Granulated Sulphur GTS 2250

Precision Sulphur supply via decoupling

Convenience is not always agronomically correct.

GTS 2250 delivers cost affective Sulphur to a crop, decoupled from traditional commodity products. Allowing for the correct purchase and application of Nitrogen and Potash in the spring. Plants tissue can accumulate sulphate when it is available in excess of needs, but plants cannot translocate extra sulphate to younger tissue if soil sulphate supplies run out.

GTS 2250 looks at the seasonal sulphur issues and delivers a constant supply of sulphur over the crops foundation and construction phase, linked in with soil microbial activity, this becomes available when the crop demands it, GTS 2250 ensures the crop is adequately supplied with enough sulphur at the start of its lifecycle to underpin its requirements over the season.

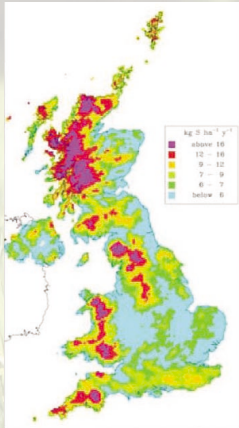
In many areas of the UK shortage of sulphur has now become the single largest limiting factor restricting plant productivity. It is well documented about reduction of atmospheric deposition of sulphur (60% of UK receives less than 12 kg s/ha/yr) and the increased demand from crops yields as yield potential increases through better efficiency from Nitrogen, (NUE). Sulphur plays a very key role in this and all metabolic pathways within a plant.

Trials consistently detail agronomical and financial benefit from applying sulphur to soils that are prone to deficiencies.

The question is no longer whether sulphur should form part of a program, but rather how it is best incorporated within a farm nutrient plan. What is the best way to supply S to the crop?

Key decisions criteria's

- Consistent supply of the Sulphur throughout the growth of the crop
- How it could affect soil nutrient and the pH properties of soils
- Balanced N:S ratios
- Ability to decouple in season Nitrogen sulphur applications.



Sulphur Functions

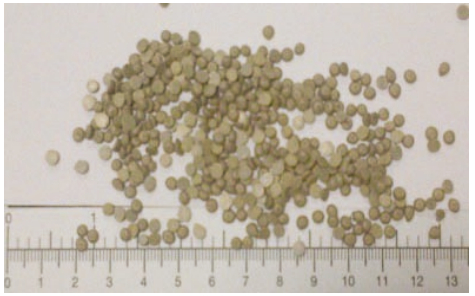
- Constituent of enzymes and vitamins
- Role in Initiating protein synthesis
- Essential for Nitrogen fixation in legumes
- Essential for the satisfactory uptake of Nitrogen
- Necessary for chlorophyll formation
- A constituent of several volatile organic compounds which give characteristic odours to mustard, garlic and onion.

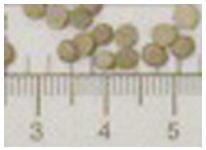
ssm Sustainable Soil Management

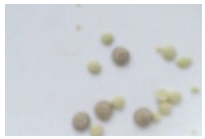
Sustainable Soil Management (SSM) is an Independent service focused on delivering the sound principles of soil health and balance known as Bioscence®, **www.soiladvice.com**

Bioscence® is a farming system based on sound ecological and agronomic advice, which manages soil fertility to optimise its full potential. Bioscence® is a sustainable system practised on farms throughout the UK and Ireland for many years and more recently has been introduced further into Europe. Bioscence® continues to be a successful formula for improvements in soil health and crop profitability.

