

Tackling sulphur deficiency in Spring Barley

Sulphur is a national issue with the majority of the UK requiring some form of it in their fertiliser program. Over the last two years, John Gray, based in Doune, Stirling, has rectified the low pH of his clay loam soil through the application of Calcifert granulated lime.

Now, with a pH of above 6, he has carried out a trial on his spring barley, applying a single application of Calcifert Sulphur (granulated calcium sulphate), to the crop both at 85kg/ha and 125kg/ha. The rates, which equate to 47.5 kgSO₃ and 70kgSO₃ respectively, were spread over five separate tramlines to ensure an accurate overlap and provide a representative sampling area, with an untreated area also being retained as a control.


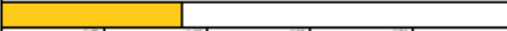
A total of 146kg/ha of nitrogen was also applied to the crop in three doses - no manure was spread on the field, and none of the fertiliser applied contained sulphur.

Positive results

Samples taken in June 2012 showed a shift from a position of sulphur deficiency to levels which would facilitate more efficient nitrogen utilisation.

SAMPLE NAME: S BARLEY ZERO

CROP: SPRING BARLEY

ANALYSIS	RESULT	INTERPRETATION				
		Deficient	Low	Normal	High	Excessive
Nitrogen (N) [N:S Ratio]	4.94 %					
Sulphur (S) [18.1:1]	0.273 %					



SAMPLE NAME: S BARLEY 85

CROP: SPRING BARLEY

ANALYSIS	RESULT	INTERPRETATION				
		Deficient	Low	Normal	High	Excessive
Nitrogen (N) [N:S Ratio]	4.47 %					
Sulphur (S) [14.2:1]	0.314 %					

SAMPLE NAME: S BARLEY 125

CROP: SPRING BARLEY

ANALYSIS	RESULT	INTERPRETATION				
		Deficient	Low	Normal	High	Excessive
Nitrogen (N) [N:S Ratio]	3.60 %					
Sulphur (S) [11.5:1]	0.314 %					

Financial benefits

Situated in an area where straw is of high value, one of the most significant financial outcomes of applying Calcifert Sulphur proved to be the increase on straw yield in the trial field - noticeably higher than the other fields. John confirmed that it was the first time in 10 years that a field on the farm had yielded over one tonne of straw per acre (2.5/ha).

The table sets out the financial benefit of applying Calcifert Sulphur to the trial field. Assuming a straw value of £12/bale and a Calcifert Sulphur cost of £190/ton (applied at 125kg/ha), the cost of applying Calcifert Sulphur pays for itself as well as providing a margin of £36/ha, and this is from the straw alone.

	Control	Calcifert Sulphur	Increase
Straw yield (bales/acre)	5	7	2
Straw yield (bales/hectare)	12	17	5
Total straw value (£/hectare)	144	204	60
Cost of Calcifert Sulphur (£)		24	
New straw value (£/hectare)	144	180	36

With no yield mapping system available it was more difficult to quantify grain yields of the trial field. However improvements in yield were noted with specific weights of 65kg/hl being recorded, despite the difficult season, compared with other samples that tested at 50 or less.

Summary

Having improved the pH status of the farm by using Calcifert Lime, the Calcifert Sulphur application on the trial field has shown further benefits which were attributable to both calcium and sulphur.

The lack of brackling in the field also suggested that the improved calcium supply contributed to cell strength and subsequent stem strength.

About Calcifert Sulphur...

Applying Calcifert Sulphur granulated calcium sulphate is a quick and easy way to supply both calcium and sulphur to soil.

With a typical analysis of calcium as CaO: 39% and sulphur expressed as SO₃: 56%, Calcifert Sulphur is one of the purest calcium sulphate products available on the market. Calcifert Sulphur has a neutralising value of zero, meaning it won't affect the pH of your soil.

It can be easily applied using a tractor mounted fertiliser spreader, providing flexibility to farmers and growers.

