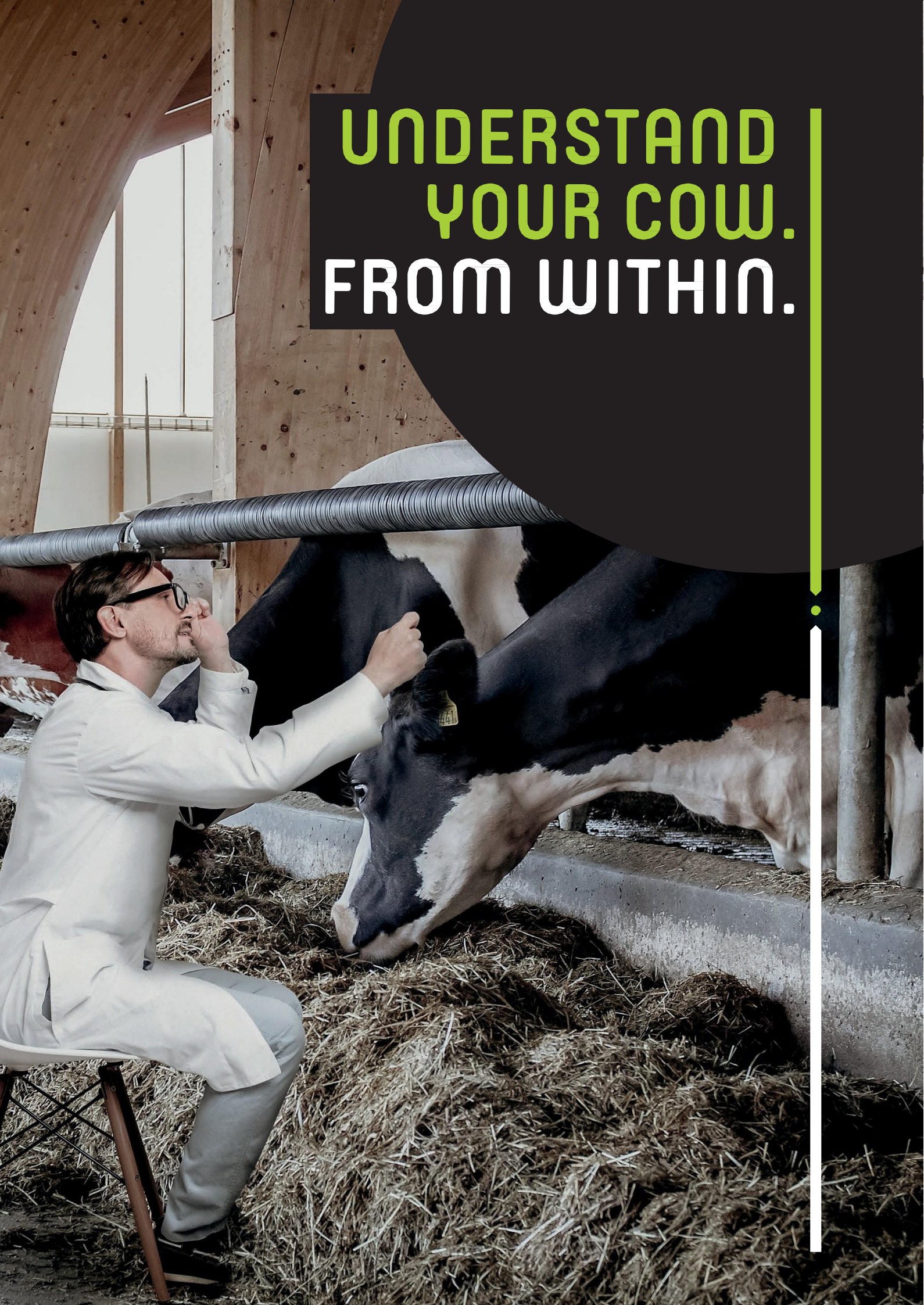


UNDERSTAND YOUR COW. FROM WITHIN.

