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Herd Navigator® – Not just a tool but a whole new concept to assist the dairy farmer

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Herd Navigator® has been developed by FOSS and DeLaval together in their joint venture company Lattec and Danish Cattle Federation. Herd Navigator® is scientifically based on the results from the research cooperation Biosens established between the parties. Danish Cattle Federation supports the solution with application and advisory services.

Herd Navigator® is able to monitor the milk production automatically, day by day. It will measure key parameters during milking:

- reproduction,
- udder health,
- feeding and energy balance.

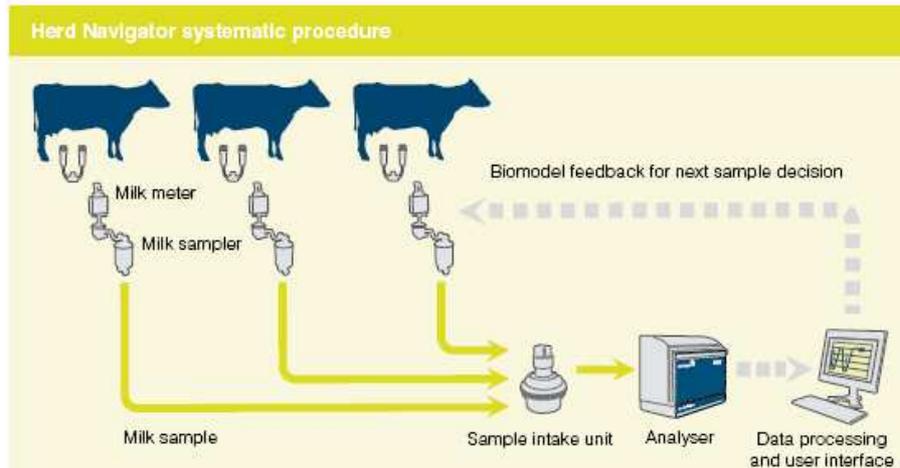
This will ensure early identification of cows needing special attention – with clear information on the action to take, based on the data. The Herd Navigator concept is delivered with customer training at start up and continuous biological advisory service.

The Herd Navigator concept is able to support the farmer in making the most of the cows' potential, to optimize the 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

The technique behind Herd Navigator®

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

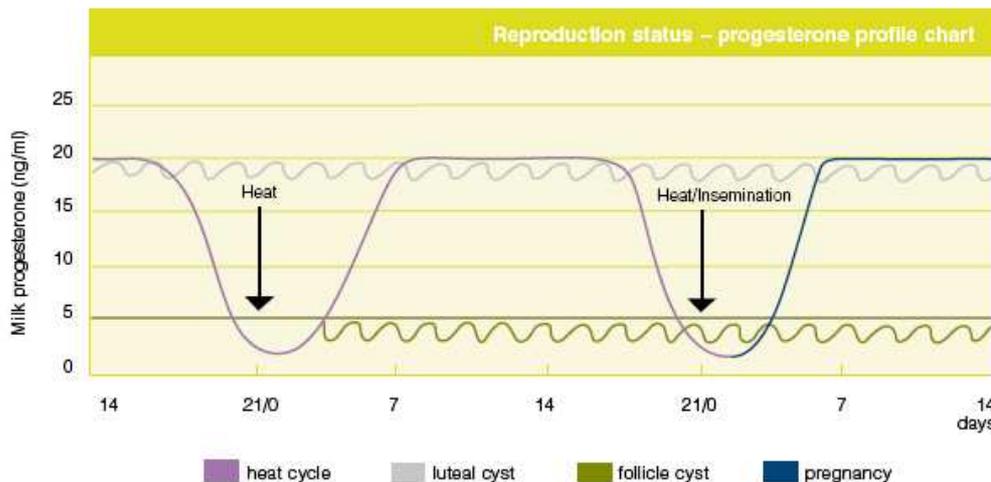


Reproduction – managed by automatic progesterone test

Herd Navigator® measures the progesterone in milk – automatically, the right cows at the right time. It indicates heat and the right insemination time, lists animals for final pregnancy confirmation and lists the risk for cysts, abortions and prolonged anoestrus.

The concept offers the farmer to save time-consuming heat monitoring, which gives time for other important activities. The farmer simply has to call the inseminator or the veterinarian to check for potential treatment. Herd Navigator® will help to reduce days open, optimize calving interval, and improve insemination success while reducing the number of inseminations.

Progesterone profile chart



Udder health surveillance

Herd Navigator® measures lactate dehydrogenase (LDH) in milk. LDH is an enzyme closely linked to mastitis. As levels of LDH rise rapidly when an infection starts, measuring this with Herd Navigator® means an infection can be detected 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. In cooperation with his

veterinarian the farmer will be able to take proactive action – before severe mastitis develops. And with the time saved, maybe he will be able to work on preventive strategies against mastitis pathogens.

Optimal feeding and energy balance

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 €2000 per 100 cow herd.

Herd Navigator® will monitor the herd automatically – the right cows at the right time, when they are most susceptible. BHB – beta hydroxyl butyrate – is used as the indicator. This metabolite is involved in energy mobilization from body adipose tissue during negative energy balance. Herd Navigator® will identify all cows at risk of ketosis – so the farmer can act early and proactively to prevent a loss in milk production.

Content of the Herd Navigator concept

- Easy-to-use software, integrated into the herd management program.
- Choice of two versions:
 - Herd Navigator® – local, using DeLaval ALPRO™ herd management system.
 - Herd Navigator® – central, using the DCF herd management system.
- Well arranged attention lists and graphs for all animals in need of special attention.
- Preset action proposals for the selected cows (standard operation 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 DCF Herd Navigator specialist.

Connect with the experts: if the farmer chooses, the veterinarian and advisory service may access the dairy management data to provide advice, quickly and efficiently, based on real time data from the herd. Dansk Kvæg, as partner in the project, will ensure that the farmer and his advisers receive in-depth training to maximize the benefits from the Herd Navigator® management solution.

The three partners

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.

Danish Cattle Federation (Dansk Kvæg) 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 programs, quality improvement and political influence.

The power of three: these peak competences together have created Herd Navigator® as an advanced dairy management concept.