Transition Cow Management

Managing the transition cow to prevent ketosis

Acetonaemia, also known as ketosis is a metabolic disorder found in high yielding lactating cows, and can be characterised by a drop in milk yield, body weight reduction and loss of appetite. Ketosis can affect cows of any age and breed and usually affects cows 3-6 weeks post calving. Like most metabolic diseases it is important to remember that for every cow that shows clinical signs, there will be several more which are affected sub-clinically.

What is Ketosis?

It is natural for a cow to have reduced appetite before and after calving and it takes her several days, even weeks to take in sufficient energy to cope with the increasing demands of lactation. This gives rise to a 'negative energy balance' (NEB). The cow is using more energy to produce milk than she can consume, so her body attempts to mobilise additional energy from fat stores. Some degree of NEB is relatively normal in cows but the extent to which it occurs and how long it lasts are key factors in how the cow transitions into productive lactation.

During periods of high energy demand, the liver cannot fully utilise or cope with the fat that is being broken down and metabolites known as ketones are produced. Essentially Ketosis occurs when there are elevated levels of ketones in the blood, urine or milk, indicating metabolic processes in the liver are being overwhelmed. Unfortunately, the ketones released as part of this process supresses the cow's appetite, creating a vicious circle that results in weight loss and drop in milk yield.

Clinical signs to look out for:

1) Reduced milk yield - initially a moderate decline, eventually a sudden drop
2) Body condition and weight loss
3) Reduction in appetite (initially non-forage feeds)
4) Dull, stary coat
5) Firm, 'waxy' dung
6) Acetone (pear drop) smell of breath or milk - not always detectable
7) Temperature, pulse rate and respiratory rate usually normal
8) A few develop nervous signs including excess salivation, licking, incoordination, aggression

Norbrook®

Transition Cow Management

Preventing ketosis:

Prevention is very important, and the aim of any prevention regime is to maximise dry matter intake during the critical period. This can be achieved by:
1) Avoiding over-fat and over-thin cows
2) Feeding correctly
3) Reducing stress in your herd
4) Early treatment leads to early recovery, so treat as soon as possible

Treating ketosis:

Treatment of ketosis is aimed at re-establishing normal glucose levels and reducing serum ketone body concentrations. By breaking the cycle of ketone production, appetite recovers and the animals voluntary intake begins to meet her energy requirements. Treatment can include veterinary intervention through the administration of intravenous dextrose and possibly steroids. For the most part treatment of ketosis centres on the provision of glucose precursors in the form of glycerol, propylene glycol and propionates. Care should be taken with propylene glycol as overdose can be toxic to rumen microbes.

Two Ketonor+ boluses given at calving provides readily available energy sources during those crucial first hours. This encourages the cow to start eating and drinking as normal. The formulation also contains niacin, cobalt and yeast to support the liver, rumen and immune system. Ketonor+ is cost effective, does not contain antimicrobials and is easy to administer. Although ketosis is usually seen during very early lactation, it can occur any time that the cow experiences negative energy balance. Ketonor+ can be used as a supportive treatment in sick or convalescent cows alongside non – steroidal pain relief and antibiotics where deemed appropriate.

To purchase Ketonor+ please contact your local supplier.

Norbrook®