



Getting Nitrogen Working

Grassland growth is driven by temperature, light and nutrients. As soils begin to warm in spring, many farms are preparing for the first fertiliser applications of the season. Getting these spring applications right can make a significant difference to the amount of grass grown and how efficiently fertiliser is used throughout the year.

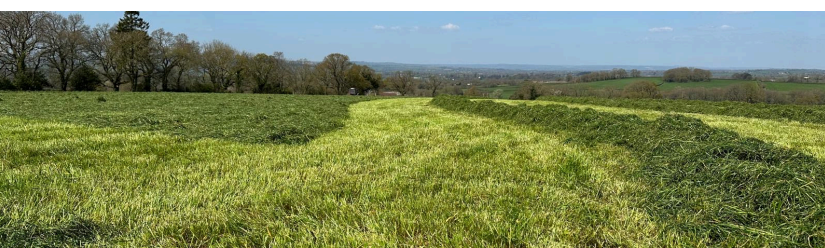
Early nitrogen is often the most valuable nitrogen applied during the season. When grass responds well, it helps build grazing covers, supports early turnout and reduces pressure on winter forage stocks. However, the response to nitrogen in spring can vary widely depending on soil conditions.

Cold soils, low sulphur availability and poor soil structure can all limit how well plants respond. In many cases, nitrogen may be present in the soil but cannot be fully utilised by the plant.

Sulphur plays a particularly important role at this time of year. Modern farming systems receive far less atmospheric sulphur than they once did, meaning many grassland soils are now deficient. Sulphur is essential for amino acid formation and helps plants convert nitrogen into protein. Without adequate sulphur, nitrogen use efficiency can fall significantly.

Soil structure is another important factor influencing early season growth. Compaction reduces air movement and root development, limiting the plant's ability to access nutrients and water. Improving soil structure allows roots to explore a larger volume of soil, helping plants make better use of both fertiliser and soil reserves.

A balanced fertiliser programme, combined with good soil management, helps ensure early nitrogen applications deliver their full potential.



Understanding Humates in the soil

Humates are naturally occurring organic compounds formed during the decomposition of plant and microbial material over very long periods of time. They are considered one of the most stable and biologically active forms of organic matter in the soil.

Humic and fulvic acids, the key components of humates, play an important role in soil chemistry and nutrient availability. These compounds have a high cation exchange capacity, meaning they help soils retain and hold nutrients such as calcium, magnesium, potassium and trace elements.

In practical terms, this helps reduce nutrient losses while increasing the availability of minerals already present in the soil.

Humates also support soil biology. Many beneficial microorganisms rely on organic carbon sources within the soil, and humic substances help provide a stable environment where these microbes can thrive. As microbial activity increases, nutrients tied up in organic matter begin to cycle more efficiently. This process gradually releases nutrients into plant-available forms.

Another important role of humates is their effect on soil structure. By helping bind soil particles into stable aggregates, humic substances improve soil crumb structure, allowing better movement of water, oxygen and roots through the soil profile.

For grassland systems, this improved soil environment can support stronger root development, improved nutrient uptake and more resilient swards.



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Grassland Tip : Slurry Application



When applying slurry in early spring, consider how quickly the nutrients will become available to the plant. A significant proportion of nitrogen in slurry is present in organic forms and requires microbial activity to convert it into plant-available nutrients. Encouraging soil biological activity helps accelerate this process and improves the value of organic manures. Good soil aeration and balanced nutrient supply both help support these biological processes.



Soil Boost is designed to support soil biology and nutrient cycling within grassland systems.

It contains a combination of humic substances, calcium, sulphur, magnesium and trace elements alongside seaweed and readily available carbon sources. These components help support microbial activity and improve soil structure.

The product is particularly useful following slurry or FYM applications, where increased microbial activity can help break down organic material and release nutrients more effectively.

Typical applications are made in spring or autumn at around 500 kg/ha.



From the field

Several farms have reported noticeable improvements in early grazing covers where sulphur has been included alongside early nitrogen applications.

This response has been particularly evident on lighter soils, where sulphur reserves tend to be lower and nutrients are more prone to leaching during winter rainfall. Balanced nutrition early in the season often sets the foundation for stronger grass growth throughout the grazing year.

Technical Fact

Under favourable growing conditions, 1 kg of nitrogen can produce around 30 kg of grass dry matter.

This highlights the importance of ensuring nitrogen is used efficiently. Improving nutrient uptake by even a small percentage can have a significant impact on overall forage production.



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