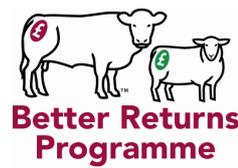




SILAGE DECISIONS FACTSHEET



SULPHUR FERTILISER

Sulphur is needed by plants in similar quantities to phosphorus, according to RB209 published by DEFRA. Historically, atmospheric sulphur deposits from industry have meant grass and other crops have received an adequate supply.

With reduced emissions of sulphur from factories, a need for sulphur applications in many areas of the UK has been identified. RB209 says atmospheric deposition in 1999 was about 15% of that in 1980 and predicts this will continue to fall. Yet, the 2006 British Survey of Fertiliser Practice 2006 shows less than 7% of the grassland area in Great Britain received sulphur fertiliser.

Where deficiency is indicated, RB209 recommends applying 25-40kg of SO₃ as a sulphate containing fertiliser at the start of growth before each cut. A deficiency is more likely in second and later silage cuts, especially on sandy or shallow soils.

Researchers at IGER North Wyke applied 38kg/ha of SO₃ - equivalent to 15kg of sulphur - on two different soil types, both receiving 200kg and 400kg of N/ha and cut three times. The research was sponsored by Kemira GrowHow.

Results show the high N level yields increased by 0.45t of DM/ha on first cut and 35% over all three cuts on the sandy loam soil. On the clay loam soils no benefit was recorded on first cut, but there was a response on second and third cuts, giving an annual yield response of 11%. The same research reported an increase in soluble sugars and true protein of silage, so a small improvement in overall crop quality can also be predicted.

Fertilisers containing sulphur typically have a lower N percentage for the same price. However, fertilisers with sulphur can allow reduced N applications as IGER research showed they increase the efficiency of N fertiliser, by reducing leaching and denitrification. This could be important in meeting NVZ restrictions, while maximising potential yields.

Sulphur applications are likely to be beneficial:

- On lighter soils e.g. sandy loams
- Where there is little industry in the locality
- Where applications of nitrogen are relatively high e.g. 400kg N/ha
- For second and third cuts where N use is lower e.g. 200kg/ha
- Where nitrogen applications are limited, such as in NVZs
- Where manure is not regularly applied

Further information RB209 - Published by DEFRA - available free online at www.defra.gov.uk/farm/environment/land-manage/nutrient/fert/rb209/intro.pdf

Journal of Agricultural Science, Vol 135 (2000) The effect of sulphur application on the efficiency of nitrogen use in two contrasting grassland soils. *Brown, L., Scholefield, D., Jewkes, E. C., Preedy, N., Wadge, K. J., Butler, M. R.*

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Please note: Any changes to management should be researched thoroughly and tried cautiously, bearing in mind any restrictions in force, such as Nitrate Vulnerable Zone regulations or environmental stewardship scheme rules. BGS and EBLEX cannot be held liable for any losses.