### DeLaval DelPro

**A System Approach** 





# IT ALL REVOLVES AROUND YOU

We have built DeLaval DelPro™ and its suite of sensors and applications to give you more control than ever before, by surrounding you with faster, more accurate access to valuable information, analysis and reports that will help you make better decisions on your farm.

You set your management objectives and targets, and DelPro is there to make sure you have everything you need to put your plans into action, all the information you need to monitor and adjust those plans, and the alerts and analysis to stay on track.

To do this, DelPro pulls the many data sources on your dairy farm together, processes and analyses them to create valuable information and reports to help you do your job. With a range of different applications to help you harness all that power depending on the task at hand, DelPro puts you, and usability, at the center of everything it does.

Fast, easily understood, valuable, accurate and actionable information to help you meet the challenges of modern dairy farming.

When you need to make a decision on your dairy farm, the first place to turn for trusted, useful information is DelPro. It's where better decisions start.





#### **Animal Welfare**

Healthy cows are the key to any dairy farm. DelPro records and analyses data from every cow to provide you with accurate, reliable and timely information of the wellbeing of every cow to help you make decisions that result in superior animal health, reproduction and longevity.



# TAKING A 36 YOUR

#### **Work Efficiency**

DelPro was designed to help you focus on the key tasks that will help you be more productive. This means making it easier to record valuable performance data and then using that data to generate reports, alerts and action plans to help you make better decisions.





#### **Farm Profitability**

DelPro enables faster diagnosis of animal health issues to reduce treatment costs, longevity and performance loss; feed optimization to reduce waste and improve productivity; accurate heat detection to reduce insemination costs and improve reproduction; and the ability to carry out projections to explore possible enhancements to your farm's profitability.

# O VIEW OF FARM



#### **Food Safety**

DelPro exists to help ensure your cows are producing better quality milk, that any cows who shouldn't be milked aren't – and that should any milk be compromised, it is diverted from the tanks.

# WHY IS IT BETTER?

DeLaval DelPro™ is a central operating platform for dairy farms that is currently used on a wide range of farms, from those with a handful of animals, all the way up to 20,000 animals. Whether you milk cows, sheep, goats or buffalo, it provides the processing power that turns all of the data you receive from milking and feeding systems, integrated sensors, animals, recorded events and observations into usable information to help you make better decisions that drive better results.





# THE KEY FEATURES

DeLaval DelPro<sup>™</sup> takes all the data being recorded on your farm and does the number-crunching for you.

Instead of pages and pages of numbers and charts – you get valuable information, sometimes in the form of a single number or alert.

This useful, actionable information is delivered to you by whichever DelPro application is the right one for the task at hand. This means you may want the information in the office, the barn or pasture, while milking or even when you are with an advisor away from the farm. With DelPro you can even grant remote access to parts of your data to vets and advisors.

It is easiest to think of it as a hub for your dairy farm. Everything is fed into it via a range of inputs; DelPro processes and orders that data to allow analysis and reporting that is then delivered to you via a series of applications that make it easy for you to do more with the data than you probably thought possible.





#### **DelPro**<sup>™</sup> **Farm Manager**



Milking System Interfaces





**DelPro**<sup>™</sup> Companion



**DelPro**™ **BioModels** 



DelPro<sup>™</sup> Certified Trainers Advisory and Support

# DelPro Farm Manager

# DeLaval DelPro™ centralizes, processes and analyzes the many points of data recorded on your farm.

DelPro Farm Manager is the major interface to all that information. It puts the power at your fingertips so that you have everything you need to make better decisions every day.

This means that whether you need to monitor the production of one cow, a group or the whole herd; to check when your next milking system service is needed; or to create a recurring protocol to ensure that every animal on your farm receives a vaccination at exactly the right time - DelPro Farm Manager puts you in control.



#### **Monitor Board**

One screen to provide a total overview DelPro Farm Manager is the key to turning all the data recorded on your farm into valuable, easily understood, actionable information. Your Monitor Board provides exactly this. It provides a dashboard which gives you a snapshot of everything you need to know in an easily understood and evaluated visual format.

