Ketone Testing in Dairy Cows

The period between calving and end of lactation is a critical time period that strongly correlates with the health and milk production of the cow. During this time, cows can slip into a ketotic state, putting them in risk of decreased milk yield, impaired reproductive performance, and higher risk of more severe clinical ketosis, all ultimately leading to economic loss.1

Ketosis, arguably the most important metabolic disease in dairy herds in the US, occurs when there is a negative energy balance during lactation.2,3 This happens because the demand on the body during lactation exceeds the energy intake of the cow. The key to preventing ketosis before it becomes a clinical problem is checking cow BHBA levels through the lactation period and providing nutritional support for the herd.3

The gold standard for ketosis testing is blood Beta-Hydroxybutyrate or more simply, blood BHBA.1,2 Subclinical levels of ketosis occur between 1.2 – 1.4 mmol/L. This is an important threshold for dairy cows to detect advancing cases of ketosis and can be used to predict health risks during early lactation.2,3,4

Did you know...

- Most clinical cases of ketosis occur in the 2-3 weeks after calving5
- Milk yields can decrease up to 4.6 lb. a day in the first week of lactation with subclinical ketosis5
- Cows with subclinical ketosis (1.2 – 1.4 mmol/L) were 3x more likely to be removed from the herd5
- The gold standard for testing ketones in dairy cows is blood BHBA1,2

References: