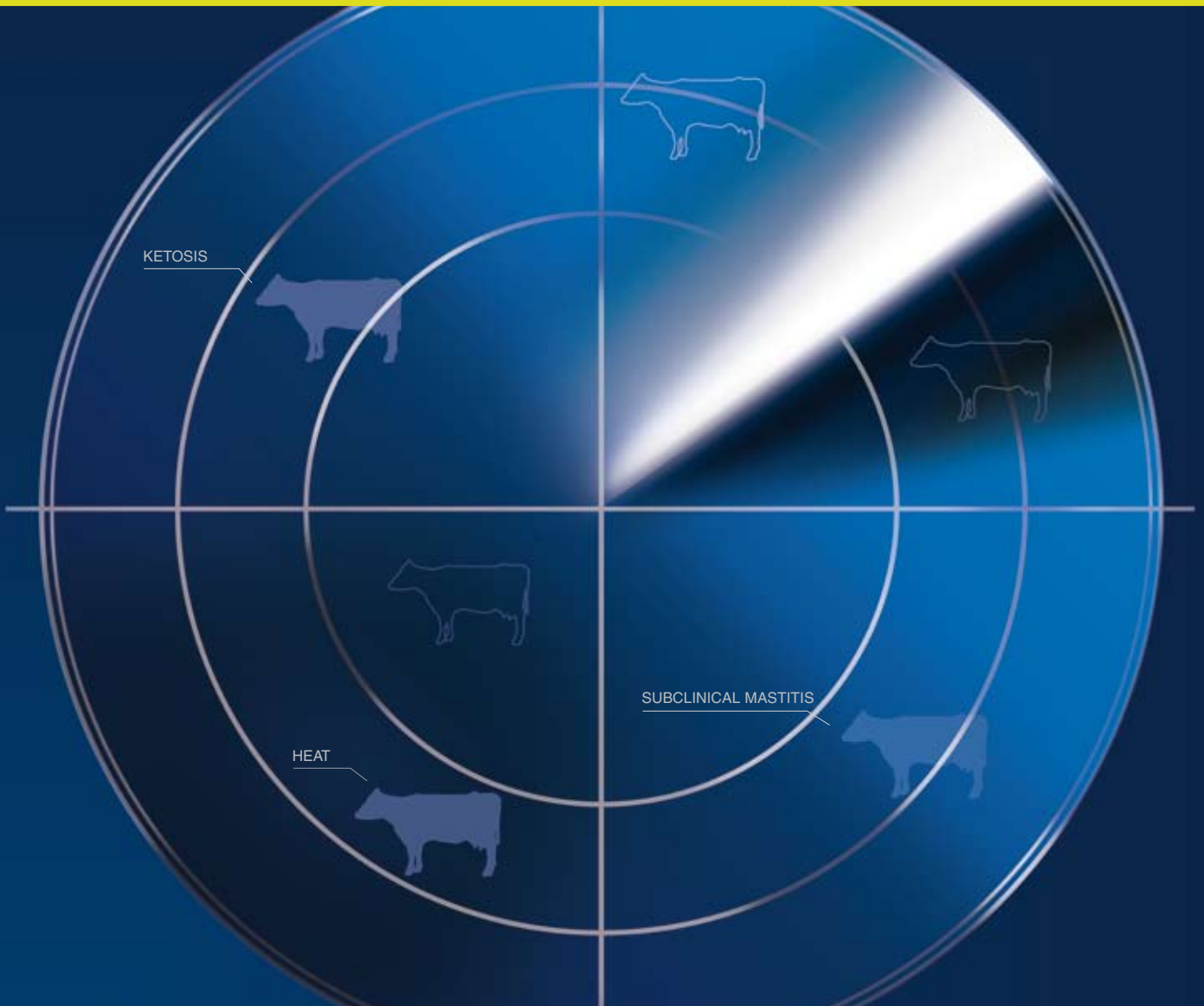


Herd Navigator™



Proactive herd management

Peace of mind – Herd Navigator shows you the way to improve herd performance and profitability, empowering you to stay competitive as a professional farmer in the dairy business.

The unique qualities of Herd Navigator™



Dairy farming is your life. It is your profession, and you believe it is the best choice for you and your family. But it is a challenge.

You may need to increase your herd size to stay competitive – but you still want to provide good care for each individual animal. You want to fight cow diseases as early as possible to prevent serious problems, but you lack a smart tool to help you navigate through them. You want to do everything possible to improve animal welfare and product quality, but you are drowning in workload. You want to attract new motivated employees but manual routine work is not fun for them.

Set your sights on Herd Navigator™ to support your drive for quality dairying.

Herd Navigator will monitor your milk production automatically, day by day. It will automatically

measure key parameters during milking to support:

- reproduction
- udder health
- feeding and energy balance.

This will ensure early identification of cows needing special attention – with clear information on the action to take, based on the data. Herd Navigator is delivered with customer training at start up and continuous biological advisory service. Herd Navigator will support you in making the most of your cows' potential, to optimize your dairy herd performance and reduce costs.

