Afimilk's Solution for Parlor Automation

afimilk®

About Afimilk

Afimilk's full automation and management solution is simple to use, comprehensive, and focused on farmers' needs. AfiFarm software interprets the data from all these tools to provide you with comprehensive and accessible information you can use to make more insightful and informed decisions.

How do we drive effective management?

What

Informed Decisions

Artificial intelligence algorithms transform the sensors' data into valuable farming decisions, keeping your herd healthy and well fed.

Who

Accurate animal ID

Afimilk's precise & accurate ID system assigns the measured data to the right animals.

How

High performance sensors

Afimilk sensors measure yield (ICAR accuracy) and conductivity as well as milk components (fat, protein, lactose).
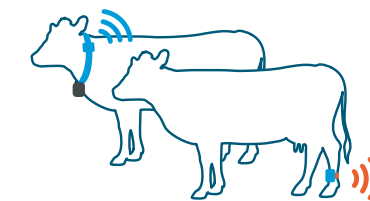
Afimilk Solutions

For management, control, and growing productivity in dairy farming

Milk sensors

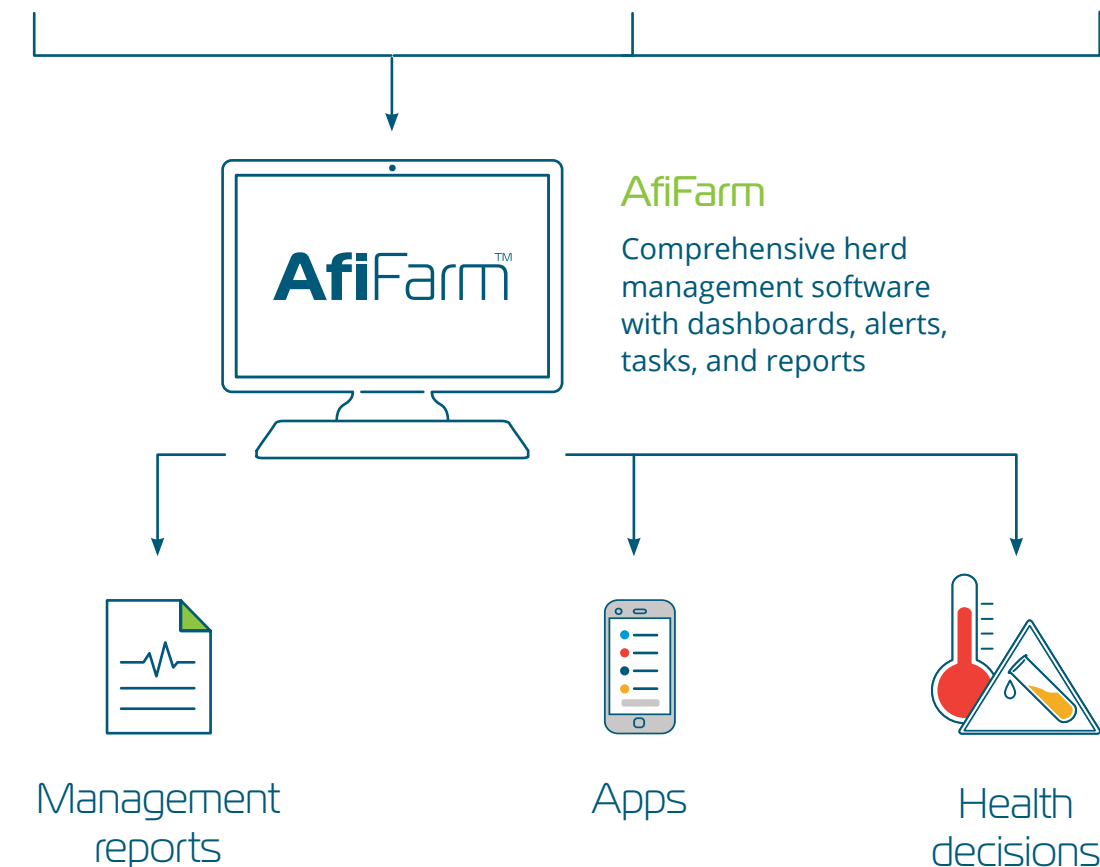Afimilk MPC milk meter (yield and conductivity) and Afilab milk analyzer (milk components)
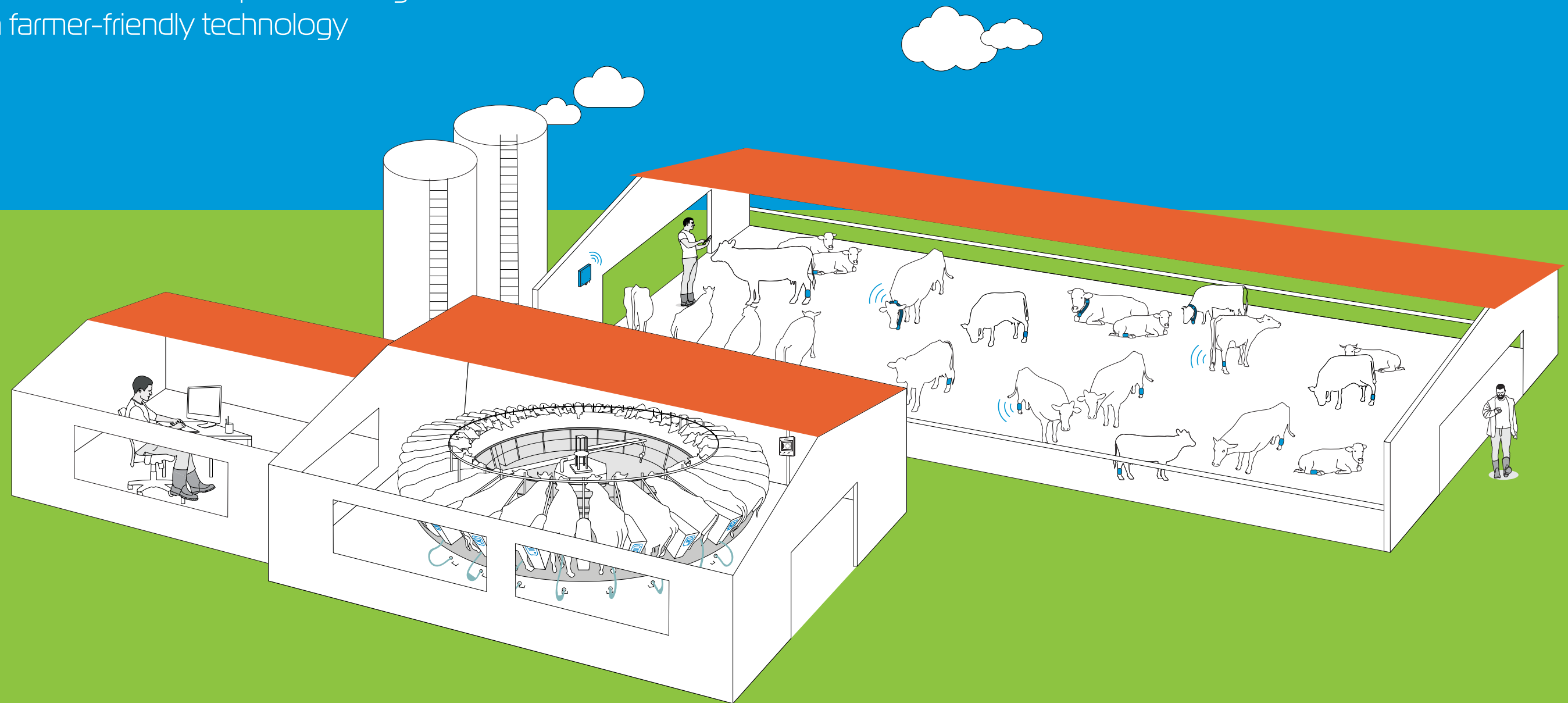
Animal sensors

