

SULPHUR AS A NUTRIENT FOR CEREALS AND OILSEED RAPE

- Oilseed rape crops remove 20-30kg/ha S
- Cereal crops remove 10-15kg/ha+ S
- Sulphate may be leached from the soil by rainfall.
- Uptake is also reduced by poor root growth and soil compaction

OIL SEED RAPE

- Schnug and Ceynowa (1990) found that light leaf spot proliferates more rapidly in environments deficient in sulphur than when soil s is adequate.
- Sulphur deficiency results in poor winter hardiness
- Sulphur deficiency results in impaired utilization of N
- Sulphur deficiency decreases photosynthesis and inhibits protein synthesis this results in smaller plant size
- Major requirement for S is during the flowering period
- Sulphur fertilisation improves quality of oilseed rape meal by increasing the proportion of sulphur containing amino acids in the protein
- Applying Sulphur stimulates the production of secondary compounds and the emission of sulphur containing trace gases which positively influence the plants natural resistance to fungal infection
- Minimum S level in leaf for high yielding oilseed rape crops is 0.65% S
- Most crops contain as much S as P in the plant
- S deficiency in oilseed rape reduces pod set, the pods do not fill properly and seeds are small. Maturity may also be delayed.
- Sulphur deficiency may also reduce oil levels in the seed
- Autumn applied elemental S will feed the autumn sown crop on establishment
- As soils cool during the winter the elemental S lies dormant without leaching therefore being available in the spring when growth starts
- Requirement for OSR is 20-40kg/ha

CEREALS

- Deficiencies need correcting before stem extension (HGCA)
- Increasing S concentrations in grain are directly related to improved baking quality of flour. Loaves made from sulphur deficient flour are smaller than normal and have a coarse texture
- It seems that sulphur deficiency may also reduce the quality of barley grown for malting
- Sulphur deficiency results in poor utilisation of applied N
- Sulphur deficient crops are lower yielding
- Late application of nitrogen to increase protein levels in wheat will not be effective if S is deficient

SulFer 90 is the most efficient way of providing the plant with sulphur