SAFE.
EASY.
BETTER.

How the technology works.

The unique, award-winning system measures key parameters at the safest and most accurate point in the body. Inner body temperature and movement activity are monitored directly in the reticulum. The system guarantees top quality real-time data.

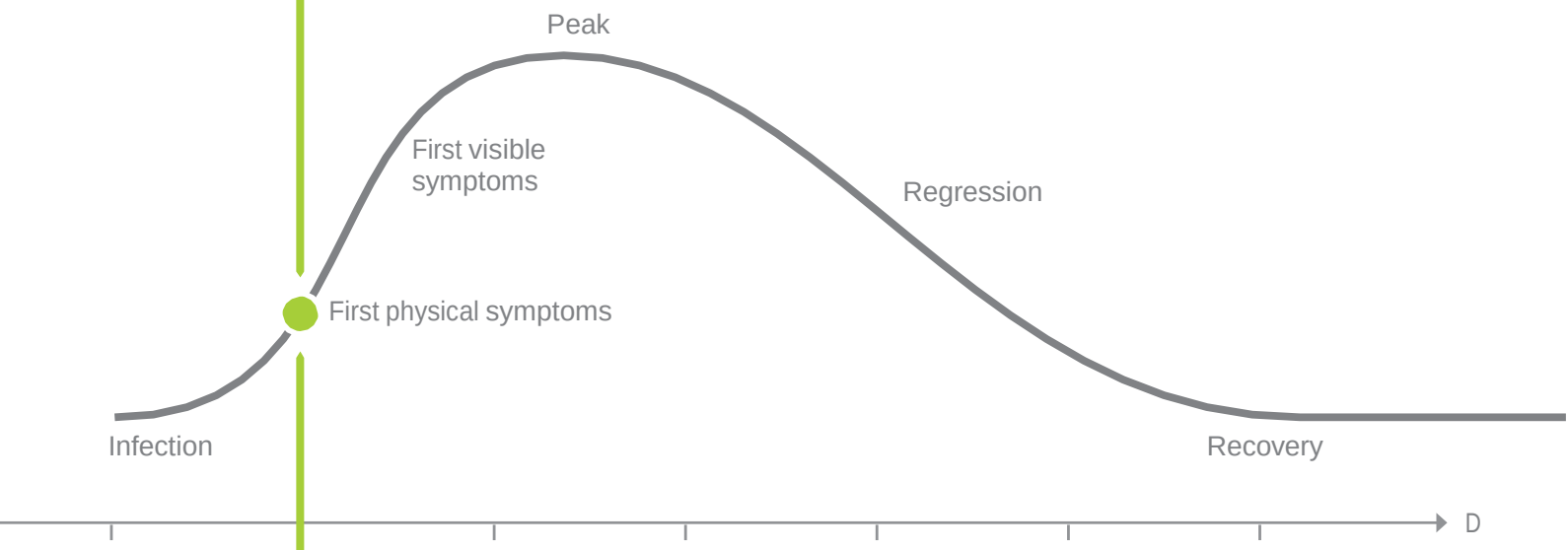
The certified measurement device in the form of a bolus offers highest levels of safety. The measurement position inside the cow means there is no risk of loss of the device or injury to your animal. Both the sensor and the data are tamper-proof and all information can be clearly assigned to a specific animal.

It's easy and convenient to use. Once the bolus has been administered there's no more animal-side work to do. No adjustments to be made due to changes in weight, no checks to make sure the sensor is in place. The system doesn't need you to do any of that. You simply receive valuable, high quality data direct from the inside – with no additional workload or expense: all you need is a smartphone or PC and a functioning electrical outlet.

The system delivers valuable information that helps you to understand your cows even better.

WHAT IS EARLY DETECTION?

Early detection means working preventatively. Using early detection means you're informed about processes that are not visible to you from the outside. So you can take action early on – and the sooner you identify the problem, the more you can limit any impact it may have on the cow.



