



One Year After Start-Up (Part 2): Why were the results so variable?

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In [part one of this article](#) we saw that one year after start-up, there was significant variation in milk production between the groups in the **top 20 %** and **bottom 20 %**. Here is how we used measurements from the Lactanet database to explain the differences.

Transition: A Critical Element

A comparison of the final milk recording before start-up to the one from one year later, showed a 326-point gain on the transition cow index for the average herd. More specifically, we saw that herds whose transition cow index increased in the first year (74% of the farms) performed well with a 2.2 kg production increase.

Herds whose transition cow index decreased after start up, however, experienced a difficult first year. These herds saw a significant drop immediately after start-up, followed by a particularly slow recovery period.

Table 1. The Influence of Transition Cow Index Variation on Post Start-Up Results.

Transition Cow Index Trend in The First Year	Transition Cow Index Variation One Year After Start-Up	Average Results Shortly After Start-Up	Production Variation One Year After Start-Up
Average Herd	+ 326	-2.2 kg milk	+0.6 kg milk
Herds Experiencing Growth	+ 541	-1.2 kg milk	+2.2 kg milk
Herds in Decline	- 283	-4.4 kg milk	-3.8 kg milk

Transition Period and Robot Milking: Proper Planning is Essential!

During the periods leading up to and immediately after start-up the focus is on the cows in milk. After all, they generate the revenue, everyday. We monitor housing, animal circulation, robot production tables, PMR composition, etc. The preparation is often less rigorous, however, for the dry cows, close-up heifers, and cows at the start of lactation.

Some questions to ask yourself...

How are changes made between these groups? Are all of these groups housed in the same barn? When making changes between groups, do you provide an anti-slip surface to avoid falls? It is important to avoid overcrowding for these groups and to provide a comfortable place where they can rest; ideally one with packed bedding.

What about feed?

Was the ration for each of these groups planned before start-up? How will it be distributed? TMR? Will the forages and concentrates be served separately? For larger herds, a feeding station can be an interesting option for the close-up group. Not only does it distribute concentrates, but it will also help the cows get used to receiving concentrates from a machine before calving, making it much easier to adjust when the cow has calved and is introduced to the robot. When she goes into the robot and the concentrates are released into the feeder, it makes the cow feel more secure. This is also an important step for heifers who are close to calving as they will be less nervous and will want to visit the robot more often. The quicker the cows increase the number of milkings at the start of lactation, the quicker they will reach their peak and even higher peaks.

The transition period is critical to successful milk production, and it is even more so with robot milking. Proper planning before start-up and rigorous monitoring of the established plan once the robot is up and running will yield better results.

Growing Too Quickly?

The majority of projects to convert to robot milking are coupled with herd expansion. The amplitude of the growth varies and we wanted to see if this influenced success levels.

Table 2. Influence of Herd Expansion on Post Start-up Results.

Herd Characteristics	Number of Cows in Lactation and Proportion of Herds	Production Variation One Year After Start-Up
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Before Start-Up	94.9	
Average One Year After Start-Up	110.2	+0.6 kg milk
Expansion < 20%	30 herds / 44	+1.3 kg milk
Expansion > 20%	14 herds / 44	-0.6 kg milk

The average expansion over the course of the first year was 15.3 cows or 16%. The herds that expanded more than 20% saw a drop in corrected milk of 0.6 kg versus their average production before start-up. The farms with more modest expansion (below 20%) saw a 1.3 kg increase in corrected milk production. Therefore, expanding too quickly can come with drawbacks. The extra work brought about by a rapid expansion combined with the learning curve for the robot software possibly reduced the time spent consulting robot reports and managing the herd.

Other Measured Criteria

Somatic Cells

Little change was observed in SCC after start up and improvement was noted after a year. When we took a closer look at the herds, however, eight of them (18% of herds) saw an increase in SCC's of more than 100,000 and two had results that were more than 500,000 SCC right after start-up. This period can generate a lot of stress for the cows that, for the most part, must also learn to function in free stall housing. It is a necessary step, but it is important to minimize the stress during this

period and handle the animals carefully.

Cull Rate

No variation was noted for this indicator, which was 32.8 % before start-up and 33.0% one year later.

Average Herd Age

We noted that the herd age was slightly younger with an average age of 44.3 months before start-up and 42.9 months one year later.

This completes the findings on robot milking start-ups, presented at the last Management Symposium. For the majority of herds, the experience was positive.

In the end, meticulous project preparation and continually maintaining the herd at ideal productivity and health remain the key elements of a successful robot start-up.



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