#### Milking Queue - only for AMS

95% of DelPro farmers with AMS use the Milking Queue every day, and rate it the most useful module they receive. The Milking Queue is the perfect way to start your day – providing a snapshot of everything that happened overnight, and during the previous day. This allows you to quickly identify the things you need to do today to maximize your productivity.

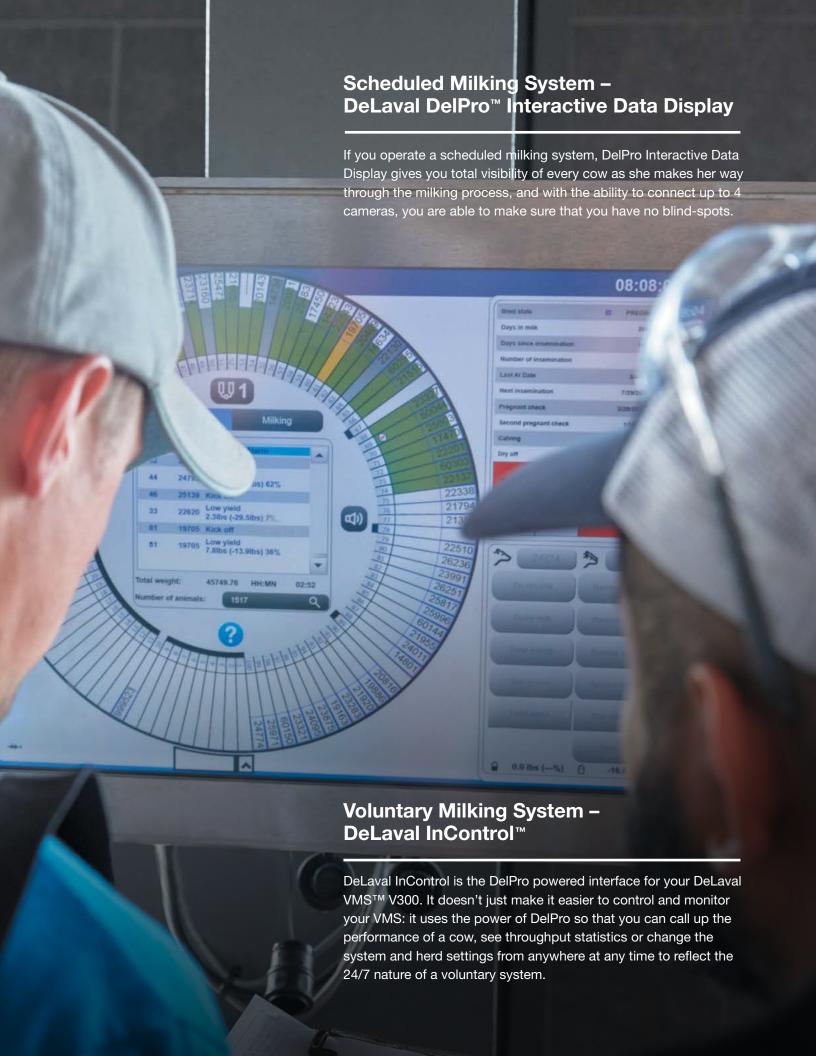


## Milking System Interfaces

Whichever DeLaval milking system you use – DeLaval DelPro™ is able to be right there when your cows are milked.

All interfaces are fully integrated with DelPro, and therefore all the data is available to you in the office using the full suite of DelPro Farm Manager dashboards and reports to help you enhance your milking performance, track daily routines or share information with staff.





# DelPro Companion

# Never leave the office alone – take DelPro Companion with you.

To complement DelPro Farm Manager as part of the ultimate farm management operating platform, DelPro Companion is developed to work with you, not only displaying animal information but also supporting your working routines to record all the important events that happen throughout your day, as they happen.

The result is that an insemination, pregnancy check or health treatment will not be missed and that you can accurately record every action, in real time, there and then. DelPro Companion puts the power to make better decisions, right into your pocket.



