

## The new routine for optimized farming 04

Automatic milking offers a new routine with more freedom for yourself and more time to spend on your cows.

## The five rules for profitable milking 06

Whether you are milking conventionally or automatically, there are five rules you must keep in mind when it comes to profitable milking.

## Build your own Lely Astronaut 12

Imagine how your farm would operate at its best. What's important for you and your farm?

# Automatic milking

*"There are never any surprises.  
We don't have to wait for  
employees to show up."  
- Marcel, Celmar Dairy  
- Ontario, Canada*



*Explore the possibilities.*



*"We chose Lely robots this time around again strictly based on reliability."*

*- Marcel, Celmar Dairy  
Ontario, Canada*



**Marcel**  
**Celmar Dairy, Ontario**

"Automatic milking has changed our family's lives in the fact that we now get up as a family in the morning. We have breakfast together. We put the kids on the bus and then we go to the barn, where the cows have already been milked and are taken care of. We check the T4C reports to see what cows we have to deal with and then our day is flexible to spend time with our kids, attend school functions and go to soccer games."



## *Explore the possibilities*

When did you last take time out to truly explore the possibilities for you, your herd and your business? What would you do if you could free up time? Focus on being a better farmer or having a better lifestyle – or both? What if you had the opportunity to redress that balance?

Imagine the satisfaction that comes from freeing up time to manage cows individually. Being able to spend less time reacting and more time being proactive. Healthy cows are certainly easier to manage. They are also more efficient, productive and profitable. And the satisfaction to be had from managing a healthy herd is immeasurable.

It signifies a job well done and makes your business more sustainable and socially responsible. And if passing a thriving business to the next generation is one of your goals, you have got that box checked.

Only you know what you would like your 'possibilities' to be. Passions, interests and goals are different for everyone. So think about yours. Let them drive you to open your mind to the possibilities and solutions that are out there – and towards change.

*"The average yield for cows milked through the AMS has increased by about 2,000 liters."*

*- Hans, Langeweer Dairy,  
Ontario, Canada*

# *The new routine*

*Automation introduces a new routine on your farm, providing greater flexibility, more efficiency and a better work-life balance.*

When you spend one-third of your working life on repetitive tasks like milking, you can imagine the possibilities it brings when you automate those tasks. The physical relief, time savings and greater flexibility offer opportunities for each farmer. It allows you to focus on the more important things, like herd health, improved management and, of course, family life.

## **Let go for more control**

You are no longer working 'under' the cows – you are working 'between' them. Literally. You are able to focus immediate attention on individual cows, as required. The system will help to identify and separate cows, ready for you to examine or treat them. A carefully thought-out workflow, where the milking robots, gates and separation areas work well together, will help you gain the full benefits of automated milking. Having the right information always at hand will give you peace of mind.

The new routine means that you are in control. You decide what your day-to-day management will include. You set the agenda and your own priorities, targets and goals. This is essential if you are to have the same freedom as the cows.

## **Trust your cows**

The new routine allows cows to follow their own rhythm. The cow decides herself when she eats, gets milked or lies down. This results in a more tranquil environment where cows have the freedom to express their natural behavior. More frequent milkings for the cow and more time for you to spend managing cow health and fertility all combine to increase cow longevity, optimize production and reduce culling rates. All you need to do is trust your cows.

# A day in the life of Hans



## Wednesday evening

**6:00 pm** ⌚ < 5 min.

- Hans has scheduled his cow touch routines in Lely T4C in automatic routing tasks. So, cows that need cow touches are automatically routed to the separation area on a specific day and time. Tomorrow it is 'dry-off day' and this evening a cow shows the first signs of heat.

## Thursday morning

**7:30 am** ⌚ 15 min.

- Check if everything is ok in the barn
- Check T4C-InHerd tasks for attention cows
- Scrape out the cubicles
- Change milk filter and quickly clean the robot
- Follow up on two attention cows

**8:00 am** ⌚ 50 min.

- Provide the cows fresh feed
- Spread fresh bedding material in the cubicles
- Feed the calves

**9:00 am** ⌚ 10 min.

- Check and treat the already routed cows for drying-off and insemination

## Time for other activities

**4:30 pm** ⌚ 60 min.

- Check if everything is ok in the barn
- Check T4C-InHerd tasks for attention cows
- Change milk filter and clean robot arm
- Clean the cubicles and treat attention cows in the separation area
- Check T4C Office and plan the next day
- Feed the calves

## Thursday evening

**10:00 pm** ⌚ 15 min.

- Check if everything is ok in the barn.
- Change milk filter

*"We can do it all right from our phone."*

*- Annika, Celmar Dairy*

*Ontario, Canada*



## *The five rules for profitable milking*

### **1** *Cow freedom and choice*

Provide the cows a stress-free environment with the peace and quiet that allows them to express their natural behavior.

