

Using Nonesterified Fatty Acids and β -Hydroxybutyrate Concentrations During the Transition Period for Herd-Level Monitoring of Increased Risk of Disease and Decreased Reproductive and Milking Performance

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KEYWORDS

- Dairy cows • Negative energy balance • Nonesterified fatty acids
- β -Hydroxybutyrate • Herd-level tests

KEY POINTS

- Nonesterified fatty acids (NEFA) and β -hydroxybutyrate (BHB) are energy metabolites that can be used as markers of excessive negative energy balance in dairy cows during the transition period.
- When sampled in the appropriate time frame, prepartum and postpartum NEFA and BHB concentrations above certain thresholds are associated with negative downstream outcomes such as increased risk of disease, and decreased milking and reproductive performance at the level of the individual cow.
- BHB concentrations can be measured qualitatively or quantitatively with several tests of varying sensitivities and specificities both cow-side and in laboratories. At present, NEFA concentrations can be measured only quantitatively in laboratories.

Continued

Disclosures: Nil.

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