#### **ANIMAL LIST**

All your animals in one place, from here you navigate into individual animal cards, record single events like insemination, pregnancy check, health treatment or sort and filter the animals you want to work with.

#### **BATCH MODE**

DelPro Cor

Record the same event with the same results on multiple animals at once. Add a dry off, group change and treatment in one step. Use the voice feedback to make sure that the action you want to take is the right one.

#### **WORKER MODE**

Record the same event for a group of animals with each animal having a different result. You have multiple cows to pregnancy check; some are positive and some negative. Connect a Bluetooth ID reader to your phone to make sure you always record the event for the right animal.

#### **ATTENTION REPORTS**

If you need a calving, dry off or insemination report; it is already in your pocket. These predefined reports from DelPro Farm Manager brings your focus to animals that need your attention.

# DelProma BioModels

DeLaval DelPro™ is our most powerful farm management tool due to the sophistication of DeLaval's proprietary BioModels that drive the analysis of your data to help you reach clear actionable decisions.

#### What is a DelPro BioModel?

DeLaval DelPro is able to project future states based on current and historic data. This is done by creating accurate models of both biological and behavioral outcomes that we call BioModels. These are unique to DeLaval, and they are able to be harnessed by you through DelPro. The information produced by these models is often presented in the form of an index – you set the threshold that shows you when performance is less than desired or greater than expected.

This means we can use BioModels to give you a clear snapshot of cow performance, reproductive status or health, often before there are any visible signs.

Examples of this are Herd Navigator and the new Cow Health index (CHi).



# **DeLaval Herd Navigator™** BioModel DeLaval Herd Navigator enables progressive dairy farmers to proactively manage their herd. Delivering precise analysis of milk to develop an action plan for each cow and the herd to help improve farm profitability through improved reproduction results and lower health costs; as well as making more efficient use of your time.

Herd Navigator includes three BioModels (reproduction, mastitis and ketosis) that are designed to feedback into the system when each individual cow needs to be sampled next time, based on the previous sample results. This function is built to optimize number of samples to focus on critical situations, still maintaining the system performance.

When you start your day, DeLaval DelPro with Herd Navigator alerts you to the cows that need to be inseminated, pregnancy checked, treated or given further attention.

#### Cow Health index (CHi)

DeLaval has made health monitoring simple.

We've created an algorithm which uses data from DeLaval Activity Meter System, milk production, milk flow, and milk conductivity to provide you with a list of potential cows in trouble. Each is ranked by a health score indicating which parameters are not right. As you know, early diagnose is key.

Cow Health index (CHi) is available for conventional milking systems with DelPro.

#### **DeLaval Mastitis Detection Index (MDi)**

The DeLaval Mastitis Detection Index MDi is a unique tool developed by DeLaval, which combines multiple pieces of data, to provide you with 1 number that gives you an early indication of the health status of every cow.

This means that at a glance you can review any cow, group or your whole herd to see if any are in need of inspection or treatment. MDi does not use any chemical and it analyses several parameters to provide better warning for faster management to avoid udder health issues and mastitis.

DelPro calculates the MDi for every cow, at every milking and uses the data to help you ensure better health outcomes.

# DelPro Certified Trainers Advisory and Support

Once you make the decision to put DeLaval DelPro™ to work for you, we can help you to make it work as hard as possible.

#### Implementing the system you need

Our DelPro Certified Trainers are experts in setting up the whole system, that means ensuring that you are getting the right data inputs by deploying the most cost-effective suite of sensors and meters; and ensuring that your management objectives are supported by the best reports and DelPro applications to deliver you actionable, timely information to support your decision making.

#### Advisory empowered by unique remote analysis tools

With the power of sophisticated software tools for remote data analysis of robotic farms, our advisors can help you monitor your farm's key performance indicators and also benchmark your performance with similar farms. Their experience working with your dairy – and other farms – enables them to offer valuable advice, help you set goals, and determine priorities to help you achieve maximum results.



