage is particularly liable to sulphur deficiency.


As with arable crops, grass also requires a balance between nitrogen (N) and sulphur (S) for its protein content, and a lack of sulphur will lead to reduced yields and to increased levels of non-protein nitrogen in the feed.

Research on silage found dry-matter yields increased by 35% over three cuts on sandy loam soil where sulphate was applied. Nitrate losses were cut by up to 82%, while the true protein and soluble sugars content of the silage were boosted by 25% and 30% respectively.



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A new Biogro Certified fertiliser, high in sulphate, available in its natural state.

 Sulphur 48% SO₃ as sulphate

 Magnesium 6% MgO as from magnesium sulphate

 Potassium 14% K₂O as from potassium sulphate

 Calcium 17% CaO as from calcium sulphate

Perhaps even more importantly, the microbes in the rumen also need the correct balance of nitrogen and sulphur. If the grass is short of sulphur they will not be able to use all of its potential feed value. This means that the actual digestibility of the feed is reduced and part of the feed value is wasted.

Sulphate behaves like nitrate in the soil. In the plant, nitrogen and sulphur are both essential building blocks for proteins. Sulphur deficiency will severely reduce the efficient use of nitrogen and limit protein synthesis.

Sulphur can only be taken up by plants from the soil solution as sulphate. As with readily-available nitrate, it can be liable to loss through leaching. Spring application of sulphate fertiliser is therefore recommended so that the plant can take it up during the period of active growth, as with nitrate. Sulphur is required together with nitrogen for the formation of proteins and uptake timings are similar.

Spreadability trials have been undertaken. **BioKsupa** is a dry, granular 2-4mm product that is available in its natural state. Trials carried out in Denmark and Germany, confirmed an excellent overlapped spread pattern at a 24-metre bout width, with a coefficient of variation of 4.3, and good spreadability up to 36 metres.

While sulphate fertiliser is immediately available to the crop, applications of elemental sulphur must be converted to sulphate by bacterial activity in the soil before it becomes available. The time taken for this oxidation is unpredictable and may take many months, so the sulphate required by the crop may not be available when needed.

CHEMICAL ANALYSIS TYPICAL RESULT GUARANTEED

Water soluble sulphur SO ₃	50.9%	48%
Water soluble potassium K ₂ O	14.8%	14%
Water soluble magnesium MgO	6.5%	6%
Water soluble calcium CaO	17.9%	17%

Bulk Density 1.6 g/cm³

pH Neutral

CONTENTS TYPICAL

Sulphur (S)	19.2%
Potassium (K)	11.2%
Magnesium (Mg)	3.6%
Calcium (Ca)	12.1%
Copper (Cu)	2.0ppm
Manganese (Mn)	3.8ppm
Iron (Fe)	100ppm
Zinc (Zn)	3.3ppm
Boron (B)	300ppm
Chromium (Cr)	6.4ppm
Nickel (Ni)	5.1ppm
Vanadium (V)	3.9ppm
Lead (Pb)	0.5ppm
Mercury (Hg)	less than 0.2ppm
Arsenic (As)	less than 0.1ppm
Cadmium (Cd)	less than 0.1ppm

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