STRATEGIES

for Herds with a High Prevalence of Ketosis

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1 Take the Problem Seriously

Ketosis causes serious economic losses in dairy herds. Cows not only lose potential milk yield, but also have increased risk for other diseases (particularly metritis and displaced abomasum) and for premature culling from the herd. The estimated economic cost of each case of ketosis (including both clinical and subclinical cases) is about $289 per cow.

The measured ketosis prevalence (the number of cows affected at a moment in time) actually represents a little less than half the incidence of ketosis (the proportion of cows that will actually be affected by ketosis sometime during early lactation).

2 Determine a Reliable Estimate of the Prevalence of Ketosis in the Herd

The best approach to estimate herd prevalence of ketosis is to use the highly reliable, cowside blood ketone test (Precision Xtra®) and test all of the cows in the herd between about five and 20 days in milk. You will need to test at least 20 cows to get a reliable estimate of herd prevalence, so smaller herds may need to test several times about two weeks apart. Once you have done this blood testing you will know your herd's current ketosis prevalence. If it is high (above 10%), then you definitely have a herd problem.

The recently developed KetoMonitor™ offers a starting point for determining a herd's prevalence of ketosis. KetoMonitor utilizes DHI milk sample component data and additional cow-based information to predict ketosis.

3 Implement Early Ketosis Detection and Treatment

Early detection and treatment of ketosis can make a big difference in most herds. For herds between about seven and 25% prevalence of ketosis, test all fresh cows twice (between three and nine days in milk) with the cowside blood ketone test and treat the ketotic cows (≥ 1.2 mmol/L on the meter) with 300 mL (10 ounces) of propylene glycol once daily for at least three to five days. Following this protocol will likely increase milk yield plus decrease the risk for displaced abomasum or premature removal from the herd. It returns about $116 per cow, compared to not testing or treating these cows.

Herds with ketosis prevalence >25% would be economically better off to give oral propylene glycol to all fresh cows and not bother with blood ketone testing. Herds with a ketosis prevalence below 7% can monitor the fresh cows and only test the cows with abnormal attitude or appetite.

4 Investigate and Correct the Root Causes of the Herd Ketosis Problem

Start by looking at the prevalence of ketosis in the first lactation cows versus the older cows. We expect the older cows to have about 1.5 times greater ketosis prevalence than the first lactation cows. If the prevalence is disproportionately high in the first lactation animals, look for over-conditioning of the replacement heifers or lack of adequate eating space in pens that contain both cows and heifers. There should always be at least 30 inches of bunk space per cow during the transition period.

If the older cows (or cows in all lactations) have a high ketosis prevalence, look for inadequate bunk space, excessive or stressful pen moves around calving, stays of more than one day in a maternity pen, improper energy intake before calving, or general over-conditioning of all of the dry cows. Diet formulation problems in the post-fresh period could also contribute to high ketosis prevalence; however, this is unusual. You can contact your nutritionist to see if certain feed additives, known to reduce the risk for ketosis, might be beneficial for your herd.

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