#### Ongoing optimization and learning\*

Once you are up and running our advisors can support your whole operation. Using the power of the DelPro platform, they can check your current performance and propose ways to get better. Whether your focus is in increasing milk yields; better feed efficiency; improving pregnancy rate; lowering mastitis incidence or reducing milking time, together you will prepare a plan to achieve your targets. What's more, with DelPro Remote Farm Connection they are able support you, when you need it, wherever you are, giving you the greatest chance to succeed.

#### **DelPro™ Remote Farm Connection**

With DelPro Remote Farm Connection, you can access DelPro Farm Manager from anywhere. You can also provide remote access to vets or advisors, and it also means that the DeLaval remote support team can instantly access, view and analyze diagnostics to get a complete overview of your data and also your milking system. This means that they can help you with any DelPro related queries, but also – when it comes to your milking system, they can advise you if a problem can be easily resolved or, if a service visit is required, the service technician will be fully briefed on the situation; thus speeding up the service process.



# PUTTING IT ALL TOGETHER

On a dairy farm everything is inter-related and every decision has multiple impacts. That's why DeLaval DelPro™ has been designed to support the 5 key pillars of farm management, and to provide you tools to help you make the decisions that will maximize your results for your whole farm.





#### **MILKING**



## **DelPro**<sup>™</sup> **During Milking**



#### Scheduled Milking -DeLaval DelPro™ Interactive Data Display

DeLaval rotary and parlor milking systems are equipped with sensors that record cows entering, milking and exiting. We combine all this data and present it to you during milking with alerts that allow you to maximize the quality and quantity of the milk you harvest.



#### Voluntary Milking - DeLaval InControl™

When you work with a voluntary milking system like the DeLaval VMS™ V300, the requirement for 24/7 real-time reporting is essential. That's why DelPro was designed with a live module to provide you with continuously updated information for your whole herd.

However you milk, the ability to present live, real time data at the point of milking is a key feature of DelPro, your DelPro enabled interface also allows you to quickly record events or observations immediately in a way that ensures the information is retained and utilized by DelPro. This means that when you are back in the office you are able to review accurate data through DelPro Farm Manager to review and improve milking performance.



## **DelPro**<sup>™</sup> **Before and After Milking**



#### Milking Performance

The Milking Performance Dashboard in DelPro Farm Manager gives you a quick insight into the performance of your milking system: cows milked per hour, rotations and/or batches milked and milk harvested across the milking sessions. Simple color indicators can then alert you to changes in performance. It also allows you to quickly and easily access additional information to help you correct any performance issues.



#### **Detailed Animal, Group and Herd Production Performance**

Our milk meters constantly record the milk yields, flows and cups on time of the cows during milking. This accurately recorded data is then combined on group level to give you an insight into production and efficiency performance differences across groups within your herd.



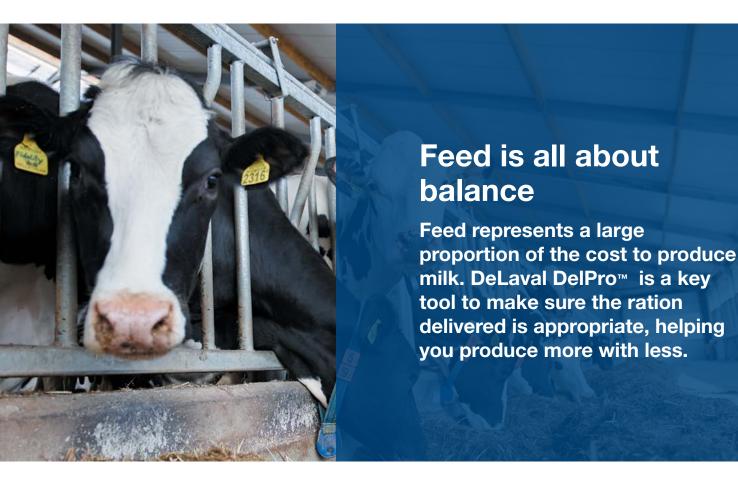
#### **Live Milking Information at Hand**

If your cows are milked 24/7, a standard static report is not efficient enough to fit in your daily work. Therefore we designed a live platform giving you a tool to keep a structured overview, live, of all cow milking status. This is key in effectively monitoring your herd, and the individual cow, in whatever lactation stage she might be.





