

Intensive Measure of Temperature in Fresh Dairy Cows

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Introduction

Postpartum disease is a common occurrence in the dairy cow. Nationally about 7% of calvings and 15% of culls occur in the first 30 days postpartum. Metritis is one of the most common diseases of the postpartum period. Metritis has been shown to occur as often as 37.3% of the time (Markusfeld 2007). Monitoring of the rectal temperature of dairy cows for the first 10 days postpartum is a common recommendation (100 day contract Pfizer Animal Health). Treatment with antibiotics is often recommended to be initiated if temperatures are greater than 103 to 104°F. The purpose of this study was to determine the temperature of lactating dairy cows in the first two weeks postpartum, and evaluate temperature as an indication of the need for antibiotic therapy for the treatment of metritis.

Materials and Methods

Data loggers (HOBO, Onset Corp.) were attached to blank CIDRS (without progesterone Pfizer Animal Health) and placed intravaginally in cows within 48 hours postpartum. These data loggers were left in place until 14 days postpartum. Temperatures were recorded every five minutes for the duration of time the data logger was in the cow. After removal the data was downloaded into a computer using the Hobo Pro software and exported into Excel (Microsoft Corporation) for analysis. Any health events during the two week postpartum period was recorded and first service conception rate,

days open and percent pregnant by 200 days-in-milk were evaluated.

Results

Temperature results were obtained from 99 cows. Of these cows 97 (98%) had at least one reading greater than 103°F. These cows had an average of 758 five-minute readings over 103°F (range 1-5322). 82 cows (83%) had at least one reading greater than 103.5°F. These cows had an average of 438 five-minute readings over 103.5°F (range 9-5042). 72 cows (73% of the cows had at least one reading greater than 104°F. These cows had an average of 259 five-minute readings over 104°F (range 1-4260).

Significance

Much of the monitoring of fresh cows on dairy farms is done by employees of the dairy. These employees are often operating on the guidelines of standard operating procedures (SOPs). Often temperature is the first criteria used to determine the health status of fresh cows. Based on the temperature readings recorded in this study, care should be taken in using temperature as the most important criteria in evaluating the health status of fresh cows as most fresh cows will have elevated temperatures post calving, and use of the temperature as the sole criteria of health status has the potential to result in the overuse of antibiotics.