

# One application of Calcifert Sulphur reduces magnesium levels by 28%

## Farm facts

Cropping Year: 2013 | Crop: Cider Apples | Farmer: John Thatcher | Location: Sandford Somerset

## The soil

The farm has clay soil which is prone to waterlogging, this not only makes it difficult to get on the land, but also causes a percentage of the trees to die in each row. Analysis of the farms soil has shown very high magnesium levels and low total calcium, which is leading to a poorly flocculated, tight soil.

It is generally accepted that magnesium tightens up soil and can compromise the availability of potash and other nutrients, particularly where calcium is compromised.

## Application and results

A rate of 500 kg/ha was applied to the fields during March 2013, this will have supplied 170 kg/ha calcium and 275 kg/ha  $SO_3$ . The aim of the application was to drive the magnesium of the soil colloid and replace it with calcium, which will improve the structure of the soil.

	BL	BLP	FHT
2011	889	570	713
2013	644	399	504

The soil sample results for magnesium (quoted in mg/l) in the table above, show how the magnesium levels in the soil have reduced by 28% on average after the application of Calcifert Sulphur. It is hoped that the magnesium levels can be further rebalanced with Calcium to improve the soil's condition and drainage.

## Summary

Over use of magnesium lime for decades, even at low percentage inclusion, can lead to this situation, as can a lack of recognition of calcium oftake. Calcium can be lost from the soil by leaching, nitrogen fertilisers and through the use of slurries and manures. This does not happen in the same way with magnesium, therefore leading to an accumulation in the soil.

It is vital that checks are made on calcium in the soil not just pH, as this can be misleading because magnesium, potassium and sodium also have an effect on pH. All these cations should be measured individually when soil testing. It pays to spend money on the right soil test, and basic test is not up to the mark nowadays. Soil testing is a relatively cheap way of solving problems.