AfiCollar
AfiAct II (leg tags)

Parlor ID

Accurate cow identification in the milking parlor and at the sorting gate

AfiFarm™

AfiFarm

Comprehensive herd management software with dashboards, alerts, tasks, and reports

Management reports

Apps

Health decisions

Vital Knowhow in Every Drop

Automate and control parlor management & animal health
with farmer-friendly technology

Milk sensors

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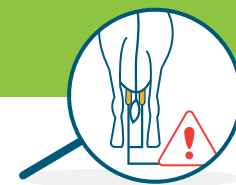
Health management
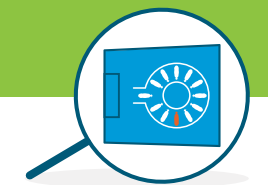
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Feed efficiency

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Prevents bulk milk loss

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Milking efficiency

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Animal sorting

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AfiFarm 5.4

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Rotary parlor terminal

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Milk
Sensors

Integrated milking point
analysis and control

Milk Sensors' Applications

AfiLab AfimilkMPC

AfiLab and
Afimilk MPC Sensors

Unique sensors monitor and record vital details of the milk for every cow, at every milking

Afimilk's milk sensors are today's most effective tools for early detection of:

Ketosis
Early detection minimizes losses due to negative energy balance

Mastitis
Accurate detection helps prevent tremendous loss of production, and improves fertility
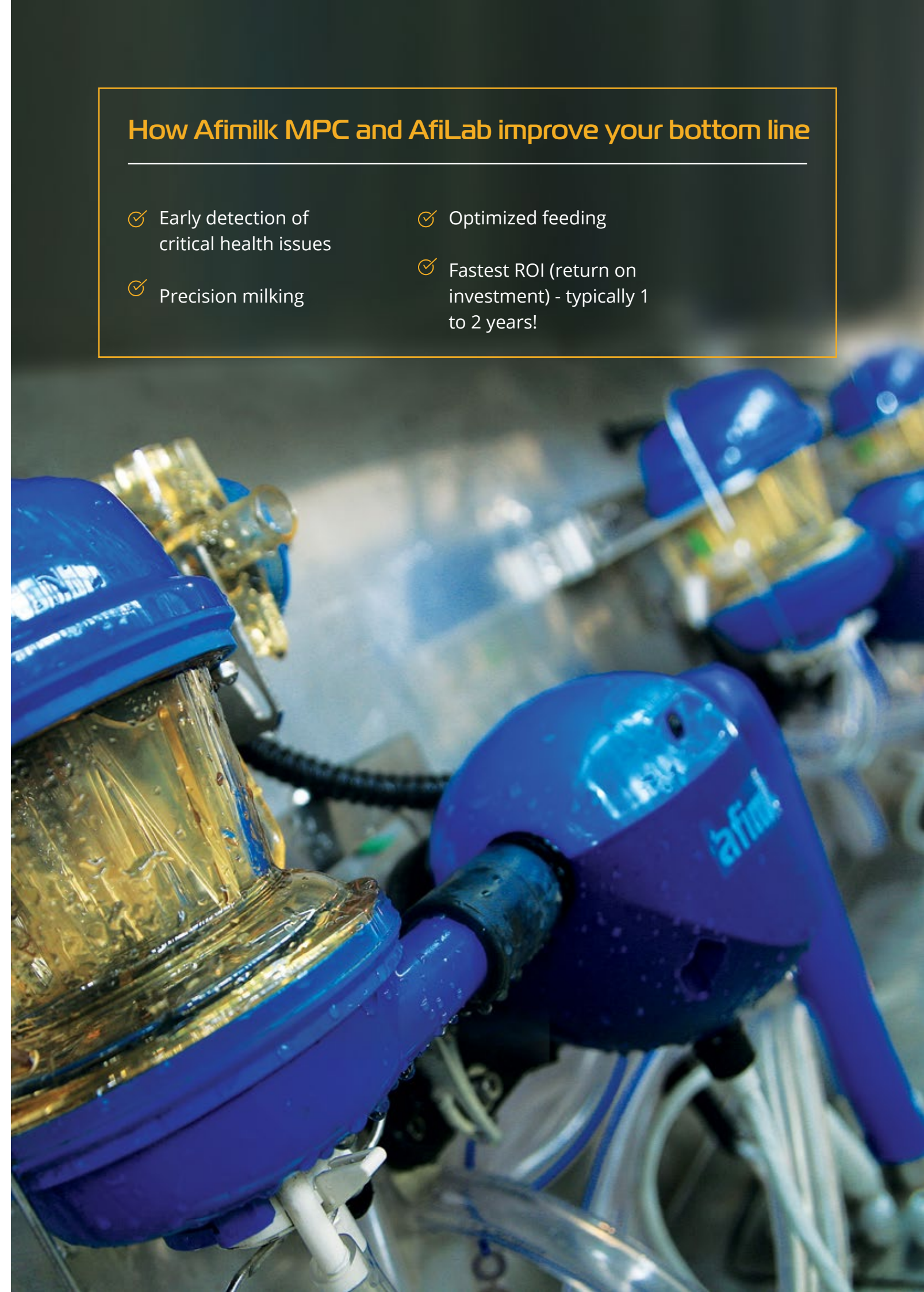
Acidosis
Detection of Sub-Acute Ruminal Acidosis (SARA) allows quick modification of food quality

Additional benefits
Feed monitoring (TMR corrections), prevents bulk milk contamination by blood and/or antibiotics, improves genetic planning

How Afimilk MPC and AfiLab improve your bottom line

- ☑ Early detection of critical health issues
- ☑ Precision milking
- ☑ Optimized feeding
- ☑ Fastest ROI (return on investment) - typically 1 to 2 years!

Ketosis
Early and accurate detection is key

Ketosis or NEB (Negative Energy Balance) – What is it?

Fresh (post-calving) cows suffer from reduced appetite and weakness.
When daily feed consumption does not meet energy needs, cows enter a state of negative energy balance, breaking down body fat reserves, resulting in increased level of Ketone bodies in the blood (i.e. Ketosis)

Detection

Once the ketotic cow is detected, treatment can be very effective. However, detection is not simple at all, and use of detection kits has limited results.

