

Tis the time for tetany

Spring and Autumn months are the seasons renowned for grass tetany in cattle and sheep, however it can occur at any time of the year if the conditions are right.

So, what is grass tetany?

Grass tetany is a disorder associated with ruminants where the level of magnesium in the cerebrospinal fluid, which surrounds the brain and spinal cord, decreases below a critical level.

In the early stages of grass tetany, the level of magnesium in the blood decreases before the level in the cerebrospinal fluid.

A lack of available magnesium in the diet may be the reason for tetany occurring. However, it is important to understand that a diet with nutrient imbalances that interfere with magnesium metabolism, main one being potassium may also be the cause. The occurrence of grass tetany is often associated with heavy fertilization of pastures with potassium and nitrogen.

Low levels of blood magnesium are usually associated with low levels of blood calcium in late pregnant cows and cows with calves at foot. When blood magnesium drops too low, proper nerve impulse transmission fails, causing the disorder.

How to look out for grass tetany:

Unfortunately, death can be the first sign of tetany but excitement and muscle spasms are very common signs. Affected animals become separated from the group and have

a startled expression, show an exaggerated blink reflex and frequent grinding of the teeth There is rapid progression to periods of seizure activity. During seizure activity there is frenzied paddling of the limbs, sudden eye movements, rapid pounding heart, and frothy salivation.

How do we prevent tetany?

We need to ensure cattle and sheep have adequate intakes of magnesium to satisfy their daily requirement as they do not store magnesium in their bodies and therefore rely on regular intakes.



Uniblock's High Mag Bucket

Because a high potassium intake can inhibit magnesium absorption, the inhibitory effect of potassium on the efficiency of magnesium absorption can be counteracted by supplemental magnesium.

During Spring and Autumn months grass growth is generally slow and during this time slurry/fertiliser/manure is spread when potassium is naturally high in grass and magnesium naturally low.

Lush pastures are low in fibre and increase the rate of passage of food material through the rumen reducing time for the absorption.

In addition to this, high nitrogen application and spring grass being high in protein reduces magnesium absorption in the rumen due to high soluble protein. It is recommended that cattle and sheep should be supplemented with magnesium buckets during the early spring period prior to risk.



Mixrite Sweet Mag: Suitable for cattle and Sheep



Uniblock's Herdminder: Magnesium + added phosphorus to aid with good fertility

If potassium and nitrogen intakes are high and sodium and phosphorus intakes are low – there is a reduction in magnesium absorption from the rumen.

Much of the sodium consumed by cattle and sheep is used in the production of saliva which is secreted into the rumen to maintain a constant pH by neutralising acids formed by bacteria in the rumen. If the sodium content of forage is too low, the animal automatically substitutes potassium for

sodium as an alternative buffer in the saliva and diverts sodium to maintain blood sodium level as first priority.

The resulting increase in potassium: sodium ratio in the rumen leads to reduced resorption of magnesium through the rumen wall into the blood – hence placing the animal at risk to tetany.

A salt lick is a good way to help counteract this imbalance.



Uniblock's Grazing Salt lick: Highly palatable with the addition of molasses

On farms where tetany is a recurring problem, attention should be given to the potassium, magnesium and sodium content of herbage.

It is important to note that not all cases of tetany will be clinical and a large percentage of animals can be affected sub-clinically. Sub-clinical tetany can present the following:

- Depression of dry matter intakes,
- Reduction in milk yields
- Loss of body condition, and
- Increased susceptibility to diseases E.g., milk fever

A few top tips to consider:

- Choose grazing fields carefully by grazing less susceptible animals on high-risk pastures E.g., Heifers, dry cows or cows with calves over 4 months old are less prone to develop tetany.
- It is good practice to avoid grazing cattle on new grass until it is 4 to 6 inches tall because magnesium is less available in very immature plants.
- Provide daily access to a palatable magnesium source
- Offer supplementary salt
- Feed long fibre E.g., legume hay or graze mixed legume-grass pastures since legumes are higher in magnesium than grasses.
- An alternative way to increase the Mg content of the herbage may be the use of clovers because they have about a two times higher Mg content than grasses. This can be considered relevant in the practice of organic farming.
- Minimise use of Nitrogen/potassium fertilizers
- Provide Shelter to protect stock that are out-wintered from wind and rain.

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