



Is robotic milking for me? A few aspects to consider

Currently, only 9 per cent of Quebec's dairy farms are using a robotic milking system, but most dairy producers will eventually consider making the switch, if they haven't already made the transition.

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Advantages of robotic milking

While robotic milking has a number of advantages, not all of them generate revenues that go directly towards reimbursing one's loans. What is the actual value given to quality of life, flexible work schedules and work that is less physically demanding? Those are the key motivating factors that emerge whenever we talk to farmers who are thinking of installing a milking robot, and for good reason. In a Canadian study conducted by Ferland et al. in 2016, 213 dairy owners currently using robotic milking were asked which aspect gave them the greatest satisfaction. Better quality of life was the response given by 88 per cent of them. The same producers were also asked what they thought was the main advantage of switching to robotic milking (see Figure 1).

The top two advantages identified by producers were a flexible work schedule and work that is less physically demanding. Those two factors alone accounted for 86 per cent of the responses provided, and although it is difficult to quantify their value, a flexible work schedule was by far the most frequently mentioned benefit.

What about the dreaded alarms?

As is often the case, greater benefits may mean putting up with some inconveniences. Although robotic milking allows more freedom to organize one's time, it also requires that someone be available

24 hours a day, 365 days a year, in case any problems arise with the milking robot. The experimental farm in Derval, France, published a report last year on the use of its milking robot since its installation in 2008. The report indicated that, on average, the alarm went off during the night (between 7 p.m. and 6 a.m.) once every 11 days, and that the problems were corrected within 5 to 10 minutes. So you will need to factor in your tolerance for this type of situation when considering your options.

Work efficiency

How does the work time in robotic barns compare to that in barns with a milking parlour or milk line? In this context, work time refers to routine tasks such as milking the cows, feeding the cows, calves and heifers, and tending to herd health and management. These tasks take three minutes less in a robotic-milking dairy farm than in a milking parlour, and five minutes less than in a traditional barn equipped with a milk line. Figure 2 shows work efficiency for each type of milking system based on a 2015 Valacta study.

Production

The study by Ferland et al. reported a 737 kg increase in milk production in the 18-month period following the last milk test prior to the robotic milking start up. Production varied from 10,027 kg to 10,764 kg. The 65 Quebec farms who participated in the study all showed an increase of similar magnitude, that is, 720 kg. Nonetheless, production varied widely between farms: 20 per cent showed a drop in production (an average

of 577 kg), 10 per cent showed no change, and 70 per cent showed an increase in production (an average of 1,195 kg). These findings emphasize the importance of adequate preparation to avoid any missteps during start up. Moreover, as many automatic milking systems are installed in new or refurbished buildings, it is important to mention that part of the production increase is likely attributable to improved cow comfort.

Costs to keep in mind

Table 1 presents the average annual maintenance costs for different milking systems used to milk 60 cows. Overall, if we compare all milking systems, it costs \$5,000 more per year to maintain a milking robot. Costs vary from one farm to another, however. Average feeding costs with robotic milking are \$0.39/hL higher than with the other two milking systems (Valacta, June 30, 2016), amounting to \$2,100 more per year.

Thinking of expanding?

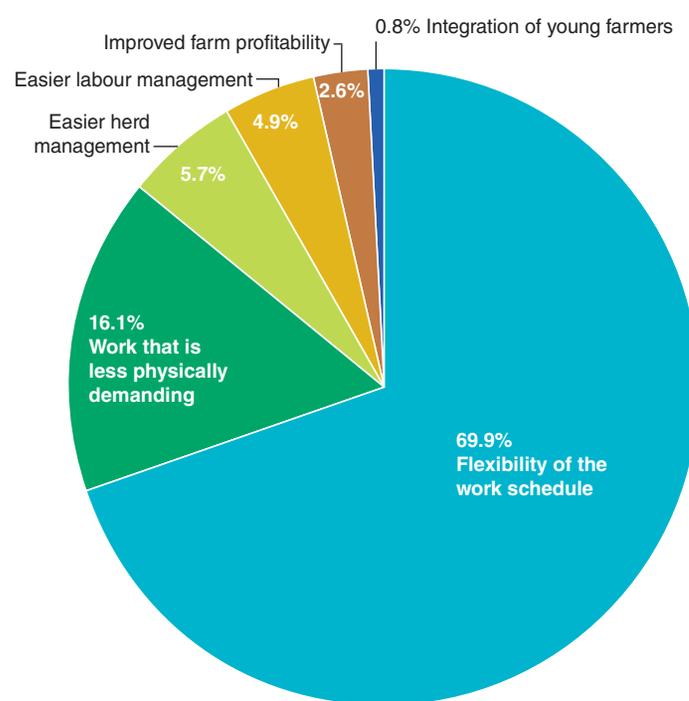
With a robotic milking system, time is the limiting factor. There are only so many milkings that can be done and so many cows that can be milked in a day. However, it is important to optimize the use of the milking robot before considering adding a second one. Some farms are currently producing over 80 kg of fat per day per robot.

There are a number of factors that must be taken into account when considering making the move to robotic milking, and it is not simply a matter of money. One thing is certain, producers using a robotic milking system must increase production if they

want to ensure a return on their investment. Discuss your plans with your Valacta advisor or technician. They can

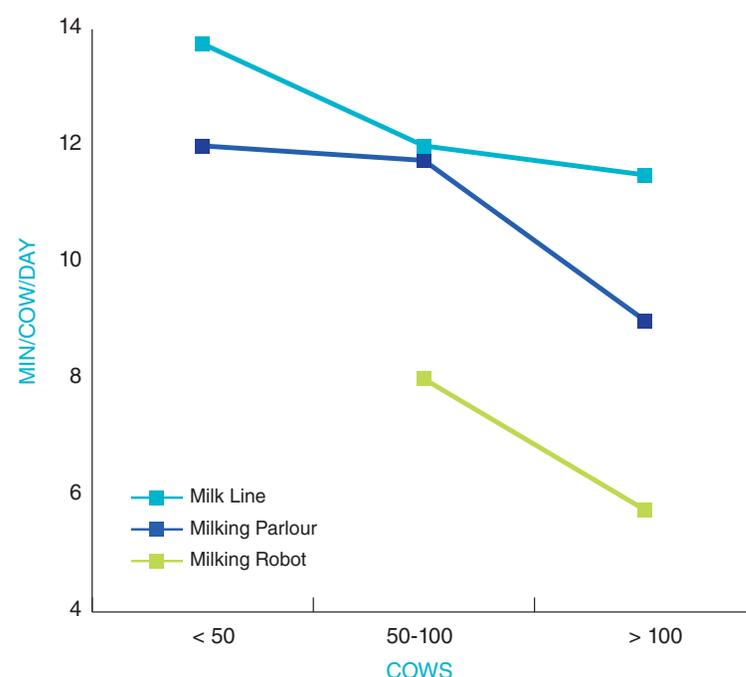
refer you to our specialized resources to help you organize your project, no matter where you are in your planning.

FIGURE 1 – ADVANTAGES OF ROBOTIC MILKING



Socio-economic impacts of a transition to an automated milking system for Canadian dairy farm, Ferland et al., 2016

FIGURE 2 – WORK EFFICIENCY BY MILKING SYSTEM



Work efficiency, Valacta, 2015

TABLE 1 – ANNUAL MAINTENANCE COSTS BY MILKING SYSTEM

| | Milk line | Milking parlour | Milking robot |
|-----------------------------|-----------|-----------------|---------------|
| Maintenance costs (\$/year) | 2,500 | 2,500 | 7,500 |

Source: Fournier and Beauregard, 2014