



SULPHUR REQUIREMENT OF PEAS

Using Brimstone 90

Brimstone 90 is a straight 90% elemental sulphur which allows you to be fully flexible with dose rates.

Fertiliser spreader calibration tables are available.

The application window for pea crops is during February and March.

Remember to account for sulphur applied in organic manures.

Testing for deficiencies

Soil analysis is a guide to the likelihood of sulphur deficiency. 89% of almost 10,000 soils tested by Lancrop Laboratories, part of Yara, between 1st August 2010 and 22nd October 2010 were deficient in sulphur. Leaf analysis will not always confirm diagnosis. Leaf analysis is carried out too late for the current crop as once deficiency symptoms are since significant yield loss will have occurred. The best guide for assessing the risk of sulphur deficiency is soil type. Sands, shallow soils or sandy loams with low organic matter are most prone to deficiency.

Sulphur Application

Adequate soil sulphur levels are most vital during the first 8 weeks of plant growth. For best results elemental sulphur should be applied prior to planting in February or early March. Elemental sulphur must oxidise to the sulphate form before being taken up by the plant. This requires soil micro-organisms and is very rapid for micronised materials. Alternatives to elemental sulphur can be costly. Sulphate of Potash (50% K₂O, 45% SO₃) is available for inclusion in blended fertilisers. Foliar applied sprays are costly and do not apply sulphur in adequate quantities.

Brimstone 90 delivers agronomically and economically

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Brimstone 90 a cost effective source of sulphur for quality crops

Pea yields have appeared to reached a plateau in recent seasons. Some growers do not take the nutritional requirements of peas as seriously as they do for other crops in the rotation.

Sulphur on Peas

Sulphur is important for protein development as it is an essential component of plant amino acids (thiamine), co-enzyme A and vitamins (biotin).

Symptoms of deficiencies

Symptoms appear first on youngest leaves and show as pale even yellowing. More severe deficiency results in stunted growth and delayed maturity.

Factors affecting availability

Levels of atmospheric sulphur deposition are reducing as industrial emissions reduce. Sandy free-drained acidic soils, low in organic matter are most likely to show first deficiencies. Sulphur can be taken up by plant roots from the soil supply or via leaves using atmospheric sulphur dioxide when deposited as rainfall. Poor rooting caused by compaction, inadequate drainage or damaged roots will affect the plants ability to take up sulphur even when it is present in adequate levels.

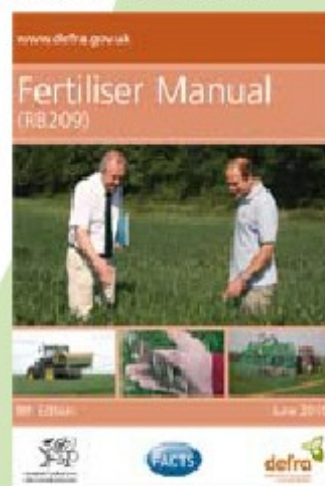
Interactions with other nutrients

Nitrogen fixation – sulphur feeds the nitrogen fixation process which occurs within the root nodules. As soon as sulphur runs lows the whole plant is rapidly starved of nitrogen reducing the formation of yield and sugars. This can also have a marked affect on the performance and fertiliser nitrogen requirement of the following crop.

pH – applications of elemental sulphur can have a localised acidifying affect in the soil. In soils with a high pH (pH >6.5) availability of essential nutrients potash, manganese, boron, copper, iron and zinc.

Recommendations

Crops require an application of 25kg SO₃ where deficiency may occur (RB209-Fertiliser Manual). Apply 15kg – 20kg per hectare of Brimstone 90 (225% SO₃) prior to drilling to feed the pea crop. Elemental sulphur not taken up by the pea crop will be available to following crops.



Speak to Boothmans for specific advice and to discuss your Brimstone 90 requirements

Contact Boothmans on:

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