Product Information

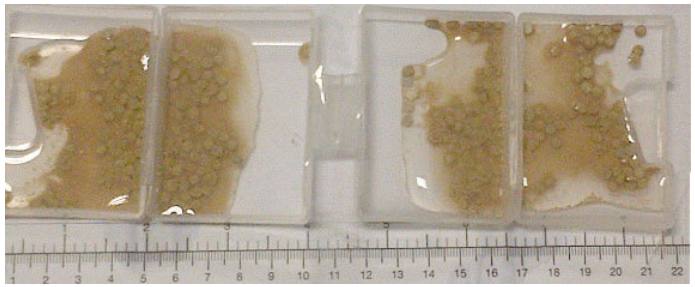






- 3mm average Hard Granule size
- Versatile applications: Placed or 24m spreading options
- Can blend with other fertilisers

Granule size is not sized matched to Oilseed Rape seed and is larger than comparable materials.



Solubility after 5 minutes

GTS 2250

- Rapid granule breakdown: allowing for steady oxidisation
- Release: related to soil temperature and moisture (matches plant growth
- Available for microbial action
- GTS 2250 contains 900gms S/Kg
- GTS 2250 contains 2055gms So3 equivalent /Kg

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Glenside

Granulated Sulphur GTS 2250

Product Details

GTS 2250 (2250g/kg So3) 1 ton bags

- Hard granule
- Rapid breakdown
- Slow release
- 24m spreading options

Application Rates

Winter OSR 35 - 50kg/ha

Winter Cereals 15 - 25kg/ha

Brassica 45 - 50kg/ha

Grassland 35 - 50kg/ha

Peas 15 - 25kg/ha

Nitrogen sulphur ratios

For the correct functioning of sulphur within the plant we look to target the nitrogen to sulphur ratios in the tissue, at around 12:1 in cereals and 9:1 in Brassicas.

If the result is higher than this more Sulphur would be desired. If the result is lower than no more sulphur is required but you may need more N. (Something else may be effecting your NUE)

Typically in the soil a guide figure less than 20-30 ppm sulphate S would require treatment.

Application rates

Oilseed rape requires 80-100 kg/ha S03,)
(32 - 40 kg/ha of GTS 2250.)
Cereals would require around 50 kg/ha So3
(20 kg/ha of GTS 2250)

Sulphate-sulphur, like nitrate-nitrogen, is very mobile in soil. After heavy precipitation or irrigation events, sulphate leaching from the topsoil into subsoil away from roots can induce S deficiencies. Sandy soils have the greatest potential for sulphate leaching. This problem can be overcome by using elemental sulphur that does not leach. It will slowly oxidise to sulphate during the early part of the growing season thereby supplying the plants with adequate Sulphate sulphur. (So long as you have applied the required amount)

It has been proven in trials that additional sulphur in the autumn as S has improved yields and crop qualities, compared to just increasing the sulphate levels in the spring.

It is advised that 20-40kg /Ha of GTS 2250 is to be used in the autumn as part of a program to supply sulphur in the autumn as a foundation to the full sulphur strategy on the farm. This can be followed up with the required crop balance via spring applied sulphate sources e.g. fertilisers etc.

Diagnosis

Sulphur deficiency in the field can often be confused with Nitrogen deficiency.

Crop stunting and paling of leaves. But Sulphur will tend to show in the younger leaves whereas Nitrogen tends to express itself in older leaves first.

Oilseed rape the middle and upper leaves can show inter-veinal yellowing with flower petals being pale.

Sulphur ratios

- Cereals 12 : 1
- Oilseeds 9 : 1
- Potatoes 12 : 1
- Grassland 10 : 1

Sulphur crop requirements

- Cereals 25 - 50 SO3 kg/ha
- Potatoes 25 - 30 SO3 kg/ha
- Oilseed rape 80 - 100 SO3 kg/ha
- Cabbage 75 - 125 SO3 kg/ha
- Grassland Cut 50 - 100 SO3 kg/ha
- Pulses 25 - 50 SO3 kg/ha
- Sugar Beet 25 - 50 SO3 kg/ha

Soil conditions for best Performance

- Warm (>10 degrees C)
- Moist
- Containing correct bacteria (Thiobacillus)
- In perfect pH range (low)
- Aerated

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