

Ketosis in Dairy Cows

What is ketosis?

Negative Energy Balance

Ketosis is a metabolic disease which usually occurs in cows in early lactation. At this time the cow's appetite is depressed after calving and energy intake cannot meet the increasing demand of the rising milk yield. This period of 'negative energy balance' is normal in all newly calved cows but it is the level at which this happens that is important.

Implications

To meet energy requirements, the cow loses weight by mobilizing back fat which is then transported (as NEFAs) to the liver and broken down to release energy. During periods of high energy demand the liver cannot fully utilize the fat and metabolites known as ketones, such as acetone and beta-hydroxybutyrate, are produced. If too much weight is lost, these ketones overflow into the blood resulting in a further depression of appetite and subsequently reduced milk yield.

Typically, cows will lose 0.5 in body condition score from calving to service but many lose more than that. Fat cows already have lower dry matter intakes post calving and so their body condition score drops even more, taking them to the

point of ketosis. Cows that have been dry for a long period of time or cows that have some sort of metabolic disease during calving, or dystocia, are also more susceptible to ketosis.

Hidden ketosis

Ketosis is a worsening problem in UK dairy cattle, with approximately 30% having 'hidden ketosis'. It is commonly characterized by anorexia, depression and reduced productivity, lower milk yields and poorer fertility. Even when at sub clinical level, cows are at higher risk of suffering a wide range of metabolic and reproductive diseases which can further reduce income and add extra cost. The direct costs of ketosis include the input by the vet and herds person, drugs, discarded milk and reduced yield. Longer term problems are extended calving intervals, higher cases of cystic ovaries, LDAs, retained foetal membranes and metritis.

What can be done to help reduce the risk of ketosis?



**Reduce the risk
of ketosis in
dairy cows**

Pro-Keto Dry

Dietetic complementary feed for high performing dairy cows

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Farm-O-San Pro-Keto Dry is a dietetic complementary feed for high performing dairy cows for the reduction of the risk of ketosis.

It includes essential ingredients for a good start to lactation. Glycogenic energy is provided in the form of flavoured chicory pulp with propylene glycol. Chicory contains inulin, a fructo-oligo saccharide consisting mainly of beta (2-1) fructosyl-fructose links. Inulin has long been associated with the maintenance and support of a healthy gut flora.

Niacin and vitamin B12 improve energy utilization. Choline chloride contributes to a normal functioning of the liver.

Pro-Keto Dry should be fed during the last few weeks of the drying off period and for the first 3 to 6 weeks of early lactation. 250g should be fed per animal per day for this period.

