

Spring application is ideal for Calcifert S

A trial in Shropshire has proved that timing is everything when applying nitrogen and sulphate to winter Oilseed Rape. Trials were carried out to investigate the effects of applying Calcifert S granulated calcium sulphate to a winter OSR crop at different points in the season. The trials were carried out at a farm in Ash, Shropshire, one of seven that are contract farmed by Fieldfare Farmers.

Application

Calcifert S 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 that the only difference in treatment was the Calcifert S application.

Harvest results

Application timing	Yield (t/ha)	Yield increase (over control)	Yield increase (over winter)
Control	3.824		
Winter only	3.944	+ 0.12	
Winter and 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 that the winter application had been worthwhile as the NS 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 shows that 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 that has been echoed by farmers on other sites who have applied Calcifert S at similar rates.

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

Financial Benefits

The cost of the Calcifert S 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 that an early application of Calcifert S 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 that the highly soluble nature of Calcifert S 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 utilised alongside other fertilisers, in particular nitrogen.