

A trial in Shropshire has proved timing is everything when applying nitrogen and sulphate to winter oilseed rape (OSR). Trials were carried out to investigate the effects of applying Calcifert Sulphur granulated calcium sulphate to a winter OSR crop at different points in the season. The trials were carried out on a farm in Ash, Shropshire, one of seven contract-farmed by Fieldfare Farmers.

LKAB Minerals

Application

Calcifert Sulphur was applied at a single total rate of 200 kg/ha on three trial blocks. Application was made to the first block in the winter (December) at 200 kg/ha. The second block received its application split between winter and spring each at 100kg/ha and the third block received its full dose in March. A control plot was also retained. Nitrogen was used at a standard rate of 190 kg/ha assuming an average yield of 3.5t/ha. No sulphur was included in any of the fertiliser ensuring the only difference in treatment was the Calcifert Sulphur application.

Harvest results

Application timing	Yield (t/ha)	Yield increase (control)	Yield increase (Winter)
Control	3.824		
Winter only	3.944	+ 0 .12	
Winter & Spring	4.232	+0.408	+0.283
Spring only	4.967	+0.143	+1.023

Tissue sampling in April (a month after the spring application) seemed to indicate the winter application had been worthwhile as the N:S ratio and the percentage of nitrogen and sulphur in the plant were more than satisfactory. In contrast, the spring-only treated plots showed deficient levels in the plants at this stage. However, with the aid of yield monitoring, the table above indicates each treatment showed an improvement over the control plot. Moreover, the spring-only application provided the highest yield. Fieldfare Farmers reported that the spring-treated block had a much higher biomass when compared with the other blocks; a trend echoed by farmers on other sites who have applied Calcifert.

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Sulphur at similar rates

With calcium being integral to cell strength, the results suggest Calcifert Sulphur facilitated a greater uptake of calcium and sulphur, in turn producing the larger crops.

Financial benefits

The cost of the Calcifert Sulphur application at 200kg/ha is £38/ha. The yield improvement on the spring only application at £360/t equates to a margin increase of £410/ha.

Summary

Tissue tests initially suggested an early application of Calcifert Sulphur was beneficial as it appeared to have assisted with nitrogen and sulphate uptake during the winter months. It would seem, though, that applying sulphate in the winter months exposes the nutrient to the risk of being leached out of the soil. The trials suggest the highly soluble nature of Calcifert Sulphur has made a supply of both calcium and sulphur available to the plant when it was required in growing season. The spring-only application made these essential elements available when they could be used alongside other fertilisers, in particular nitrogen.

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.