Automated milking puts producers in control of the cost of milking. It is a fixed cost – there are no variables, such as labor. It is predictable, and this is key to controlling costs and good financial planning.

With free-cow traffic, the cow decides when she eats, drinks, lies down and gets milked. Therefore, there should be plenty of space around the milking robot to give her free access to motivate her to go to be milked. She should be 'encouraged' – not forced.

# Control the input, optimize the output

## Your return on performance

Investing in new equipment and implementing a new system must be justified on any dairy unit. As a producer, you need to make sure that you see a solid return on your investments. With an automatic milking system, milk yields typically increase and producers can expect to see the highest lifetime production per cow. This is because cows are milked more frequently through an automatic milking system – 2.7 times a day, on average. Improving income from the dairy herd is driven by reduced labor and more milk. Explore the possibilities within your herd. Use accurate, real-time information on yield, protein, butter fat, milk speed and health traits. Breed in the good traits and breed out the bad.

## Improved herd health and welfare

More income can also be the result of increased stock sales, particularly sales of surplus heifers. Achieving this relies on a lower herd replacement rate through better cow health, which in turn means fewer involuntary culls. An Astronaut contributes to better herd health and welfare, with fewer cows experiencing lameness, injury and mastitis issues. In the longer term, these advantages improve the return on investment of the Lely Astronaut.

## Consistent input and output

Relying less on labor and knowing the Astronaut's running costs, along with a more consistent and predictable milk yield, will provide the business with a steady cash flow.

## 2 Cows like consistency

Let your cows develop their own individual rhythm that suits their needs and stage of lactation.

## 3 Individual treatment

Every cow and every one of her teats is unique and, therefore, needs to be treated individually.

## 4 Optimize cow health

Cow performance is optimized when cows are healthy. Health requirements must be met.

## 5 Handle milk with care

Milk is a valuable but perishable commodity and needs to be handled with care to maintain the quality.

Cows are averse to change, so a barn and self-learning milking system is an important element of profitable milking. Automatic milking systems allow each cow to develop a consistent routine that suits her individual rhythm, needs and stage of lactation.

The optimal milking process meets the needs of each individual cow, each udder and each quarter. Automated milking allows milking to be easily tailored to meet different needs.

Automated milking quickly identifies any abnormalities in milk or cow behavior that could indicate health issues. This 'early warning' means that preventative steps and treatments can be administered as soon as possible – and before issues become clinical.

Timing is everything when it comes to milking to ensure that milk quality is at its optimum in terms of fat and protein. Preventing milk losses from milking also maximizes milk in the tank. Milk should remain in the same high-quality state as when it leaves the udder.



## *Benefit from local knowledge and 24/7 support*

The Lely Center in your area is your local partner in dairy automation. Over the years, Lely has built a comprehensive network of specialists, combining their experience in dairy automation with local knowledge. Their main goal is to help you get all the benefits from your Lely equipment.

### **Get it right the first time**

All Lely Center facilities worldwide are supported by national or regional organizations that monitor the quality of the service offered and are available in case your query requires escalation. It is dealt with quickly and effectively by the right people. They have the skills and experience to get it right the first time.

### **A joint journey**

When you look forward to the transition phase, remember that you are not the first. More than 15,000 farmers went before you, and all of this experience is embedded in the support you get from your Lely Center to provide a flawless installation and start up.





### **Regional knowledge and experience**

The farm management advisors at your local Lely Center keep an eye on the wider picture – starting with a smooth transition followed by checking in with you regularly to see that your herd is performing to its potential. Because they have other systems installed in your area, they are up to speed with any regional challenges or issues and are able to cope with your needs.