Focus area	Parameter analysed in milk	Early / on time detection
Reproduction	Progesterone	Heat Silent heat Pregnancy Abortion Cysts Anoestrus
Udder health	LDH – lactate dehydrogenase	Mastitis Subclinical mastitis
Feeding and energy balance	Urea BHB – beta hydroxybutyrate	Feed ration – protein Ketosis Subclinical ketosis Secondary metabolic disorders



Testimonial: Bjarne Lind. "We spend much less time on heat monitoring, and find more cows in heat, even the silent heat cows. Herd Navigator gives us much more flexibility as we can check on the cows identified for attention whenever it fits into our daily routine".

Successful reproduction



Successful reproduction is at the heart of dairy management. Your economic success is heavily dependent on good heat detection and correct insemination timing.

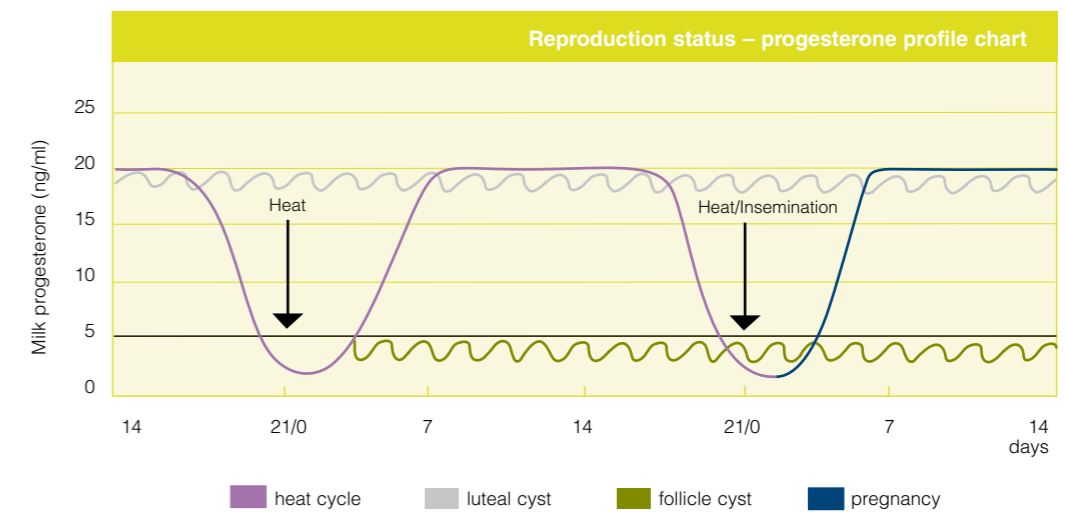
Automatic progesterone test

Undetected reproductive disorders which cause delays in getting cows pregnant, or that cause abortions, cost you money: at least EUR 3 per infertile cow, per day.

Herd Navigator automatically measures the level of progesterone in milk – the "gold standard" for reproductive status. It indicates heat and the right insemination time, lists animals for final pregnancy confirmation, indicates early abortion and lists the risk for cysts and prolonged anoestrus.

With Herd Navigator there will be less time-consuming heat monitoring for you or your team – saving time for other important activities. You simply have to call the inseminator or the veterinarian to check for the appropriate treatment.

Herd Navigator will help you to reduce days open, optimize calving interval, and improve insemination success while reducing the number of inseminations.





Mastitis is ranked second after infertility as a main reason for culling cows. Each case of clinical mastitis may cost from around EUR 240 to EUR 630.

Udder health – mastitis

Perhaps more important, each undetected subclinical case may cost up to EUR 240 in milk losses. But how can you effectively screen your herd?

Herd Navigator will do the job for you

Herd Navigator automatically measures lactate dehydrogenase (LDH) in milk. The enzyme LDH is highly correlated to somatic cell counts and is closely linked to the presence of mastitis. As levels of LDH rise rapidly when an infection starts, measuring this with Herd Navigator means an

infection can be detected several days before it is clearly visible.

Automatic monitoring and analysis by Herd Navigator, sampling the right cows during their specific risk periods, identifies which cows need to be checked or treated. You will be able to take proactive action – before severe mastitis develops. And with the time saved, maybe you'll be able to work on preventive strategies against mastitis pathogens.



Fighting disease at an early stage



Testimonial: Bente Tang. "Herd Navigator detects mastitis several days earlier than we see clinical signs. Finally we have the tool we need to work early and proactively to keep our cows healthy".



Testimonial: Jørgen Clemmensen. "Herd Navigator has a lot of advantages, but the main benefit for me is the early detection of ketosis – this is really lost money to gain back which we never saw before. And we can spend time saved from manual work on more important things".

Feeding and energy balance



Increasing performance in your dairy herd is associated with increased risk of metabolic disorders. The most frequent and important one is ketosis.

Feeding and energy balance – ketosis

While your herd may have one or two clinical cases per year, and may cost from EUR 80-320 each, what about the subclinical cases?

