

Sulphur limit to save costly over application

Product Update
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New trials have given OSR growers guidance for sulphur requirements, advises Dr Lizzie sagoo of ADAS

Oilseed rape growers should be applying sulphur at a rate of 50 - 75 kg/ha (SO₃), with little or no cost benefit or yield advantage from using higher rates.

Results of extensive new research by ADAS, presented at the latest **Syngenta iOSR grower meeting**, demonstrated growers and agronomists can have confidence in the existing RB209 fertiliser recommendations, according to ADAS soil scientist, Dr Lizzie Sagoo (above).

"Growers on heavier land, typically less susceptible to sulphur deficiency, might err towards the lower 50kg/ha supplement, whilst crops on more sulphur responsive lighter sandy soils should receive towards the higher end of the range," Lizzie advocated.

She highlighted that a series of trials from 2009-16 have shown these recommended rates are suitable for all OSR crops, irrespective of the expected final yield.



ADAS trials in Suffolk that showed clear signs of sulphur deficiency on untreated plots (above left) delivered a 4 t/ha yield response from sulphur fertiliser application.

Yield responses from sulphur application had been up to 4.0 t/ha in two extreme cases of deficiency, but more typically were around 0.5 t/ha – particularly with the focus on higher yield potential sites with recent trials. In all cases the step change was from untreated to even a small application of 30 kg/ha SO_3 , but in most instances with further incremental gains to the optimum level.



ADAS trials last season (above) on the farm of the iOSR meeting host, Chris Eglington, revealed significant sulphur deficiencies on the selected loamy sand field – with tissue samples showing a malate:sulphur ratio of 6.2:1 in mid-April; when anything over 1.5:1 indicates a potential deficiency.

Sulphur, applied with the first N fertiliser application on 24 February 2016, produced an average 0.5 t/ha yield increase.

“Chris needs to apply S to his OSR, and the trial has shown that applying 50-75 kg/ha SO_3 should be sufficient to maximize yields,” Lizzie reported.

“Even looking to achieve the high yield potential on this farm, there would appear little benefit of applying more SO_3 ,” she advised.

The trial at North Hill also demonstrated the potential for organic manures to provide sulphur for growing crops. The farm utilises farmyard manure from 3500 pigs finished under contract in farm buildings; 100 beef cattle and stubble turnip grazing for 800 sheep, along with 1600 tonnes of biosolids annually.

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