VALACTA – Dairy Production Centre of Expertise

More milk at *Ferme Ferland et frères*

Gervais Bisson
Strategic Advisor

Annick Desjardins
Dairy Production Advisor and

Julie Baillargeon
Research Project and Technology Transfer Coordinator
Valacta

Nestled in the valleys of the Eastern Townships, near Compton, is the *Ferland et frères* dairy farm, an operation proud of its heritage and now focused on the future. Jacques, his daughter Julia, and Maxime Lauzon operate the family farm together. Their 300-head herd is composed largely of Holstein animals and includes about 165 lactating cows in a free-stall barn. In this chapter of their story, we will tell you about the process that has enabled them to improve their productivity, through a Potential Gain analysis of the farm's production and components sector.

The priority for the team on the Ferland farm was to improve the production and components sector. By aiming for a level of production in the 50th percentile for Quebec dairy farms, they could hope for a potential gain of around $30,000 per year.

Accordingly, the team on the Ferland farm decided to proceed gradually, focusing on one realistic goal for the following year: "Increase production to 30 kg of milk per cow per day, while maintaining component levels above the provincial average." And what's the diagnosis?

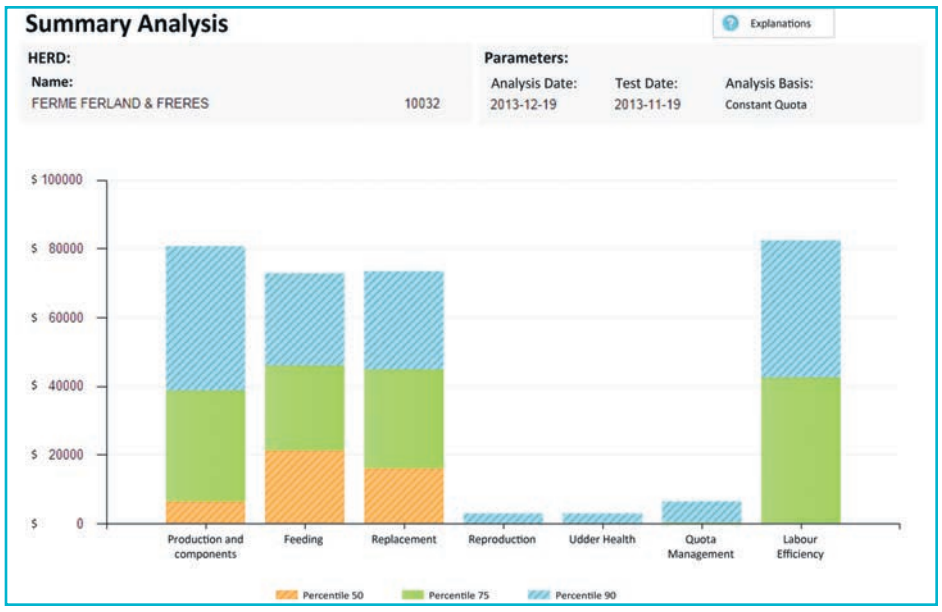
Forage quality

Certainly one of the most important factors to consider is forage quality. At Ferme Ferland, a silage-in-a-day harvest system had already been put in place to improve forage quality. Although that effort contributed to a reduction in the cost of concentrates, there was no significant increase in production.

Dry matter intake

Anything that can be done to improve dry matter intake ends up in the bulk tank; unfortunately, the opposite is also true. Every two kilograms of dry matter is transformed into two kilograms of milk. In loose housing, feet and legs are critical. Lameness affects the cows' ability to move around, and dry matter intake is inevitably reduced as a result.

It's true that many of the cows on the Ferland farm were limping or seemed uncomfortable. Likewise, the cows were spending little time lying down in the stalls; it rarely happened that 90 per cent of the cows were lying down. Many of the cows had trouble moving around, which most probably had a negative impact on ration intake, to the detriment of milk production. In the spring of 2012, a veterinarian specializing in locomotion problems confirmed there was a high incidence of digital dermatitis and sole ulcers in the herd.



Transition

If transition cows are comfortable, have a good appetite and a good body condition score at drying off, in addition to eating a properly balanced ration and calving easily, then all is well: they are unlikely to become ill in early lactation, will reach peak milk production quickly, with a good yield, and will be pregnant again at 120 days. If transition management is deficient, however, there is an increased risk of sick cows in early lactation, earlier culling, disappointing yields and dry cows at 120 days. Depending on the scenario, the transition period is either doubly successful or doubly detrimental.

Among the many Valacta reports, the Transition Cow Index (TCI) is probably one of the most important. Since the TCI for the Ferland herd was below 0, there was obviously room for improvement in managing the transition period. As far as the ration was concerned, everything seemed to be under control. On the other hand, because the transition cows were housed in the old tie-stall barn, a cow comfort problem, among others, was suspected.

Because lactation was getting off to a rough start, it was also important to assess the situation of the fresh cows. These animals were kept in their transition stalls, in the tie-stall barn, for up to 14 days after calving. Perhaps they would benefit from an earlier return to open housing with TMR feeding.

Ration

When it's a question of improving production, the first reaction is often to focus on the ration. It is important to ensure that the cows' needs are being met. Accordingly, the Ferland team explored different options to improve the rations of their lactating cows. In 2010, a self-loading TMR mixer was purchased to obtain a more homogenous ration. A slight increase in milk fat was then noted, but there was no change in production.

Other factors

Two other key areas that influence production are reproduction and udder health. These sectors are well managed in the Ferland herd however.

Follow-up

There is no instant cure for foot problems, so it takes a few months before any improvements can be observed. The Ferland herd showed steady increase in the TCI over the past 12 months. The 80th percentile for the provincial TCI is + 387. So it's clear that implementing the actions proposed in the action plan has proved profitable.

On the November 2013 test day, production reached an average of 31.4 kg of milk for the first time. In fact, average production increased by 689 kg of milk over the previous 12 months. From the time the action plan was implemented to the November 2013 test day, the cows increased their energy-corrected milk by 7.5 kg. According to the Potential Gain analysis, the increase in average yield over the past 12 months generated $31 990 in additional revenue. This calculation takes into account the sale of 11 cows.

Note that the graph for the Potential Gain Summary Analysis presented in Figure 2 is based on data for the 12 previous months. With the improvement in the herd's performance record, it's safe to say that the bar for the production and components sector will undoubtedly change its shape in the months to come!

Action Plan

Working together with their herd veterinarian and hoof trimmer, Annick, Julia and Maxime drew up an action plan to correct the situation.

Ferme Ferland Action Plan

Goal: Reach a yield of 30 kg of milk/cow/day while maintaining a margin above the provincial average. **Target Date:** 12 months

Actions	Person in charge	When
Modify the footbath formula	Julia	Immediately
Correct the hoof trimming strategy	Hoof trimmer	Next round
Adjust the neck rail for dry, pre-partum and lactating cows	Maxime	Within a month
Provide more bedding for dry and pre-partum cows	Julia	Immediately
Return cows to open housing about 4 days after calving	Julia	Immediately

What are we measuring?:

- Average production per cow per day
- Transition Cow Index to ensure that the changes made to improve dry and pre-partum cow comfort are effective
- Number of lame cows to validate the changes to the footbath formula and hoof trimming