

Stephen LeBlanc

Addendum to the question round at the Dairy Nutrition Symposium 2017

Mark Le-Perrier

Why don't we just give a prophylactic dose of prop glycol for a day before we start getting clinical symptoms of ketosis? It's definitely economically justified.

RESPONSE

I'm not aware of evidence from studies on the utility of a single day of drenching, or of routinely drenching all cows (unless the incidence of ketosis is > 50% (McArt et al., 2014), which is the case in some herds, but is uncommon). The best available evidence suggests that a good starting point is to estimate the prevalence of ketosis in a herd by sampling 30 clinically healthy cows between 3 and 14 DIM. If the prevalence is > 15% (which will be a majority of herds, based on published prevalence data in the EU and North America), then testing and treating with glycol for 3 to 5 days looks to be the best strategy on present evidence.

Rik Hendriks

Isn't it more appropriate to distinguish between ketosis type I and type II? Because the latter relates to (inflammation associated) insulin resistance.

RESPONSE

The definitions of Type I and II ketosis as applied to dairy cows are problematic and, in my opinion, not clinically useful. One key element in this classification has to do with blood glucose concentrations, which are said to be high in Type I (as in Type I diabetes in people). That is rarely, if ever, the case in dairy cows. About 35% of cows with blood BHB > 1.2 mmol/L < 16 DIM have blood glucose < 2.2 mmol/L (very low). Both Type I and II have low blood insulin. All cows in early lactation have some degree of insulin resistance (some excessively), which can be quantified, but not in routine practice in the field.

"Type II" is associated with fatty liver, which is challenging to measure in the field but clinically and conceptually useful. We should describe conditions at the level that we understand them and can actually classify them. Therefore, what is most useful is to speak not of Type I or II but of the time of onset of ketosis: in the first 2 weeks, or at 3 to 6 weeks postpartum. The former likely has causes before and at calving, while the latter has to do with postpartum nutrition and management. To the extent that there are data about NEFA or fatty liver these facts can be added to the description.

David Levick

Is a more practical measure of sub clinical ketosis to measure rumen fill from day 1 rather than relying on a chemical test?

RESPONSE

I am not aware of data validating rumen fill scoring as a predictor of health outcomes or its association with ketosis. It might be a useful adjunct, but I don't think it is a replacement for testing for BHB in milk or blood