Early detection enables you to take preventative action. This has a positive impact on your cows, your day-to-day workload and your farm.

But what does early detection mean exactly?
Inner body temperature changes as soon as the immune system reacts to germs and stress. Thanks to the system you no longer need to wait until initial clinical symptoms become visible. Early detection enables you to spot first signs of changes inside the cow's body. The system contnuously measures inner body temperature as well as ot- her parameters – so you can take appropriate action at an early stage, care for your cows in an optimal way and safeguard their milk production.

HEALTH

Healthier dairy cows.
Shortened disease progression.
Less antibiotics.

Animal health is decisive for productivity and the efficient operation of a dairy farm. Only healthy and productive cows can give the best possible results. The sooner you identify a health problem, the faster you can take action and thus reduce development of serious disorders on your farm.

WHAT ARE THE BENEFITS OF EARLY DETECTION?

You reduce disease outbreaks and prevent the development of serious disorders. This also enables you to minimize the use of strong medication and to considerably reduce length of treatment. Cases that are detected early on may only require anti-inflammatory medication, or later on – unless it's already too late – an antibiotic.

HEALTHY COWS SAFEGUARD OPERATING RESULTS

Using preventative health monitoring enables you to reduce the ill-ness-related costs that have such a negative impact on profitability. From medication and additional work to milk loss due to legal waiting times through to shortened lifespan of your cows – the earlier you intervene, the sooner you can avoid production losses and ensure positive operating results for your farm.

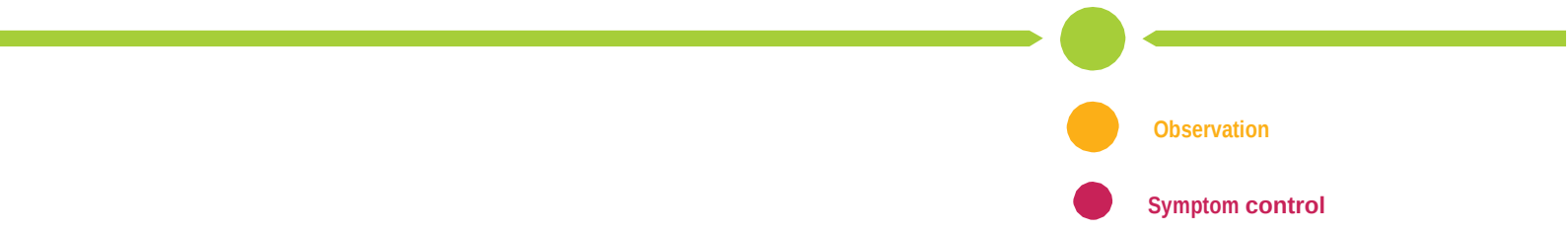
CONTINUOUS TEMPERATURE MEASUREMENT

Inner body temperature is a highly reliable parameter for monitoring animal health. Why? As soon as the immune system reacts to germs or stress, inner body temperature changes. First indications are there-fore visible long before the onset of the disease and you can take the necessary corrective action.

Inner body temperature measurement provides another advantage: it provides you with information about the type of illness. An increase in inner body temperature is often an indication of the presence of infections and inflammation whereas a drop in inner body temperature is an indicator of metabolic diseases.

So thanks to this system you know immediately what to check your animals for.

> "The system recognises signs of illness much quicker than our staff – so our animals recover much faster. Within just 6 months, we've been able to reduce the number of cows in the hospital pen by 30% and use of antibiotics has drop- ped by 14%. The system health monitoring is great value for money.
>
> Konyn Dairy (USA)
> 1.500 cows



EARLY DETECTION

REPRODUCTION

Early preparation for calving.
Better insemination results.
Detection of fertility problems.

The reproductive status of a dairy herd is one of the main factors affecting farm profitability and closely correlates to animal health. Continuous monitoring has a positive effect on reproductive performance.

Because the healthier your cows, the more fertile and productive the herd.

