

When reproduction goes hand in hand with organization

What follows is an account of the process that enabled Ferme Drahoka to improve reproduction management in the herd and increase profitability.

Justin Rousselle

Service Vétérinaire des Vallées au Fleuve

Jean Durocher and Julie Baillargeon
Valacta

Upon meeting the brothers behind Ferme Drahoka, one is immediately aware that labour efficiency is a matter they take to heart. In their barn in the Kamouraska region, Francis and Sylvain Drapeau have their scraper at the ready and are chasing down the next “plop”. One or the other of them is always in the barn taking care of the herd, which includes 90 cows, 70 of which are in milk, and 60 replacement animals. With 300 acres under cultivation, including 210 in grassland, they are almost self-sufficient.

Using the 27-kg quota acquired from their father in 2000, these third-generation representatives of the Drapeau family focused their efforts on milk production, bringing their quota up to 80 kg. They quickly joined the ranks of the top producers in Quebec with three milkings per day. Their fourth-place ranking for BCA average in Quebec in 2004 is their proudest achievement. The third milking was abandoned in 2005, due to a shortage of labour. It's important to note that the two brothers do almost all the farm work themselves, with employees working fewer than 80 hours a year.

Priority: reproductive management

The brothers on Ferme Drahoka strive for efficiency and performance—in all areas! They knew however that achieving efficiency and performance would require them to define their priorities and focus on organizing their operation. They decided to concentrate on the reproductive sector in particular, because they felt it offered considerable

potential for improvement. A discussion with their veterinarian confirmed that impression.

Diagnosis

Let's look at the situation on Ferme Drahoka as it was in November 2010:

The voluntary waiting period (VWP) was set at 60 days in milk (DIM), but the first insemination was generally done at 90 DIM. The conception rate at first service was around 30 per cent, while the annual pregnancy rate had reached a ceiling at 14.5 per cent. The calving-to-conception interval was 155 days and there was a wide distribution of interval length among cows. Although the herd's situation wasn't disastrous, it obviously wasn't ideal.

But was it worthwhile to improve the situation? In November 2010, the calving interval on Ferme Drahoka was 444 days. When you consider that every day subtracted from the calving interval generates a gain of \$3 to \$6 per cow, targeting a 400-day calving interval represented a potential gain of \$16,230 per year for the herd. The Drapeau brothers needed no further convincing; some changes were about to be made!

Action plan and results

The first phase undertaken in November 2010 was aimed at reducing the interval between services. In concrete terms, this meant scheduling a preventive medicine visit every two weeks. To better manage the insemination information, the brothers began using a system that includes DSA Laitier-Producteur software and a simple little table hung up in the cow barn, where they record return-to-estrus dates and heat observations. Particular attention was focused on communication, i.e. information sharing, between the two brothers and their veterinarian. The concept of heat synchronization was also successfully introduced: every cow serviced was included in a new synchronization protocol that was initiated even before the cows were diagnosed pregnant. In the case of a non-pregnant diagnosis, the protocol was carried out, thus saving a number of precious days.

As a consequence of their actions, the inter-service interval shrank from 45 days to 33, which is the 90th percentile average for Quebec. Accordingly, the pregnancy rate rose to 18 per cent. Without a doubt, Ferme Drahoka was headed in the right direction! By November 2012, the calving interval had

dropped to 424 days. That change corresponded to a monetary gain of \$8,010 per year in relation to the state of affairs in November 2010.

But the Drapeau brothers weren't yet ready to rest on their laurels. They moved on to the second phase of their plan, a more comprehensive approach aimed at improving reproductive physiology.

In the past, it wasn't uncommon for some cows to be inseminated for the first time at more than 90 DIM because they were in anestrus (i.e. no ovarian cycle). With more regular veterinarian visits, it was time to discuss a problem the brothers were seeing on the farm, namely, subclinical ketosis. Bi-weekly monitoring during the first month of lactation using KETOLAB services and/or Precision Xtra led to changes in the way the brothers managed their cows during the pre-calving and transition periods.

In order to shorten the calving-to-first-service interval in the herd and reduce the variation among cows, first-insemination synchronization protocols were implemented in November 2012. Since then, all cows receive their first service around 72 DIM. These protocols also allow the brothers to intervene more efficiently with cows in anestrus. The

outcome has been a first-service conception rate of over 53 per cent, and the annual pregnancy rate has increased to more than 30 per cent overall.

In July 2014, the calving interval was 399 days, a reduction that represents an additional gain (due the second phase of the action plan alone) of \$8,290. A further advantage of efficient reproductive management on Ferme Drahoka is a decrease in the range of calving intervals in the herd. Aiming for a high pregnancy rate ensures an acceptable interval between calvings by reducing the variability in the interval among cows. More cows calving yet again means more milk in the tank. Bi-weekly preventive medicine visits, efficient information management for inseminations, and protocols for synchronization and resynchronization of non-pregnant cows all help limit the number of cows with an excessively long calving interval.

It works!

The projected calving interval is currently 388 days. Compared to the situation in November 2010 (a 444-day calving interval), that represents an estimated gain of \$19,420 per year. There's no doubt that efficient reproductive management pays off!

ACTION PLAN FOR FERME DRAHOKA		
Goal: Improve reproductive management in the herd		
Target date: Two-phase plan (2010 to 2014)		
ACTIONS IN PHASE 1	Person in charge	When
Preventive medicine visit scheduled every two weeks	Francis, Sylvain and Justin	November 2010
Information management (services and DSA-LP software)	Francis and Sylvain	November 2010
Resynchronization of non-pregnant cows	Francis, Sylvain and Justin	November 2010
ACTIONS IN PHASE 2		
Monitoring and control of subclinical ketosis	Francis, Sylvain and Justin	November 2012
Synchronization protocols initiated at first service	Francis, Sylvain and Justin	November 2012

EVOLUTION OF REPRODUCTIVE PARAMETERS ON FERME DRAHOKA			
Parameters	November 2010	November 2012	July 2014
Pregnancy rate	14.5%	18%	30%
Calving-to-first-service interval	87	77	72
First-service conception rate	30%	35%	53%
Calving-to-conception Interval	155 days	117 days	107 days
Interval between successive services	45 days	33 days	32 days
Calving interval	444 days	424 days	399 days