#### **FEEDING**



#### **Feed Strategy**

The needs of your cows change at different stages of lactation. DelPro ensures you quickly, safely and accurately adjust your feed to meet these changes. This means continually adjusting the base ration and managing supplements to ensure animal welfare, productivity, reproductive performance and longevity at all times.

DelPro gives you the power to set a controlled strategy and implement it for differing days in milk, production level, group or lactation number.



#### **Monitoring**

We all have animals that do not consume exactly the feed that we have assigned to them, often due to health related problems. DelPro quickly highlights these animals by providing reports on feed consumption history at a cow and herd level. This combined with a 365 day graph showing feed consumption lets you easily review the nutritional intake on herd, group and animal level.



#### **Cost:Benefit**

Being profitable means keeping a close eye on your feed efficiency. That's why we created easy to read overviews to see the farm performance from a "top down" approach.

Based on feed consumption, feed cost, production data and milk price DelPro provides a clear overview of the herd, group and animal level feed efficiency. This also allows you to budget and model future scenarios.



#### **Concentrate management**

If you feed supplements, you know the risks of oversupplying animals with concentrates. DelPro will help you to deliver a cow's ration accurately and safely. You decide how much feed a cow should get per visit, and at what speed feed is dispensed, DelPro uses this to put in place limits for consumption per visit, carry over to the following day and hour qualification.



#### **Body Condition Scoring**

Consistent, accurate monitoring of every cow's body condition score is key to the timely adjustment of your feeding strategy. It is the key that unlocks consistent, reliable productivity, longevity and reproduction results. With the addition of a DeLaval body condition scoring BCS you are able to automatically record accurate, consistent body condition scores for every cow, every milking, every day. This 3D mapping technology generates the data that when analyzed using another of the exclusive DelPro BioModels is able to alert you instantly to changes in condition before they are even visible, allowing you to act faster to prevent future problems.



#### REPRODUCTION



Dairy farming is not possible without the ability to manage reproduction, and successful reproduction is all about timing.

This means that you need instant access in "real time", and even more than that, you need the information presented in a way that allows you to easily see what needs to be done to meet your reproduction targets.

#### One of DelPro's key tasks is supporting you to meet this challenge.

This isn't just about capturing data or creating BioModels to help you, but presenting the most valuable information, in the most timely fashion, in an easy to use format; to help you make the decisions that will lead to the fewest inseminations required to get your cows pregnant on time.

# We provide simple working groups: a top down approach



#### **Farm**

You set your objectives and the numbers you want to achieve, DelPro allows you to measure your results against these goals.

By looking at your herd and breeding summary reports, you can see the number and nature of the reproduction events that occurred over the course of the last year. This lets you quickly identify areas you can improve. It might be pregnancy rate, conception rate or the number of cows calving each month, DelPro will help you make the changes you need to get the results you want.



#### Herd

Visual presentation of your herd's data allows you to quickly and easily see patterns that a list of numbers simply can't match. Our unique herd reproduction distribution graph and custom scatter graphs allow you to view your whole herd, or any group you wish, on one screen letting you quickly see the big picture. These graphs instantly highlight individual cows that need attention, trends that require action or analysis of your overall strategy and results.



#### Cow

Individual cows cycle through the reproduction process at different speeds, which means you need to be aware of the actions required for each individual animal at the exact moment that it is required.

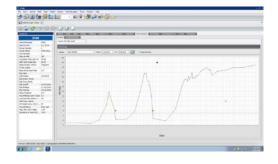
DelPro reproduction attention report is at the heart of your reproduction management.

Combining accurate data from every animal, which is filtered against your management objectives and analyzed according to standard operating procedures – this report indicates clear, structured actions to help you give each cow the attention she requires to ensure a timely and cost-effective pregnancy.