Subclinical ketosis is caused by a negative energy balance shortly before and during the first weeks of lactation. Normally undetected, it can create serious problems in many herds, with negative effects on milk yield and animal health. The potential loss of milk money alone easily costs up to EUR 90 per cow and year.

Herd Navigator will automatically monitor your herd – the right cows at the right time, when they are most susceptible. The indicator used is BHB – beta hydroxybutyrate.

This metabolite is involved in mobilizing energy from body adipose tissue during negative energy balance.

Herd Navigator will identify all cows at risk of ketosis – so you can act early and proactively, to prevent a loss in milk production.

Feed costs are up to 40% of direct production cost per kg milk. But by adjusting the protein and energy content, you can increase feeding efficiency and reduce feed costs. By measuring urea levels during milking (urea is an indicator of over or under supply of feed protein), Herd Navigator can provide, on a regular basis, the data that you need to adjust your feed ration.





Testimonial: Kim Møller Christensen. "It has been easy to understand and work with Herd Navigator. I appreciate the software functions so I can set up my own rules for different "attention list" cows. This is a step forward in managing my herd and with a bigger herd and more employees it would be essential".

The technique behind Herd Navigator™

Herd Navigator comprises a new advanced analysis system in the milking parlour connected to a computer in the farm office.

While the cows are being milked, representative milk samples are taken simultaneously from different milking points and sent to the analyser instrument. The system automatically selects, via a sophisticated biological model, which cows to sample at which milking session and for which parameters. The analytical results are processed in the biological model and displayed in your dairy herd management system.

Herd Navigator support:

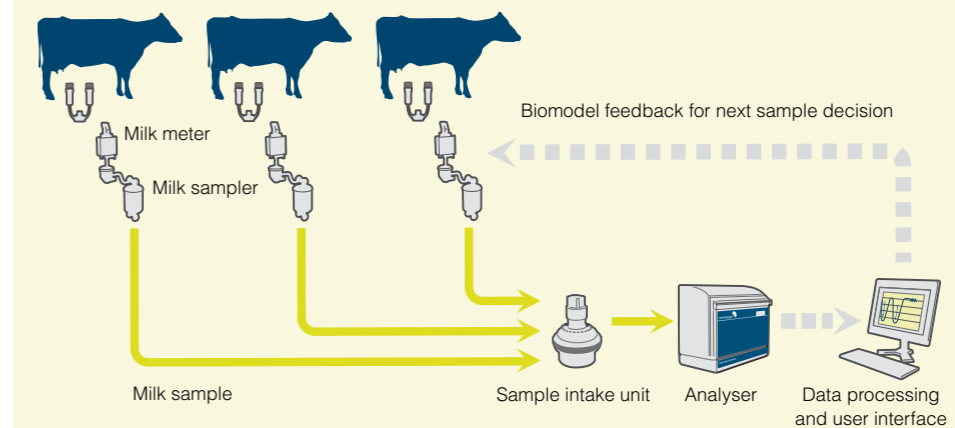
- Easy to use software integrated into the herd management program.
- Choice of two versions:
 - Herd Navigator – local, integrated with DeLaval ALPRO™ herd management system.
 - Herd Navigator – central, using the Dansk Kvæg herd management system via a web-based server.

- Well arranged attention lists and graphs for all animals in need of special attention.
- Preset action proposals for the "attention" cows (standard operating procedures – SOP).
- Functionality to develop your own treatment schedule, which you may choose to do with support from your local veterinarian or advisor trained by Dansk Kvæg Herd Navigator specialist.

Connect with the experts: if you choose, your veterinarian and advisory service may access your dairy management data remotely to provide advice, quickly and efficiently, based on real time data from your herd.

Dansk Kvæg, as partner in the project, will ensure that you and your advisors receive in-depth training to maximize the benefits from your Herd Navigator management solution.

Herd Navigator systematic procedure



Combined peak competences

Herd Navigator™, the first product of the FOSS & DeLaval Solutions brand, has been developed by FOSS A/S and DeLaval International AB together in their joint venture company Lattec I/S in close co-operation with the Faculty of Agricultural Sciences Aarhus Universitet. Dansk Kvæg supports the solution with education, application and advisory services.

FOSS helps the milk and dairy industry to keep pace with their analysis demands. *FOSS* dedicated analytical solutions have proven significant for dairy herd improvement, raw milk testing, standardization in dairy production and verification of end-product quality. *FOSS* has been the market leader within this area for 50 years.

DeLaval develops and supplies milking and other farm equipment for dairy cows, sheep, goat, and buffalo farming. *DeLaval* drives progress in milk production by recognizing and serving farmers' needs. *DeLaval* delivers complete solutions to empower their customers and give them better control of their business.

Dansk Kvæg (Danish Cattle Federation) is Denmark's national umbrella organization for dairy and beef farming, the dairy and meat industries. The mission of *Dansk Kvæg* is to contribute to profitable dairy farming through advisory services, development and innovation, health programmes, quality improvement and political influence.

The power of three

These peak competences together have created the unique *Herd Navigator™* as a complete dairy management solution.



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