

## How soil can benefit your animals

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Many people feel that they aren't reaching the maximum potential of their soil. There is now an increased reliance on purchased concentrates and minerals to allow animals to be finished within specifications and timeframes. These strategies add significant cost to the finished animal or production cost.

The benefits of having highly nutritious grass is obvious. Grass that provides the full complement of macro and micro nutrients plus exceptional feed value should drive healthy production and healthy grass margins. That's easily said, but how do we do something about it in practice?

Key soil parameters are a team of three: Chemical, Physical and Biological.

Put simply:

- a. The physical nature of the soil will affect the chemical aspects, and in turn will affect the biological aspects. e.g. compacted soils will hold water, reducing the soil pH that results in anaerobic biology dominating which leads to unproductive soils.
- b. The chemical status of the soil will affect the physical and biological, e.g. high magnesium soils can be easily compacted, resulting in waterlogging and again anaerobic biology dominating.

The measure to manage soil approach is the first step towards improvement in any system. A detailed soil analysis is essential to find the cause behind the limiting factors. These could be:

- reducing the total dry matter yield on a farm
- imbalances that could lead animal health issues or depressed growth rates
- unpalatable grass or grass paddocks that wear out too quickly

The team of three - physical, chemical and biological all influence the above and so any soil test should be measuring elements that allow us to understand which of the physical, chemical and biological parameters are holding our production back. or nitrogen utilisation or drought-prone grasses due to poor rooting? The list goes on and on.

However there is rarely a single cause, rather it is normally a culmination of a number of factors.

Has the correct fertiliser been applied in the correct balance? Fertilisers perform differently in different soil types so just as we should choose the right sort of lime we must also consider the correct source/type of fertiliser for nitrogen, phosphate and potash.

It's worth considering that all applied nutrients do not work in isolation, i.e. to get the best out of any applied nitrogen, we must make sure that the plants have adequate access to phosphate, potash, magnesium and calcium.

All these factors have to be considered when trying to achieve the maximum output from your grassland. Soil testing has come a long way in recent years and there are now some very affordable soil tests that give you all the parameters you need to make the correct decisions about nutrient inputs to maximise quality grass production.

Make a plan to get your fields soil tested every 4-5 years to ensure you get the best from your grass and any applied nutrients.



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