

June 2011 Red Meat Development Programme FAQ

Keep an eye on whether your farm is deficient in sulphur, as this can impact on your productivity.

The topic of sulphur deficiency has come up on farm visits and farmer meetings over the past few months. An explanation of the issue and farm management tips on how to test and treat is below:

1. Why worry about sulphur?

Atmospheric deposition of sulphur has declined significantly in recent years – resulting in many areas of the country no longer receiving enough sulphur to adequately supply a multi-cut system. Last year all silage samples tested by the Grassland Development Centre, IBERS came back from the laboratory indicating a sulphur deficiency.

With a rebalancing of sulphur levels in the soil, yield increases of 33% and 11% have been demonstrated on sandy and clay soils respectively¹.

2. What to look out for.

- Sulphur deficiency is common in silage systems where more than 1 cut is taken, particularly where high nitrogen rates are applied.
- Light soils are more prone to sulphur deficiency than heavy soils.
- Apart from reduced growth rate and yields, the main symptoms of sulphur deficiency are yellowing and stunting of new growth on grass leaf blades.

3. How to test sulphur levels.

In order to test the sulphur levels on your farm, collect samples of fresh grass silage, just before cutting and send them off for sulphur analysis. Results indicating sulphur levels of less than 0.25% (in addition to low nitrogen levels) OR a nitrogen:sulphur ratio greater than 13:1 indicates a sulphur deficiency.

For example, analysis of grass samples in Powys on 2 farms showed that sulphur levels were low on both farms. An application of sulphur on these fields ahead of second cut should result in increased yields. However, make sure that soil has the optimum P & K and pH levels, in order to realise the benefits from any sulphur applications made.

4. What to do if lab results show a deficiency in sulphur.

Sulphur application guidelines:

- Apply 40 kg SO₃/ha as a sulphate based fertiliser from the bag
- OR
- Apply sulphur in the form of slurry. 50,000 litres/ha of slurry will supply around 20kg/ha of available SO₃ – which would supply around half the sulphur requirements for the following silage crop.

The above has been compiled by the Grassland Development Centre, IBERS, for dissemination by the Red Meat Development Programme, delivered by Hybu Cig Cymru, on behalf of Farming Connect. Contact HCC on 01970 625050 for more advice on this topic.

¹ Research was carried out at IGER, North Wyke, referenced in: Journal of Agric Science, Vol 135(2000) The Effect of Sulphur Application on the efficiency of nitrogen use in two contrasting grassland soils. Brown, L, Scolefield, D., Jewkes, E.C., Preedy, N., Wadge, K.J., Butler, M.R