INSEMINATION AT THE OPTIMUM TIME

Precise heat detection enables efficient insemination scheduling. It enables you to improve reproduction performance on your farm – in-semination and conception rates go up, calving intervals are shorter. You'll also see a reduction in workload and reproduction costs.

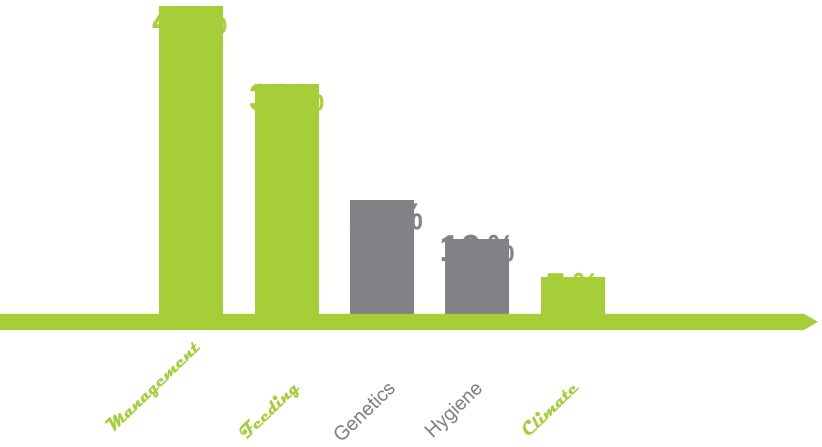
EVERY CALVING UNDER CONTROL

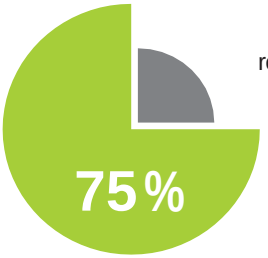
Using this system means you can keep a close eye on your cows in the critical period around calving. You receive a notification about 15 to
20 hours before calving.[1] This means you can put all the necessary preparations in place and if necessary are ready to intervene to provide support for the cow and calf during the birth. Particularly useful: if cows calve earlier than expected, your system will detect it as it continuously monitors your animals.

OPTIMIZED HERD FERTILITY

Using the well-structured dashboards enables rapid identification of animals with fertility problems. This means you can intervene at an early stage and treat the animals accordingly. Here again, you save time and money and ensure the long-term profitability of your farm.

> "Since using the system I have seen the calving-to-conception rate fall from 95 to 72 days through better identification of bulling cows."
>
> Paul Redmore (UK)
> 300 cows

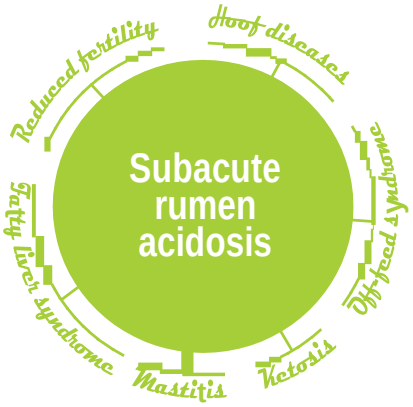




75 % of the factors that influence a cow's fertility are recorded and analysed by our measurement system. [2]

FEEDING

Improved feed efficiency.
Increased productivity.
Lower costs.



Feed costs represent up to 70 % of operating costs. That makes it even more important that this essential area is managed in an optimal way as appropriate feeding is critical to your cow's performance.

The rumen pH value is highly sensitive and immediately reflects feed management issues. Continuous measurement of pH values means feeding problems can be quickly identified and improvement potential in terms of rations and feed management are made visible.

Using this system, you know at all times whether feeding correlates to nutritional requirements in the current lactation phase so you can help the cow to perform at an optimum level without any negative impact on animal health.

EARLY DETECTION OF RUMEN DISORDERS

Subacute rumen acidosis is difficult to detect externally. But it has serious consequences: cows suffering from rumen acidosis remain less productive after recovery than animals that have never suffered from it. This is aggravated by the fact that rumen acidosis is also accompanied by secondary diseases.

