Measures of Longevity in Canadian Dairy Cattle

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The dairy industry has undergone considerable changes over the last decades that have led to improvements in the health and welfare of dairy cows; yet, there has been a decrease in their expected herd life. Improving cow longevity is a common goal of the dairy industry due to the economic and welfare benefits associated with longer productive life. Longevity is most often measured beginning at first calving, neglecting to account for important management strategies and decisions made during the rearing period needed to raise robust, healthy replacements.

Reducing involuntary culling worldwide to improve longevity is the motivation of many research endeavors. Longevity is used to gauge success; yet, a gap in knowledge exists with regards to defining how to best measure longevity and which parameters to include in the calculation. Longevity is the culmination of many decisions made throughout a cow's life; therefore, to improve longevity, and subsequently welfare and economics, it is vital to understand all aspects of a cow's life that will determine when and why she leaves the herd. This should include heifers that do not survive or are culled prior to first calving or shortly afterwards, as this is a substantial financial loss for a dairy farm. Incorporating these factors into the calculation to measure longevity will provide a more comprehensive approach to improving the herd life expectancy for dairy cows.

The objectives of this study are to perform a thorough literature review to identify current definitions used to describe cow longevity and recognize different ways these terms can be applied when measuring longevity. These definitions will then be compiled and applied to cow records with regards to milk production and quality, parity and culling rates, and health and disease records of the herd, including young stock to establish which approach best identifies desirable cows to optimize their longevity. This information will be used in partnership with CanWest DHI to develop measuring and benchmarking tools for producers.

Implications: Define longevity and how to best measure it to develop tools for producers.