Studies show that for every clinical case that is detected, 4 more (sub-clinical) cases go unnoticed. Detection kits may show inconsistent results when applied at different times of the day.

Damaging effects of Ketosis

- ☑ Direct impact on production: Milk peak will be lower and later in the lactation

- ☑ Late pregnancies result in increased open days

- ☑ Tendency for ketosis to appear in next lactation

- ☑ Negative selection - High yielding cows have a tendency to develop NEB

Prevalence and cost

Studies indicate that 40% of fresh cows in USA herds suffer from ketosis.[1]
The associated cost is estimated at $200 per cow affected with ketosis.[2,3,4]
This is equivalent to $80/year for each cow in the herd.

Milk fat

Lost milk of 450-550 lb 220-260 kg yearly

The Afimilk solution, how does it work?

The key to effective treatment is detection, and that is where Afimilk excels. Ketotic cows have increased levels of fat in their milk, and decreased levels of protein.

The AfiLab milk analyzer measures milk components at each milking. When the fat to protein ratio surpasses 1.4, AfiFarm will indicate that the cow is suspected as ketotic. As cows' milk is monitored 3 times a day, this method is highly sensitive and accurate.

Diagnostic accuracy is estimated at
80%

Studies references:
1. McArt 2011, Duffield 2001, studied 1717 animals in 4 herds
2. Oded Nir, 2014: NEB cost of milk loss
3. Walsh, 2007: NEB cost of Days open
4. Guard 2008: NEB cost of involuntary culling

Mastitis
Early Detection for Improved Health

Mastitis is one of the greatest cost drivers (if not THE greatest) of cow health.
Early detection is vital for effective treatment, preventing loss of production, and avoiding cross contamination (the spread of infection to healthy animals).
The unique combination of sensors monitoring changes in milk yield, conductivity and lactose, is today's most effective tool for routine mastitis detection.

Damaging effects of mastitis

☑ Reduced production

☑ Late detection causes chronic damage

☑ Damaged fertility

☑ One of top 3 involuntary culling reasons

In fact, farmers using the Afimilk solution save in mastitis-caused damages

an average of
$100
per year per cow

$1.8 Billion
annual mastitis damages in USA dairy

Studies references:
- 400 cows treated using Afimilk conductivity detection
- 400 cows treated without MM ($100 greater damages)

SARA

(Sub-Acute Ruminal Acidosis)

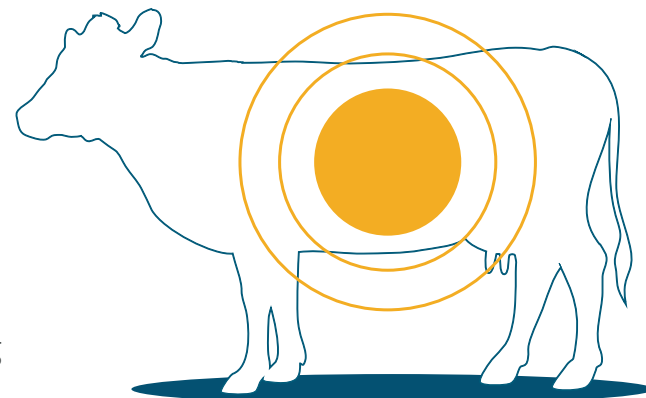# Early detection of digestion problems

What is SARA?

- SARA is a temporary reduction of the rumen pH below desired values (due to unbalanced feed)
- Low pH, poisonous gas in the rumen

Symptoms and detection

- No practical kit is available
- Change in manure consistency and color - too late

Damaging effects of SARA

- ☑ Damaged indigestion (impact on production)

- ☑ Decreased fertility

- ☑ Tendency to develop laminitis

Studies references:
- Prevalence in 19-26% of cows after calving
- Cost analysis: $100/cow in herd

Garrett R. Oetzel
MS Food Animal Production Medicine Section School of
Veterinary Medicine University of Wisconsin-Madison

cost estimation
for sick cow

$1.1-1.4
per day

Early Detection
Significant Return on Investment

How much money will I save at each milking point, using milk sensors?