Early detection enables a rapid response and helps you avoid secondary diseases and subsequent health problems.

KEEP AN EYE ON DRINKING BEHAVIOUR

Feed uptake and drinking behaviour are strongly correlated. If the cow doesn't drink, feed uptake also decreases. Using this system, water up- take frequency is continuously monitored. You are informed about any abrupt changes and can investigate the cause. Irregularities can be caused, for example, by diseases, problems with the water supply or social issues in the herd.

MEASURE TEMPERATURE INSIDE THE COW

As in humans, the inner body temperature of the cow is a parameter that reacts upon the onset of a disease. Measuring the inner body temperature means even the smallest fluctuations are picked up and the first immune system reactions are recorded and analysed.

QUICK REACTIONS.

Compared to other parameters, inner body temperature changes earlier. Studies show that inner body temperature increases briefly up to 4 days before other common measured parameters change.[3] This allows you to intervene much earlier.

MORE INSIGHTS.

The temperature not only indicates that something is wrong, but also allows conclusions to be drawn about the cause of the problem, e.g. feverish or metabolic diseases. So you already know which anomalies to look for should you receive a notification.

MORE VERSATILE.

Measuring inner body temperature means calving can be detected early. In addition, drinking behaviour is observed based on bolus position and temperature measurement. All these insights with just one device – that‘s unique!

CONTINUOUS.

Keep an eye even on inconspicuous animals. The system continuously records the inner body temperature of all your cows. This means that even with cows that you are not constantly observing, you can react quickly and in good time.

[3] „How behaviour predicts acute endotoxin mastitis in dairy cows?“, L. Hänninen et al., 2007; performance studies with other monitoring systems conducted

BENEFITS

Observing cows is easy, understanding them is quite another matter. Using this system, you can optimize the care of your dairy cows by understanding each individual cow even better. This will significantly improve both your operating result and your work-life balance.

FUNCTIONS & FEATURES

HEALTH

- Better **understanding of** your **cows and** your **herd**
- **Healthy animals** due to precise health monitoring
- **Reduced use of medication** such as antibiotics

REPRODUCTION

- **Easier planning** using early detection
- **Better reproductive performance**
- **Preparation** for **calvings**

FEEDING

- **Increased feed efficiency**
- **Lower feed costs**

HERD MANAGEMENT

- Digital **individual animal and herd management**
- **Round the clock** monitoring of your animals **from any location**
- **Integration** of existing herd management systems possible
- **Share data** with veterinarians and advisors
- **Increased productivity**
- **Better operating results**
- **Less** time-consuming **routine work**
- **More time** for family and friends
- Better work-life balance, **reduced workload**

CONTINUOUS MEASUREMENT, AROUND THE CLOCK

RECORDS AND ANALYSES INDIVIDUAL COW DATA 24 HOURS A DAY 7 DAYS A WEEK AND INFORMS YOU IMMEDIATELY ABOUT ANY IRREGULARITIES.

Inner body temperature

Even the smallest fluctuations in inner body temperature are recorded – so you can take action at an early stage.

Drinking behaviour

The system monitors water uptake frequency and informs you if your animals are drinking infrequently.

Notification ahead of calving

You can keep a close eye on your cows in that all-important period around calving.

Activity levels

Movement activity monitoring provides you with information about the individual cow's health.

pH value

Continuous measurement of pH values enables rapid detection of any feeding problems.