### **Dedicated automation support**

Remember that you will have full access to Lely's certified technicians, through your local Lely Center. Their knowledge, help and support is available 24/7 to ensure that your Lely Astronaut plays its integral role in optimizing the productivity and profitability of your farm.

### **Dairy farming is in our blood**

Many of Lely's staff come from a farming background themselves. They understand how farms work, are trained every year and tested on their knowledge. Reliability and expertise to assist both new and existing customers are on hand seven days a week, twenty four hours a day.

### **Peace of mind**

Peace of mind is most important in day-to-day activities. This means being able to rely on employees, machinery and a steady partner in servicing and support for your most important piece of equipment. It is good to know that behind your Lely Astronaut is an organization you can trust. Whatever happens.



## ***Gradual growth***

Expanding a dairy farm is something you can plan and implement over a long time. This can be done gradually so that it remains manageable in terms of financing and labor efficiency.

Milking robots fit into this perfectly. Simply because the milk capacity and investment can grow in line with the growth of the number of dairy cows. This avoids the huge investments of a milking parlor and a waiting area, in order to have sufficient milk capacity at a later stage.

## *Lely Astronaut*

# *The most cow- and farmer-friendly milking system*

Cows benefit from robotic milking. They are more relaxed, healthier and reward you with more milk. This is because the system fits much better with their needs and frees up farmers' time to give true attention to cows. It is simply the best system for milking your cows. With this in mind, you only have to look for the best-performing robot that is also the most reliable and offers milking at a very acceptable price per liter.

### **Best-performing robotic system**

The cow is the most decisive factor in the performance of any milking system. Understanding cows and treating each cow in the best way is what the Astronaut is all about. The Astronaut offers the easiest access and the most cow-friendly box to make sure a cow likes to visit the robot. The brushes ensure the best pre-treatment and stimulation, while the milking process is tailored to each quarter. The management system automatically arranges ideal milking intervals. This ensures good udder health and milk yield. Vital cow and milk data is offered as valuable information to allow farmers to take action at the earliest possible stages. From I-flow to the most accurate hybrid arm. From all sensors close to the udder to adaptive pulsating. The Astronaut uses every split second to reduce box time and to optimize its output.

### **For everybody**

A quick view during milking for the cow's info, or fast and easy first milkings. The Lely Astronaut is easier to use and understand than ever before. Lely has focused on meeting users' demands, with significant changes to the control panel and functionalities. The system offers step-by-step simple instructions, with carefully considered menus and clear icons.

### **Maximizing benefits and minimizing costs**

Reducing labor by eliminating repetitive tasks, making farmers more flexible with their time and increasing milk yields and cow health are the recognized and proven benefits of automating the milking process. Lely now offers these benefits at a steady total cost per liter that is as low as possible. With the new hybrid robot arm, Lely has managed to reduce energy consumption by as much as 20%. The system's water consumption has also been lowered, compared to the volumes used by conventional milking systems.

### **Quality you can rely on**

Being able to trust your milking system fully is what you expect. The Astronaut comprises 25 years' intensive engineering and the experience of more than four million carefully monitored milkings per day. Its design has a focus on uptime, fast maintenance and steady performance. All high-quality components and details of the robot have been part of the most intensive testing program ever.



### **I-flow**

The revolutionary I-flow concept stands for unbeatable visit behavior. The cow stays within the comfort of the herd.

### **Tailored milking**

Quarter-based pulsation, automatic milking intervals and individual take-off enable the Lely Astronaut to milk each cow according to her specific needs.

### **Easy first milkings**

This newly developed feature is easy for the farmer and relaxed for the cow. Simply bring the arm close to the udder when milking a cow for the first time.

### **Pre-treatment brushes**

Brushes remove dirt and manure from teats and even the bottom of the udder. It is also the best stimulation for letting down the milk.

*Proudly developed with our customers...*



### **Hybrid arm**

The silence and accuracy of the new arm make the robot more human- and cow-friendly than ever before.

### **Lely T4C and T4C InHerd**

The clever management system evolves continuously by presenting smarter KPIs in the clearest possible way.

### **User interface**

The redesigned menus in the control panel are more intuitive and easier to use.

### **Reliability**

Lely has never before introduced a more thoroughly tested Astronaut. All techniques used have been exposed to extremely heavy conditions.



