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Phosphorus "Gold Mine" In Your Soil

Most New Zealand farmers are sitting on a goldmine! Not the precious mineral sought by miners long ago but a stockpile of invisible phosphorus hidden in the soil. Unlike gold, stored phosphorus is much easier to find! It's present in most NZ soils - mostly as the result of ongoing large annual fertiliser applications.

Many of the soil tests processed by Soiltech reveal total phosphorus levels in excess of 500kg/ha! Many are in excess of 1000kg/ha! (1000kg/ha is 1T/ha of phosphorus or the equivalent of over 11T/ha of superphosphate!)

Much of the phosphorus currently in the soil ends up either being immobilised (and thus unavailable), removed in product, or re-deposited as dung. Some is lost into surrounding rivers and waterways in storms and rainfall events.

Phosphorus is essential for good pasture productivity on most NZ soils. However, this does not mean that phosphorus fertiliser should applied annually each and every year. Farmers need to ask "How much phosphorus is actually required?"

A number of factors impact on phosphorus requirements i.e. parent material, climate, topography, soil type, farming operation and fertiliser history etc. Sustainable agriculture is about optimising nutrient and production levels. Amongst other things, this requires knowledge of true loses, the current phosphorus status of the soil and the efficiency and effectiveness of phosphorus fertiliser applications. In the past, the application of phosphorus using granular fertilisers has been a satisfactory, though somewhat inefficient method of supplying phosphorus. It has always been difficult to distribute bulk fertiliser evenly across a paddock. These inefficiencies have been built into maintenance rates which have traditionally been higher than true losses to allow for unevenness of spreading.

Fortunately, all the phosphorus added in the past is not lost. Some of this hidden treasure trove is able to be released when the soil environment is operating optimally.

How much phosphorus is required each year? Every situation is different. The best way to find out is to undertake regular soil tests at the same time each year and use the results of these to accurately assess real fertiliser requirements.

It's time to think smarter about your phosphorus requirements. Why pay good money to apply phosphorus which may not be required?