

Advice on how to avoid milk fever at turn-out

WITH spring just around the corner, farmers will be looking forward to turnout. However, spring grass can cause as many problems as it solves.

Surely grazed grass is the best feed for dairy cattle?

You would think so, but unfortunately it can cause problems if not managed correctly. We see an increased incidence of staggers, milk fever, displaced abomasums and ketosis related to turnout onto spring grass.

Why does spring grazing cause these metabolic problems?

Spring grass is hugely variable in terms of growth, moisture content, sugar content and intake. Weather conditions are also variable, affecting intakes.

Cows are creatures of habit and do not like change. The effects are most likely to be seen in high-yielding dairy cows.

What causes staggers?

Grass staggers (hypomagnesaemia) is a shortage of magnesium. Cows cannot store magnesium and therefore have a daily requirement for this mineral.

Spring grass has a low magnesium content and matters are made worse because it is also high in moisture and low in fibre, increasing the speed of



VETERINARY ADVICE

Julia Moorhouse BVM&S, CertCHP MRCVS, of Kingsway Veterinary Group, Skipton, advises on how to avoid problems with spring turn-out of cattle

transit through the gut and decreasing the time for absorption of magnesium from the feed.

What are the symptoms?

Initially, affected cows become more twitchy and easily startled, this is followed by seizures and progresses rapidly to death. Many cases are found as sudden deaths.

How can I prevent staggers?

Increase the magnesium content of the diet either by supplementation in the feed or water, boluses or by application onto the pasture.

It is also essential to provide additional fibre in the diet to slow down transit time in the digestive tract, giving time for magnesium to be absorbed. Shelter should be provided in inclement weather in order to improve intakes.

Why is milk fever more common in the spring?

Milk fever (hypocalcaemia) is caused by low calcium levels

and is most common in transition or freshly-calved cows. Cows have a sudden increase in requirement for calcium for milk at the time of calving, if sufficient calcium cannot be sourced from the diet or from bone, then hypocalcaemia results.

Mobilisation of calcium from bone is reduced if there are too many positive ions in the blood (sodium and potassium) or too few negative ions (chlorine or sulphur).

Fast-growing grass which is high in potassium and low in magnesium and calcium, predisposes cows to hypocalcaemia.

I don't get many cows down with milk fever, so I don't need to worry about, this do I?

Clinical cases of milk fever are just the tip of the iceberg. Clinical signs include delayed calving, unsteadiness, constipation, decreased feed intake and down cows.

However, for every cow dis-

playing clinical signs of milk fever, there will be seven to eight others with subclinical milk fever. Low calcium reduces muscular contraction in the gut and in the uterus.

The effects of sub-clinical milk fever on the digestive tract will manifest as reduced dry matter intake and therefore increased risk of energy deficiency and displaced abomasums.

The effects on the uterus lead to increased retained foetal membranes and increased uterine infections and, therefore, have an adverse effect on fertility.

How do I prevent hypocalcaemia?

Housing of dry cows is by far the best way to control intake of the dry cow ration and prevent hypocalcaemia.

If dry cows must be out at grass, then they should only graze short swards in paddocks with a low potassium index – spring is not a good time to have dry cows at grass.

Additional straw or low potassium forage should be provided. Magnesium is required for calcium absorption, therefore should be supplied either in feed or in water as magnesium chloride (80-120g).

Urine-testing of dry cows will help to identify potential problems before they occur.

Are displaced abomasums related to milk fever?

Displace abomasums are commonly seen in the spring and often follow on from hypocalcaemia.

Low dry matter intake is the connecting factor with hypocalcaemia leading to reduce intakes.

Spring grass is short of effective fibre leading to carbohydrate fermentation and gas production in the abomasum. This allows the abomasum to float into the incorrect position.

Can we prevent displaced abomasums?

Preventing hypocalcaemia is the first step. Maximising dry matter intake in early lactation is vital.

There are a huge number of factors which affect this, including diet presentation, cow groupings, transition diet and cow comfort.

When grazing spring grass, it is essential to provide a high-fibre buffer feed to maximise intakes and maintain rumen fill.

Why is ketosis more common in the spring?

The changing nature of grass in the spring means that dry matter content and sugar content change daily.

It is therefore difficult to predict how much energy cows are consuming from grass and to formulate the diet accordingly.

Excess negative energy balance in early lactation leads to mobilisation of body fat which is processed by the liver.

If too much fat is mobilised it builds up in the liver, reducing liver function, lowering immunity and reducing fertility.

The negative energy balance is exacerbated by the high-ERDP levels in spring grass, which stimulate milk production at the expense of body condition.

How can we prevent ketosis?

Maximising dry matter intakes is again key to preventing negative energy balance along with a correctly formulated diet.

Metabolic profiling is a good tool to use to monitor your herd. Body condition scoring will also highlight problems.

If cows are losing more than one body condition score between calving and peak yield, this would indicate a serious problem.

What are the key take home messages for preventing problems at spring grazing?

- Plan your nutrition strategy carefully.
- Provide sufficient effective fibre to maintain rumen fill and function.
- Use blood and urine testing to monitor and correct problems before they arise.