



The importance of your breeding program on profitability

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Profitability is a constant concern for any dairy operation. As the dairy sector continues to face economic challenges, it is important to look out for strategies that will increase revenues, reduce costs, and ultimately increase profitability. With this in mind, assessing your breeding program could be a valuable option for your farm!

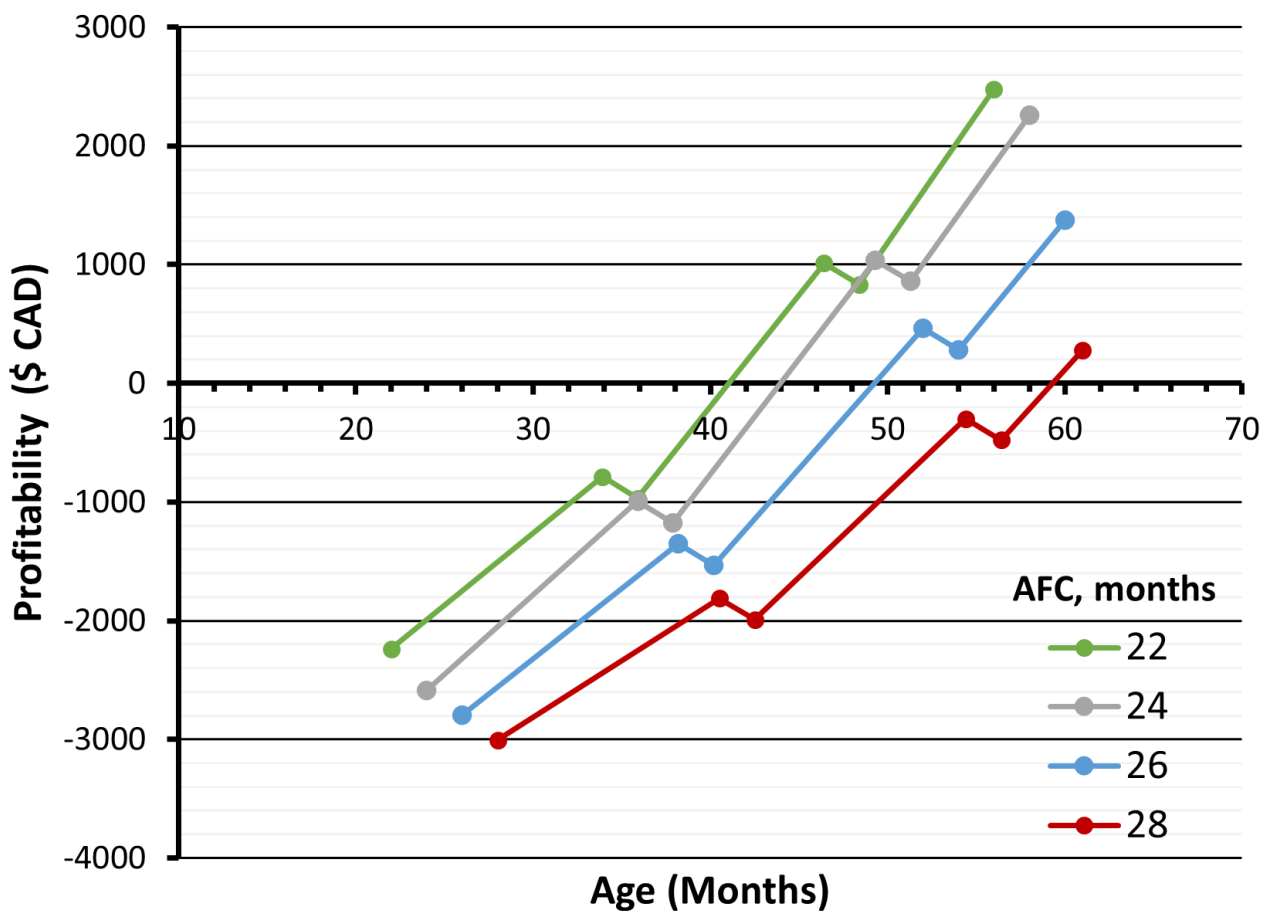


Financially, the rearing of replacement heifers represents a net expense and is one of the main costs related to milk production, along with feed and labour. Managing a replacement program should therefore aim toward reducing overall costs, while improving the quality of the growing heifers.

One of the factors with the greatest impact on a farm's overall profitability is the target age for first calving. The results of several independent studies in different parts of the world have shown that heifers that calve at a younger age yield more profit for the farm.

It is no surprise to learn that this same observation also applies to Quebec. By analyzing production data from Quebec farms (Lactanet database), average milk prices and standard costs from approximately 300 dairy farms (Agritel database), we were able to calculate the profitability during the productive life of Holsteins heifers whose age at first calving ranged from 22 to 28 months. Figure 1 provides a summary of these results; the first points for each age category represent the cost of rearing the heifers up to first calving; a cost that increases with age.

Figure 1. Effect of age at first calving (AFC) on the profitability over the productive life of dairy replacements in Quebec farms.



Once a cow begins to produce milk, the income generated eventually covers the cost of raising it. This is the point where each line crosses the horizontal axis (\$0 profitability). The data shows that heifers calving at 22 and 24 months of age generate more income per day than heifers calving at 26 and 28 months. For a difference of only 6 months of age at first calving, the ones that calve earlier pay off their breeding costs almost 20 months sooner than the ones who calve later.

From this point on, milk profits contribute to the net profitability of the farm until the cow leaves the herd. In other words, heifers that calve at a younger age show better lifetime profitability. Dairy farms where heifers calved at an earlier age were able to recover their rearing costs sooner. In addition, these farms generated greater net profit over the course of the

replacement animal's life. This improvement in lifetime profitability, associated with earlier first calving, is due not only to the lower cost of raising replacement animals, but also to lactations that are more profitable. As a result, fewer replacement heifers are required.

The younger, the better?

For decades, the generic recommendation has been to calve heifers at 24 months of age. However, many herds have been able to demonstrate that it is possible to have heifers calve at 22 months of age, and data indicates that calving at 20 months of age or less would have no impact on lifetime production.

According to the latest estimates, the average age at first calving in Holstein herds in Canada is between 25 and 26 months (Canadian Dairy Network, 2015; *L'évolution de la production laitière québécoise*, 2019). This national average for age at first calving and estimates of lifetime profitability indicate that on average, Holstein herds in Canada could increase lifetime profitability per heifer by up to \$1000 CDN by lowering the age at first calving to 22 months. This is a major gain for the net profitability of a dairy operation, regardless of its size. Just think of how much additional milk would we need to produce or additional quota we would have to buy to obtain such an increase in profit!

So how can you reduce the age at first calving in your herd?

You should ask yourself what actions you could take to reduce the age at first calving of your herd. This could be quite a challenge, considering that age at first calving depends on a number of practices and decisions taken during the development stage of heifers, such as feeding colostrum at birth, achieving growth targets, and identifying the best moment for first

mating. By reviewing the different aspects of your breeding program, you will need to evaluate your performance, set goals and implement measures; process that will need to be repeated on a regular basis. Know that you can count on Lactanet's expertise to guide and support you as well as your team throughout the process to maximize your farm's profitability.

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