- ☑ 10 cows per stall - ($200 per cow x 10 = $2000)
- ☑ 20 cows per stall - ($200 per cow x 20 = $4000)
- ☑ 30 cows per stall - ($200 per cow x 30 = $6000)

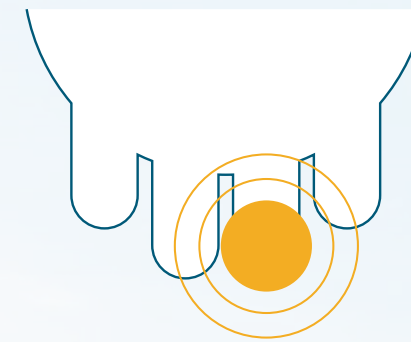Afimilk MPC and AfiLab: Accurate and early detection helps prevent illness-induced damages, with saving of:

Mastitis: **$100** cow / **year** saving
Ketosis & SARA: **$180** cow / **year** Damage, over **$100** saving
Total: about **$200** cow / year net save

Ketosis

Estimated damage
per cow in herd

$80
per year

Milk fat

lost milk of
450-550 lb
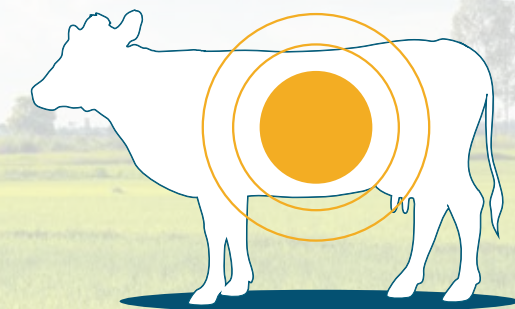220-260 kg
yearly

Mastitis
Direct saving
For average cow in herd

$100
per year

SARA

Estimated damage
For average cow in herd

$100
per year

AfiLab
Ensuring Feed Efficiency

- Defining optimal feed regimes
- Identifying effects of ration changes
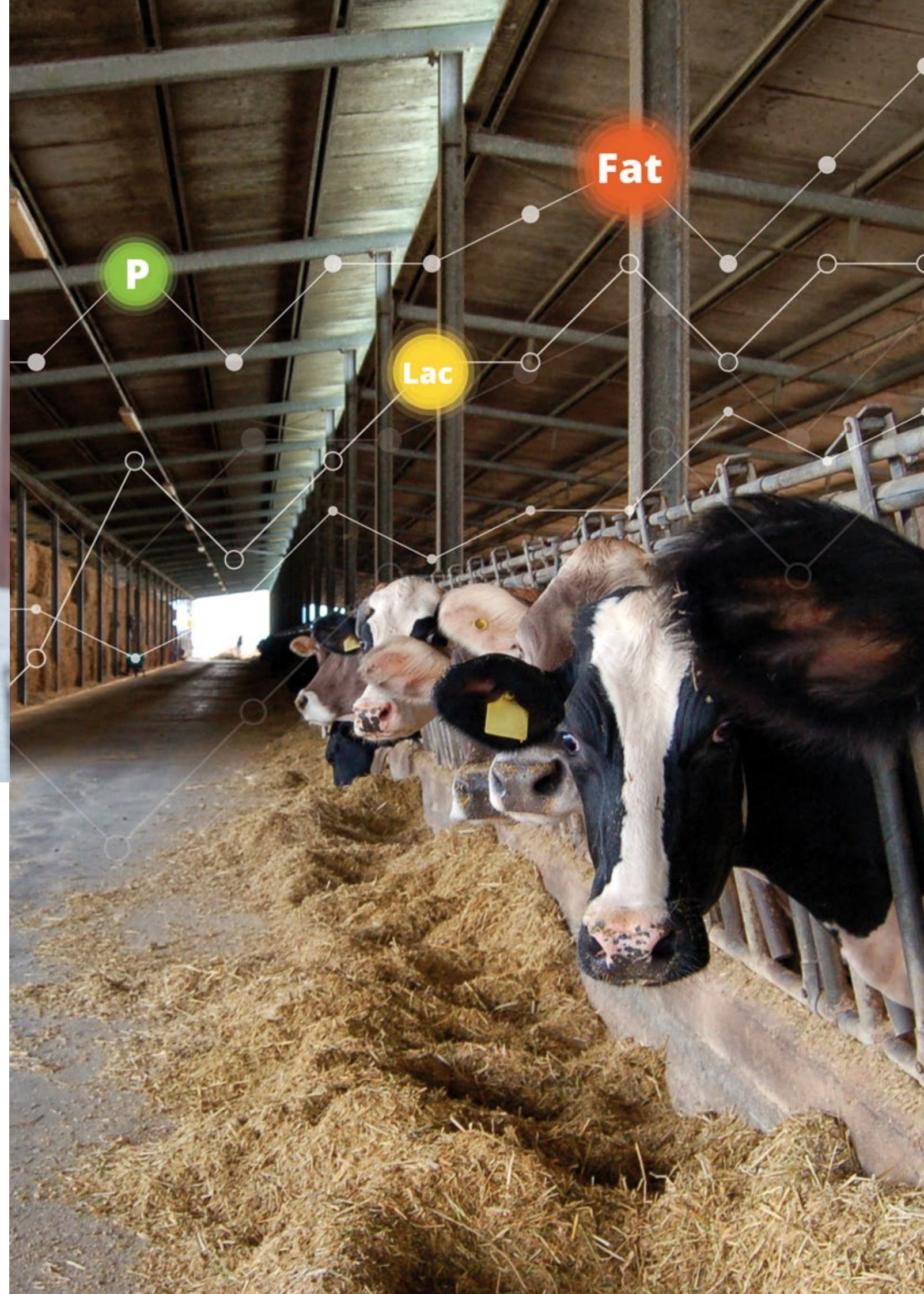- Detecting reduced quality of feed

