

Changing the course of fresh cows by using objective monitoring.

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INTRODUCTION

The implementation of an effective postpartum health control program is probably one of the main management goals of dairy farms. It is estimated that approximately 75% of disease in dairy cows typically happens in the first month after calving (LeBlanc et al., 2006). Postpartum diseases have a direct negative impact on reproductive performance and milk yield during the current lactation. Visual observation is probably the health assessment most often used but is not always accurate or efficient.

OBJECTIVE

The aim of this study was to evaluate the impact of using insights from an automated monitoring system (SenseHub[®] Dairy) on postpartum (fresh) cow health by measuring milk yield performance at week 4 post-calving in a commercial dairy farm in the US.

MATERIALS AND METHODS

In May 2019, a large US dairy farm, implemented the insights generated by an AMS (SenseHub[®] Dairy) to identify potential sick animals in the postpartum period. Every postpartum cow was wearing a collar device that continuously monitored cow behavior. Based on these data, the monitoring system calculates a rolling Health Index (HI), estimating the possible sickness status. The HI range is from 0 to 100; the lower the value the higher the probability of animals being sick. This system provides the user with a health report, listing animals with a HI < 86 to be checked for sickness.

Prior to May 2019, the postpartum group was locked up daily for individual visual health observation. Animals were treated following the farm protocol.

Cows assessed as healthy were moved to the general lactation pens before passing 4 weeks post-calving.

After the system was installed, only animals included in the health report were evaluated in the fresh pen. No other relevant transition management changes took place.

To assess the impact of this AMS on that farm, the avg. milk yield and the % of cows producing less than 27L (60lb) at week 4 post-calving were evaluated. Only ≥ 2 lact cows that calved during 2019 and with milk yield data available at week 4 were included in this analysis. Comparative results pre and post implementing of the system were analyzed.

The implementation of an AMS in an intensive US dairy farm to assess postpartum cow health provided important productive and health benefits over a visual observation. The results indicated an improvement in daily milk yield by 2,1 L per cow and a reduction in the % of ≥ 2 lactation cows that did not reach 27L at week 4.



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RESULTS

The results for 3,501 cows that calved between January and December were analyzed. Out of 1,707 cows calved between January and June, 183 (10%) did not reach 27L (60lb) at week 4 post-calving. Between July and December, after the automated monitoring implementation, 1,794 cows calved. Of these, only 29 (1%) failed to reach at least 27L (60lb) at week 4 post-calving (Figure 1).

Avg. milk yield at week 4 post-calving in cows (≥ 2 lactations) that calved between January and June was 45.9L (101.4lb). Cows with 2 lactations produced 47L (103.8lb), and cows with 3 or more lactations produced 45L (99.5lb) (Figure 2).

Average milk yield at week 4 post-calving (>2 lactations) in cows that calved between July and December was 48L (105.6lb). Cows with 2 lactations produced 47L (103.5lb) and cows with 3 or more lactations produced 48.6L (107.2lb).

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FIGURE 1. Total number of calvings per period and number and percentage of cows with less than 27L 4 weeks post-calving.

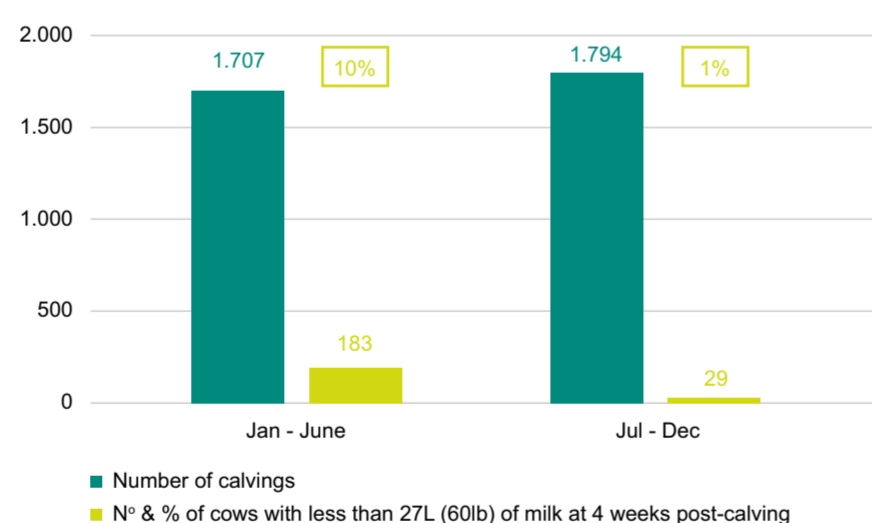


FIGURE 2. Average milk yield in L by period.

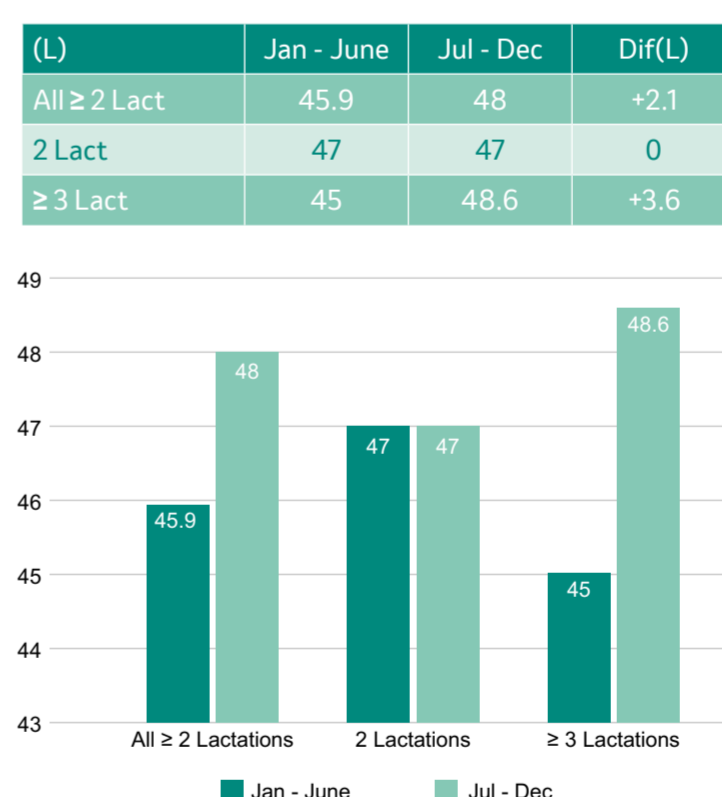


FIGURE 3. Average milk yield at week 4 post-calving of cows >2 lactations.