## The ultimate reproduction management solution

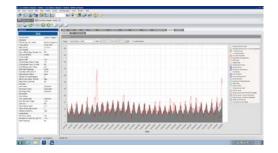
Adding the power of DeLaval Herd Navigator™ or DelPro™ Activity Meters to your farm management platform will deliver quite simply, the ultimate reproduction management support for your farm.



#### **DeLaval Herd Navigator**<sup>™</sup>

The addition of Herd Navigator gives DelPro access to the golden standard for reproduction management and heat detection - progesterone. With milk analysis performed automatically the DelPro BioModel is able to use the level of progesterone in her milk to both predict when a cow will come into heat, and define the best time to inseminate each cow.

In order to monitor each reproduction cycle, the DelPro BioModel will also identify when a cow is pregnant, if there is an early embryonic loss and which cows have abnormal ovarian structures such as cysts.

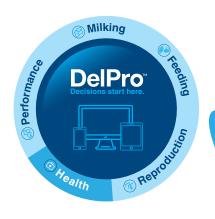


#### **DelPro™ Activity Meters**

DelPro uses the data recorded by the Activity Meters to carry out advanced statistical analysis of her movement during the day and comparing her current movement with what was expected of her to model and predict her heat status giving you accurate heat-status for every cow. In addition, whilst knowing her current movement status we can also predict the health status. A decreased movement indicates a potential health issue.



In fact, the only way you could get better information to identify cows in heat would be to have someone follow each cow every hour of every day recording their activity, a full time vet and a milk analysis lab on site.



#### **ANIMAL HEALTH**



## **Quality milk from healthy animals**



#### **Accurate Records**

You are expected to have accurate treatment records, DelPro makes entering, storing and sharing that information easier and faster.

DelPro is designed to make it easier to make the step from diagnosis to treatment as simple as possible. Not only can you setup specific treatment protocols with specific drugs and actions per diagnosis, once a treatment event is added you will receive attention reports to carry out treatments, divert milk and draft animals. You will also have one-click access to record that you have carried out the prescribed actions.



#### **Automatically Divert Milk**

If you are using a DeLaval milking system, DelPro uses the conductivity and blood level data recorded to measure milk quality. As soon as there are deviations detected, you will be notified. If you desire, your VMS™ V300 will automatically divert milk away from the cooling tank; or, for parlor and rotary systems automatically remove the cluster.



#### Milk quality

DelPro Farm Manager lets you model the impact of each cow on the somatic cell count (SCC) of your bulk tank to allow you to predict the financial implications of excluding certain cows. Our promise is to support you with consistent management of your herd, on time and automatically.



## **Speed is critical Diagnose, treat, record**

The sooner you can diagnose and treat a health issue, the sooner the recovery, and usually – the less severe the impact on productivity. That is why DelPro has been created to deliver fast, accurate animal health information.

#### **Sensor integration**

Sensors are now available that accurately and automatically measure LDH, BHB, progesterone, SCC, blood, activity, and body condition score. If they are integrated with the analytical power of DelPro, you will often be alerted to an issue before there are any visible signs, giving you better information, faster, so that you can make better decisions.



#### Combined health BioModel

DelPro's Cow Monitor for VMS provides you with a health index for each cow. This is an aggregated score combining the many pieces of information we record every day, to provide one number for a quick snapshot of every cow's health status. This allows you to quickly identify changes in an individual cow's health to alert you to those cows that require special attention.

#### **Health protocols**

DelPro's Vet Visit and Vaccination Protocol functionality ensures that you maximize the efficiency of your vet visits. Your working practices, together with all the animal information automatically generates lists which indicate each animal's scheduled vet requirements. Whether you need to vaccinate, hoof trim or pregnancy check you have the flexibility to set the criteria in the animal health module to make sure you never miss a cow that needs to be checked.





#### **PERFORMANCE**



## Simple overviews whatever your needs



#### **Compare Group Performance**

Time is a limited resource, we understand you may not have time to analyze every individual animal daily. We believe in a "top down" approach for working with the analyses of your herd. Starting with the analysis of different animal groups will give you a clear insight if deviations appear across the herd.