THE SYSTEM

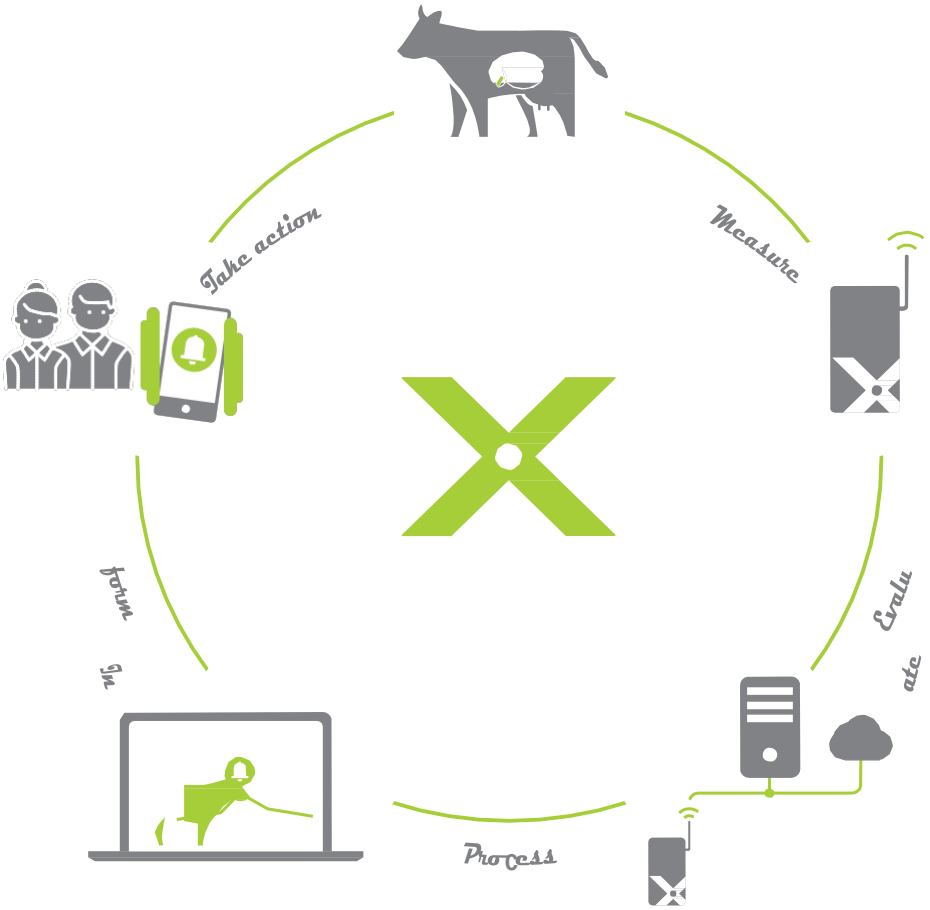
You already have everything you need to start using the system system: smartphone and/or a PC and an electrical outlet!

The user-friendly system software makes herd management easier with practical overviews and lists.

Our dedicated support team is on hand to provide you with intensive assistance during installation of the system and is also available to you at all times during ongoing use of the system. Because your success is our success.

"My animals are always in my pocket – so I can relax, spend more time with family and friends and go away on holiday. I always know how my cows are doing!"

Finja Tangermann (Germany)
160 cows



SYSTEM PRODUCTS

system website & app

Included:

- Each bolus is individually calibrated for the specific cow in order to detect deviations from relevant standard values
- Messaging service (emails, push notifications)
- Unlimited number of users (data can be made available to veterinarians, advisors and staff)
- Comprehensive data analysis

Classic Bolus

continuously measures inner body temperature and activity levels

pH Plus Bolus

measures the rumen pH value for 150 days as well as inner body temperature and activity levels

Base Station

reads out the sensor data and transmits it to the system cloud; automatic internet connection via the integrated SIM card; simply requires an electrical outlet

Repeater

to ensure coverage of various areas of the barn; transmits data from the sensor to the Base Station; simply requires an electrical outlet

Climate Sensor

battery-powered; monitors outside temperature and humidity in the barn and informs you if there is a risk of heat stress

You're already using a digital herd management system such as UNIFORM-Agri, VAS or EasyDairy?

The system offers integrations with multiple systems. This way, you retain your usual routine in your current system while enjoying all the benefits of using this system