

The survey of subclinical ketosis for DHI dairy cows ⁽¹⁾

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Abstract

This survey was to screen DHI (Dairy Herd Improvement) dairy cows with subclinical ketosis. From Oct. 2013 to Nov. 2014, individual cow milk was sampled monthly from 20 breeding farms and other DHI dairy farms. The concentration of milk acetone, BHBA (β -hydroxybutyrate) and percentage of milk protein and fat were examined by Milk Composition Analyzer. The result showed that milk ketone bodies including acetone and BHBA still stayed stable within 6 days after cold storage testing, therefore, using routine DHI operating procedure could facilitate obtaining stable ketone bodies data. The total number of cows from all farms sampled was 44,496 and 7% of them were of subclinical ketosis conditions; their highest risk of showing subclinical ketosis conditions within 42 days into lactation period was 39.3%. Among the cows from all farms sampled with subclinical ketosis conditions, 40.8% of them displayed milk protein to fat ratio (P/F) value ≤ 0.70 ; 59.2% of them displayed P/F value > 0.71 . Among the cows from all farms sampled with subclinical ketosis conditions, 43.5% of them displayed milk fat to protein ratio (F/P) value > 1.4 . However, other milk F/P value occupied 56.5%. It was concluded that the risk of subclinical ketosis occurred during all stage of milk lactation, any phase of milk P/F value and F/P value. Many factors will influence milk composition. Therefore, It is not recommend to use milk P/F value or F/P value for identifying ketosis. It is necessary to regularly sampling and monitoring the ketone bodies in DHI cow milk.

Key words: Milking dairy cows, Ketone bodies, Subclinical ketosis.

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