#### **Dashboard View**

DelPro provides a dashboard to give you a quick insight of the performance of your farm and the status of the tasks you have set. This visually simple presentation of useful, actionable information regarding the performance of your animals, your people and your equipment. It also provides a clear snapshot of milking performance and reproduction data – all in one clearly laid out design.



#### **Everything About Milking**

DeLaval milking systems are equipped with a range of sensors that record cows entering the parlor exiting the parlor and many of the operations performed during milking. Rather than presenting you with a series of data points captured by these sensors, DelPro combines all of this valuable data and turns it into performance information. This information can be used to improve routines, cow traffic and labor efficiency.



#### **Automatic Decisions**

DelPro controls your sort gates to automatically select cows based on your criteria. You choose when to sort, using the data recorded by your sensors. Your cows will be ready for inspection when you need them to be. For example, cows with low activity indicating possible health issues can be separated for your veterinarian check.



### Peace of mind with DeLaval DelPro™



#### **One View**

We don't view your dairy farm as just a collection of related activities and products to support those activities – it is a system. Like any system, it works best when each component adds value to the next, this is the role of DelPro. By integrating all the data collected on your farm and using it all to form a picture of not only how it is performing, but also what can be done to improve performance, DelPro is able to present you with one set of reports, analysis, alerts and proposed actions.



#### **Device Monitoring**

As well as monitoring and reporting on the health and performance of your cows, DelPro can also provide detailed performance reporting of your farm technology. This means alarms to indicate reduced performance as well as service timers, liner changes and how long it takes to cool milk from your DeLaval VMS™ V300.



#### **Secure Access**

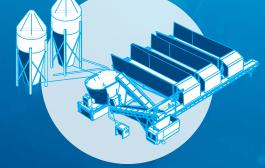
We know that you didn't become a dairy farmer to spend more time configuring routers and internet access. That's why with DelPro Remote Farm Connection we designed it so that you don't have to. It is preconfigured and based on very robust, reliable network equipment with a built in security package that protects your farm network from viruses, malware and spyware, which means that you will be up and running in no time.



# DelPro Works Well With:

DeLaval DelPro™ is not just one piece of software, it is a total management platform that provides you with the accurate, timely information you need to run an efficient and profitable dairy farm. This means creating a central platform for the capture and analysis of data from your milking system and sensors, and then distributing that data via a suite of purpose built, easy to use applications that make it easier and faster for you to turn all that data into action.





**DeLaval Optimat**™\*



DeLaval VMS<sup>™</sup>V300



**DeLaval Automatic** Milking Rotary System AMR\*\*\*



**Activity Monitoring** 



**Sort Gates** 





**DelPro**<sup>\*</sup> Companion



**DeLaval Parlor Systems** 



**DelPro**<sup>®</sup> Interactive **Data Display** 



**DeLaval Herd Navigator** 



Body Condition Scoring Camera BCS

# HOW CAN WE HELP?

Dairy farming is becoming more sophisticated every year. Today you are able to automatically record data that was once impossible to measure at all.

These new sensors and recording devices are meant to make your life easier and your cows more productive, not to turn you into someone who spends all their time in an office reviewing spreadsheets.

That's where DeLaval DelPro™ comes in.

There is only one DelPro, but several milking systems and many sensors you can use to provide it with data, and a range of DelPro applications that you can use every day to access, analyze, share and work with the data, reports and actionable information it generates.

Talk to us about how we can help you to implement DelPro, a fully integrated operating platform for your farm to help you meet your farming objectives.

And because for the last 135 years DeLaval has patented more dairy farming innovations and new systems than any other company, you can be sure that DelPro will always be evolving to keep you at the forefront of dairy technology, and at the heart our solutions – after all, with DeLaval DelPro – it all revolves around you.

#### THE NEXT STEP

To take the next step on your personal DelPro journey, either talk to your trusted DeLaval representative or for more information, visit us at www.delaval.com



We live milk

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All facts and figures are the result of different studies and data collection from several farms, actual results may vary and are not guaranteed.