AfiLab alerts you of feed problems

Feed is the greatest cost of dairy farms. Therefore, its optimized control is of major importance. Problems such as unplanned changes or over-mixed rations, often cause changes in milk fat and protein, and the ratio between them.

AfiLab to the rescue - with dedicated dashboard

AfiLab monitors milk components at each milking. Any problem is quickly identified (within 1 or 2 milkings), and the dedicated dashboard alerts the farmer.

Maintains Top Quality Milk

Prevent loss of bulk milk

There's nothing more frustrating than having to throw away a whole tank due to a load of contaminated milk wrongly milked to the tank.

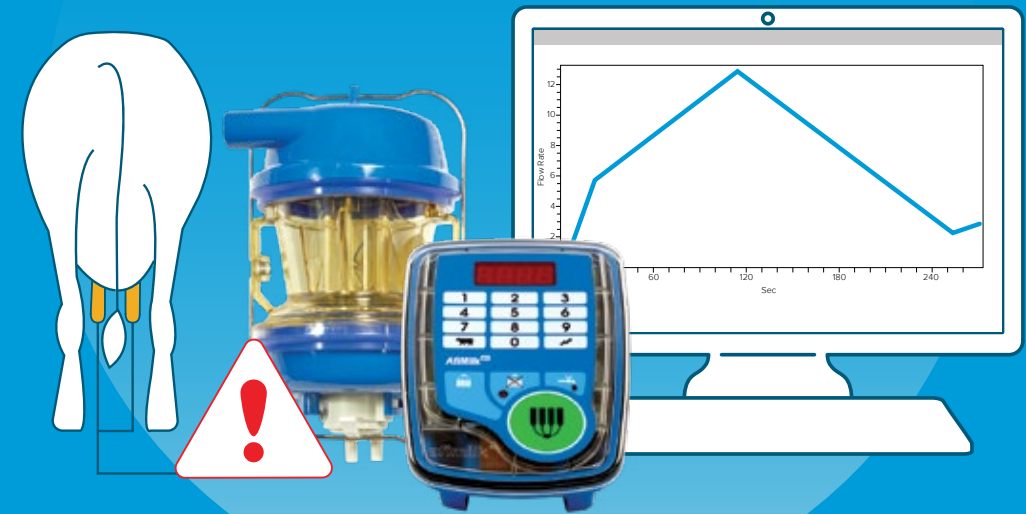Afimilk's milk sensors are your insurance policy to prevent bulk milk contamination:
- Colostrum - may be blocked from milking
- Milk of a cow with antibiotic treatment - may be blocked from milking
- Blood in the milk - may be detected by AfiLab, and quickly blocked from milking

Prevent bacterial growth - monitor CIP wash

- ☑ Careful monitoring at each milking point
- ☑ Alerts of detected deviation

Afimilk MPC Ensures Precision Milking

Afimilk MPC is the most advanced milk meter in the market. Aside from measuring yield, it optimally controls pulsation, stimulation, accurate cluster removal and milking time.
As an advanced module of the AfiFarm management solution for milking efficiency, it will help you monitor and coach your parlor team, and improve milking procedures.

How can Afimilk MPC improve my bottom line?

- ☑ Optimizes milking routines and adheres to procedures
- ☑ Calms milking environment - comfortable cows
- ☑ Maximizes parlor efficiency
- ☑ Controls pulsation, stimulation, cluster removal time
- ☑ Maintains udder health

Animal
Sorting

Save labor and avoid
stressing your cows
when you need to bring
them from the barn

AfiSort
A better way to
manage your animals

Bringing cows from the barn for treatment can be stressful for animals and farm staff alike. AfiSort changes all that with its easily set automated routines for animal sorting.

