

Case study

Calcifert |  LKAB

Calcifert Sulphur reducing magnesium

One application of Calcifert Sulphur can reduce magnesium levels by 28%.

Magnesium is known to tighten up soil compromising soil nutrients. Growing cider apples on a clay soil prone to waterlogging, John Thatcher applied Calcifert Sulphur to reduce the farm's very high magnesium levels.

LKAB Minerals

The soil

The clay soil's tendency to waterlogging not only makes it difficult to work the land, but also causes a percentage of trees to die in each row of the orchard. Analysis of the farm's soil has shown very high magnesium levels and low total calcium, which is leading to a poorly flocculated, tight soil. It is generally accepted magnesium tightens up soil and can compromise the availability of potash and other nutrients, particularly where calcium is vulnerable.

Application and results

A rate of 500 kg/ha Calcifert Sulphur was applied to the fields supplying 170 kg/ha calcium and 275 kg/ha SO₃. The aim of the application was to drive out the magnesium of the soil colloid and replace it with calcium, improving the structure of the soil.

| | Field BL | Field BLP | Field FHT | |
|------|----------|-----------|-----------|------|
| 2011 | 889 | 570 | 713 | mg/l |
| 2013 | 644 | 399 | 504 | mg/l |

The soil sample results for magnesium show how levels in the soil reduced by 28% on average after the application of Calcifert Sulphur. It is hoped the magnesium levels can be further rebalanced with calcium to improve the soil's condition and drainage.

Summary

Overuse of magnesium lime for decades, even at low percentage inclusion, can lead to this situation, as can a lack of recognition of calcium offtake. 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 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; a basic test is not up to the mark nowadays. Soil testing is a relatively cheap way of solving problems.

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.



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Learn more at
www.lkabminerals.com