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Why soil sampling is vital to reduce arable nutrition risks

The importance of accurate soil sampling can't be underestimated as input costs fluctuate and grain prices remain stubbornly low. A crop's nutrient requirements should pivot on a valid broad-spectrum soil analysis, allowing growers to strategically plan early season inputs to avoid any single nutrient being the limiting factor to yield and quality.

And it's not just the macro nutrient levels we're looking to assess, as the role played by micronutrients in soil nutrient synergy should be underestimated at your own peril. Remember, when it comes to soil nutrition, the interaction of macro and micronutrients working together is greater than just the macros on their own.

This is why a broad spectrum soil analysis, compared to a basic version, will allow a greater understanding of where deficiencies lie. Testing can be carried out at any time of year, but ideally after harvest of the previous crop to highlight any deficiencies that have developed through offtake.

Soil sampling is carried out by walking a W pattern across a field to capture a cross section of soil cores. At regular points, a soil core is taken and added to a bucket, with best practice aiming for at least 25 samples across a 4ha field, avoiding headlands if possible. Cores should be 15cm deep for ploughed land or 23cm in min tilled land – this is to avoid sampling an over concentrated area of nutrients near the soil surface. Once complete, the soil is mixed to form a representative sample and sent away for analysis.

Samples should be collected every 3-5 years, and each rotation should aim to test the same locations within the field. It looks simple, but the data gained from it can be analysed by a FACTS qualified agronomist and lead to detailed discussions about the right nutrient strategy.

One nutrient that is proven to boost yield and quality in arable crops is molybdenum, with in-house trials on spring barley returning an increased yield of 3.5% over the standard application, and a rise in NUE of 8.9%, when molybdenum was applied using the Micro-Match coating.

By applying molybdenum as a coating rather than individual granules, the number of landing sites are increased, providing greater availability to the crop and the soil bacteria.

Speak to your FACTS qualified nutrition agronomist to get your soils tested and start benefiting from the data.