## *The new hybrid arm*

The principle of Lely's robotic arm has proved itself as the smartest solution for taking care of the milking process. It is underneath the cow during the whole milking process and reacts fast when a teat cup drops off to keep it clean. The arm follows the cow, allowing her maximum freedom of movement in the box.

The hybrid arm of the new Astronaut A5 combines the advantages of electrical driven movements with the softness and the power of air. A huge pneumatic cylinder carries the weight of the arm, using virtually no air, while electrical components move the arm with great accuracy. The air in the system balances the heavy load of the arm and buffers cow kicks, protecting the electrical system.

### **Cow-friendly**

- More rest through quiet operation.
- Easier milking through accurate and swift attachment.
- Suitable for every cow due to the wider reach of the robot arm.

### **Energy-friendly**

- Very little energy usage when the arm is in position.
- No air use while moving.
- Faster into position through the most accurate drive.



## *Lely Astronaut A5*



### **User-friendly**

- Easy first milking due to the new control panel and accuracy of the arm.
- More comfort through quiet operation.
- Less and easier maintenance due to better accessibility.

### **Technology moving forward**

After 25 years, automated milking has evolved towards a mature and finely tuned system. The question was: what will take robotic milking to a higher level? With the performance and principles of the Lely Astronaut A4 as the starting point, Lely took off with developing the next step in robotic milking.

### **Progress under the hood**

The A5 has the same successful design as the A4; most changes have been made inside. The hybrid arm is the most visible example, resulting in less energy usage and more rest for cow and farmer. A lot of progress has been made under the hood, focusing on aspects such as reliability, ease of use and accessibility (*see page 12*).



## *Build your own Lely Astronaut*

At Lely, we know all dairy farms are different. Your farm is unique, just like you and your goals. But although modern dairy farming can be a complex business, at the end of the day, there needs to be milk in the tank. Please take some time to think about your situation. Imagine how your farm would operate at its best. What is important for you and your farm?

### ***Add precision to reproduction***

#### **Repro choice**

To be in control of your farm, you rely on reproduction. Get an extra set of eyes for getting your cows pregnant. Add accuracy to reproduction and you will be able to see the cows in heat and inseminate them at the right moment. This will boost your conception rate and save you a lot of time.





## *Improve hoof health*

### **Hoof health choice**

Good hoof health is important to the well-being of cows and dairy farms. In order to be able to move freely, the cow must have healthy hooves. With healthy hooves she can do as she pleases in the barn or in the field: rest, feed, drink or visit the milking robot. With the Lely Meteor hoof-health approach, hoof health improves in a sustainable, animal-friendly and safe manner.

## *Focus on feed efficiency*

### **Feed choice**

Feed is one of the main expenses on a dairy farm. Therefore, feed each cow to its actual needs and operate on feed efficiency. Get the possibility of feeding more advanced rations, even in combination with liquid feed.

## *In control of udder health*

### **Udder control choice**

Good-quality milk comes from a healthy udder. Get clear insights into udder health and understand when to take action. Have bacteria eliminated and cross-contamination avoided before each milking. Get a grip on your udder health, improve it and reduce your costs.

## *Support your grazing strategy*

### **Grazing choice**

Grazing is the most natural way for cows to get fed. Grazing positively impacts cow welfare and health. Get healthy, happy cows out in the field while having full control of your milk production. Grazing is increasingly a social expectation, as society expects to see cows in the field.

## *Know your cows*

### **Cow health choice**

Taking care of your most valuable possession: your cows. Healthy cows save costs, time and drive milk production. Get more control over cow health and make the right decisions with advanced sensors and easy-to-use information. This will secure your revenues.

*"Everything has gotten much simpler for us."  
- Marcel, Celmar Dairy  
Ontario, Canada*





## *Explore the possibilities*

Only you know what you would like your possibilities to be. Let them drive you to open your mind to the possibilities and solutions that are out there. Stepping back and considering the future can be the first move towards a more fulfilled life. What would you do if you could free up time? Focus on being a better farmer or having a better lifestyle – or both? Your local Lely Center invites you to explore your possibilities.

Call **1-888-245-4684** or email [marketinglna@lely.com](mailto:marketinglna@lely.com)

*Start exploring with your local milking experts.*

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