Benefits

- ☑ Calm animals - Avoid stressing your animals when you need to bring them from the barn

- ☑ Labor savings - Fewer people are needed for managing the animals

- ☑ Flexible management - automated schedule, one-by-one animal selection or "sort now"

- ☑ Solution for farms of all sizes - 2 way sort, 3 way sort, single or multiple

- ☑ Sort and weight scale (optional) integrated and cost effective

Sorting with **AfiSort**, Easy as A-B-C

In addition to setting sorting routines in AfiFarm, you may assign a sort order to any cow with a single click, from:

- The parlor via the Afimilk MPC keypad
- Your office via AfiFarm
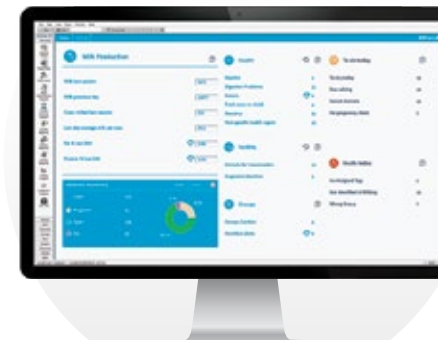- Remotely via our smartphone app

In the parlor
From each keypad

In the rotary
using touch screen rotary terminal

In the office
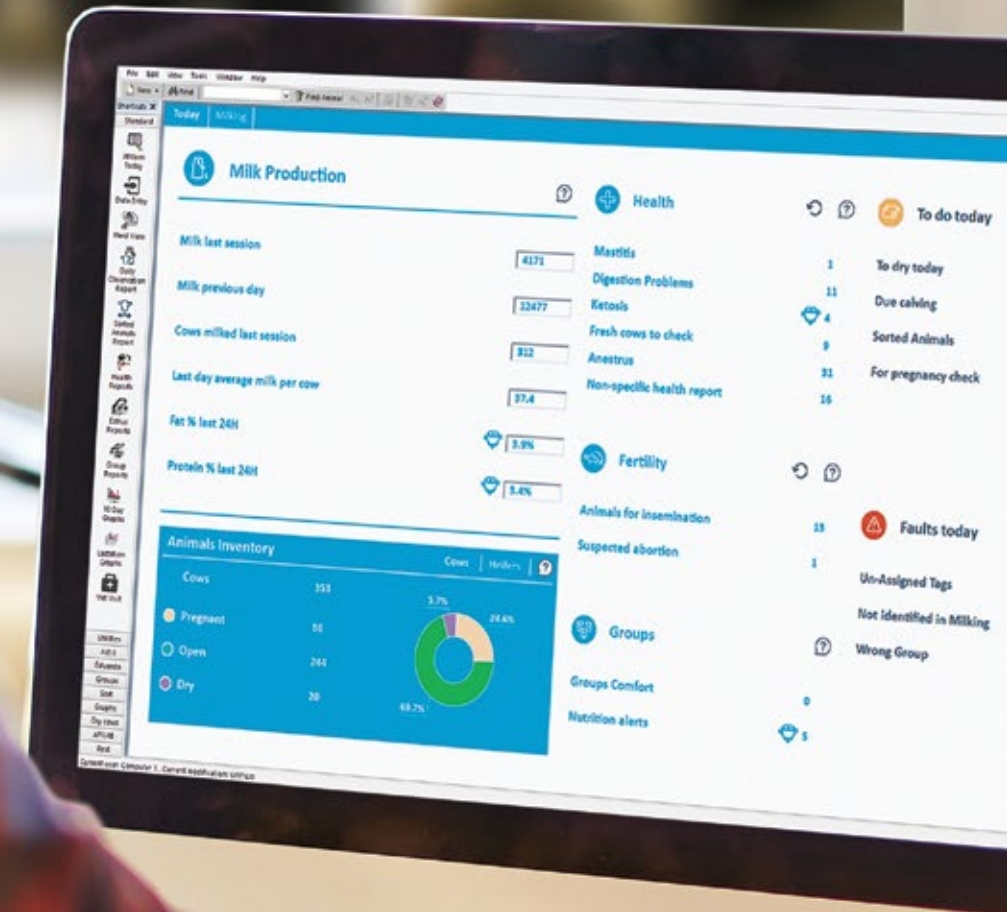from every AfiFarm report

Anywhere
From any smartphone

AfiFarm

The most advanced and user-friendly management software suite

AfiFarm™ 5.4

AfiFarm 5.4

Today's most advanced
& comprehensive farm
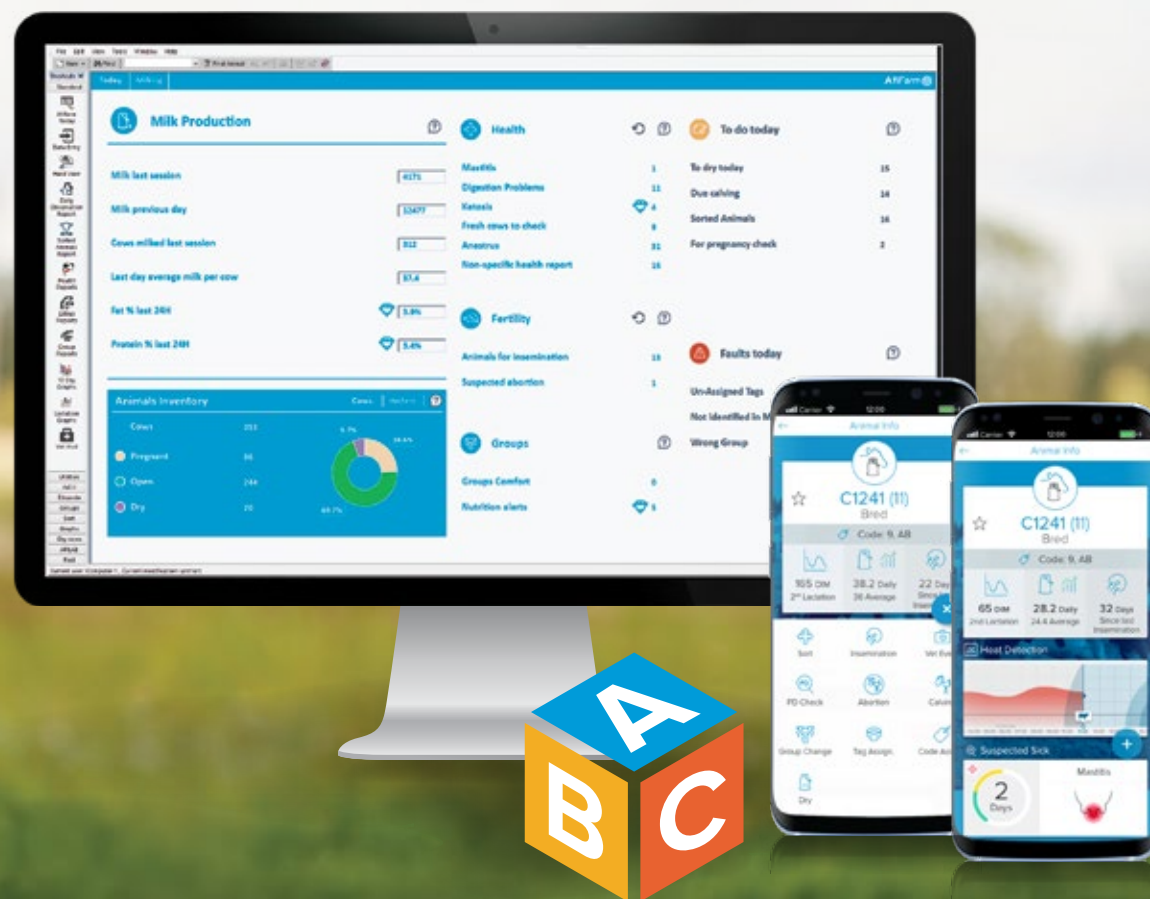# management solution

Farm-Friendly Management Software - Convenient Dashboard, Easy Start

The most comprehensive management solution available today, AfiFarm is both sophisticated and flexible for optimal user customization.

Thanks to AfiFarm's ABC dashboard, operation is user-friendly and intuitive. AfiFarm ABC brings common functions to a single homepage screen that is always on, intuitive to learn and constantly displays updated data.

A rotary terminal with touch screen, and a smartphone app introduced with AfiFarm 5.4, further help make management with AfiFarm even more efficient and convenient for the farmer.

AfiFarm™ ABC Dashboard

Rotary Terminal Control Center of Your Rotary Parlor

No need to walk around the deck, everything is visible from the 1st milker's position.

Intuitive touchscreen-based control pod to help you stay on top of everything that happens in your rotary parlor through:

Statuses: Milking session progress, groups milking and groups on the deck, production data, milking progress on the deck

Alerts: Cow in wrong group, conductivity (possible mastitis), cluster kick-off, low yield, canceled ACR, manager codes

Action: Point and send to sort, keep for 2nd rotation (requires retention bar)

Afimilk's full automation and management solution is simple to use, comprehensive, and focused on farmers' needs. AfiFarm software interprets the data from all these tools to provide you with comprehensive and accessible information you can use to make more insightful and informed decisions.

operating in
>50 countries

~15,000
farms automated
by Afimilk

>10 million
cows managed by AfiFarm SW

8 Rotaries
working together in a
single farm, managed
by Afimilk system

~110,000
milking cows-largest
herd managed using
Afimilk automation

~2.5 million
cows already managed
using AfiFarm

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