

# Herd Navigator<sup>®</sup>

- Pro-active Herd Management

ICAR 2008 Manufacturers Showcase

Niagara Falls, New York, USA

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 DeLaval

dansk kvæg

**FOSS**

 Herd Navigator

## The challenge in today's milk production

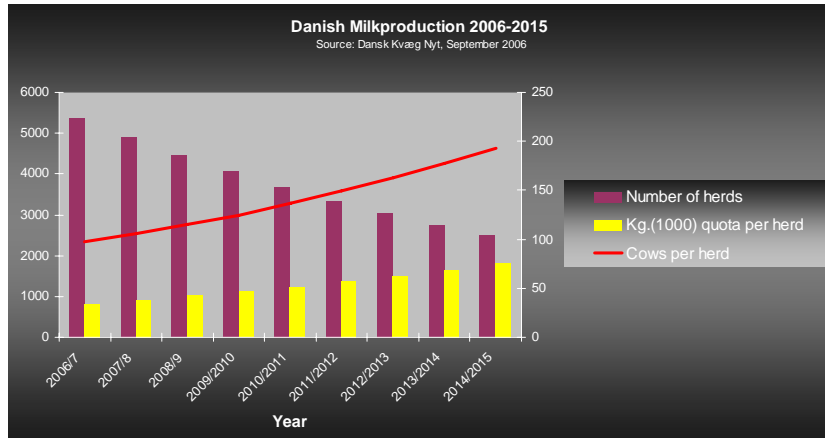
- Staying profitable in spite of declining milk prices
  - Increase herd size
  - Higher milk yield
  - Improve feeding efficiency
- Ensuring professional and cost-effective farm operation
- Reproduction control
- Reduce risk of diseases
  - Udder health, Ketosis, Metabolic disorder
- Complying with strict rules concerning animal welfare and environmental issues

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## Consolidation in dairy business



## Joint venture



We drive progress in milk production

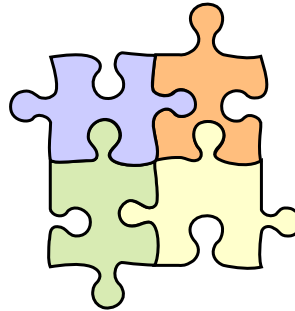


We deliver dedicated analytical solutions

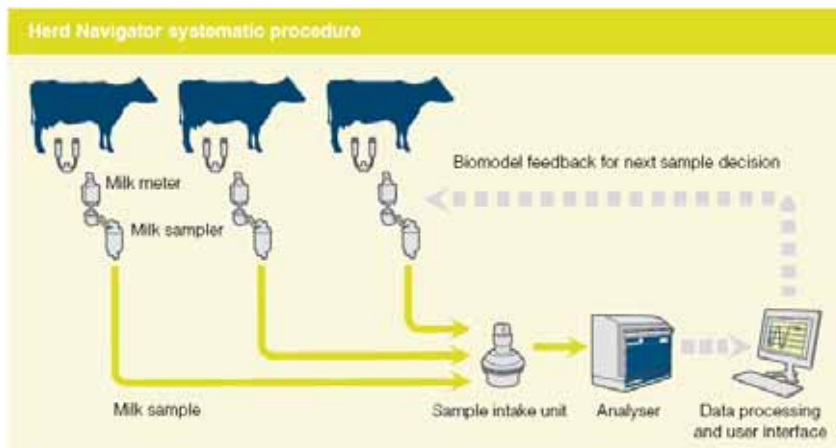
**lattec**

## The history of in-line measurements – a strategic effort of research!

- Memo project at Skovgaard experimental station (1990 – 2000)
  - 14 parameters investigated for 10 years – including 653 lactations
  - FOSS as a service partner
  
- Biosens research consortium
  - Lattec (FOSS and DeLaval)
  - Danish Institute of Agricultural Sciences
  - Danish Cattle Research Centre
  - Danish Cattle Federation
  - Supported by Ministry of Agriculture



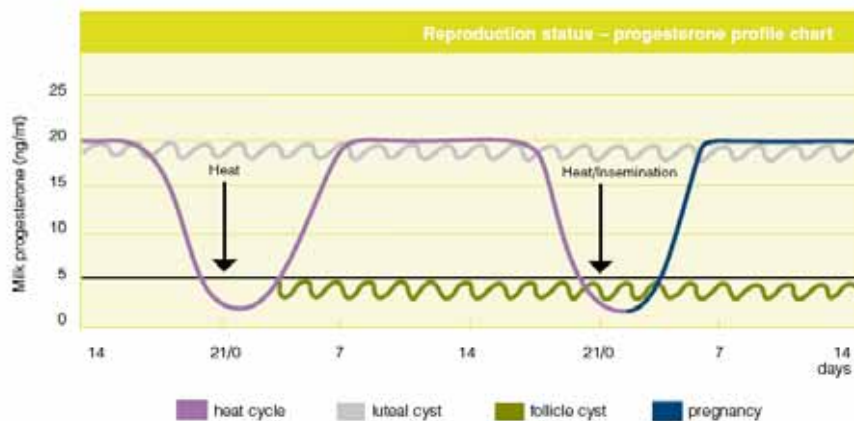
## Herd Navigator flowdiagram



## Herd Navigator monitors

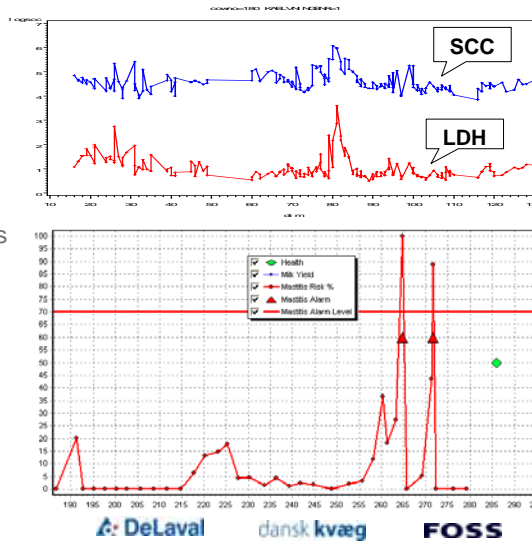
Focus area	Parameter analysed in milk	Early / on time detection
Reproduction	Progesterone	Heat Silent heat Pregnancy Abortion Cysts Anoestrus
Udder health	LDH – lactate dehydrogenase	Mastitis Subclinical mastitis
Feeding and energy balance	Urea BHB – beta hydroxybutyrate	Feed ration – protein Ketosis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

## Reproduction

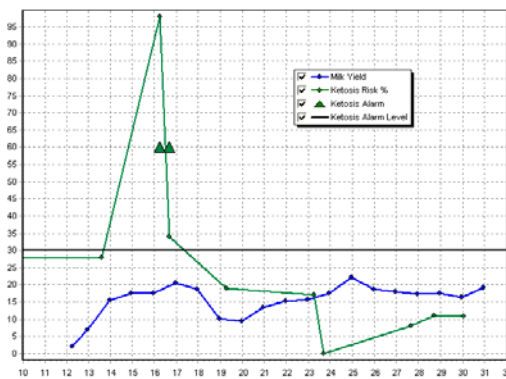


## Mastitis

- LDH is the parameter measured, correlation with SCC is very high
- Consolidation of the test farm data from veterinarians, advisors and Herd Navigator is ongoing.
- HN is able to find clinical and sub-clinical cases
- Herd Navigator alarms are triggered 3-4 days prior to visible clinical signs

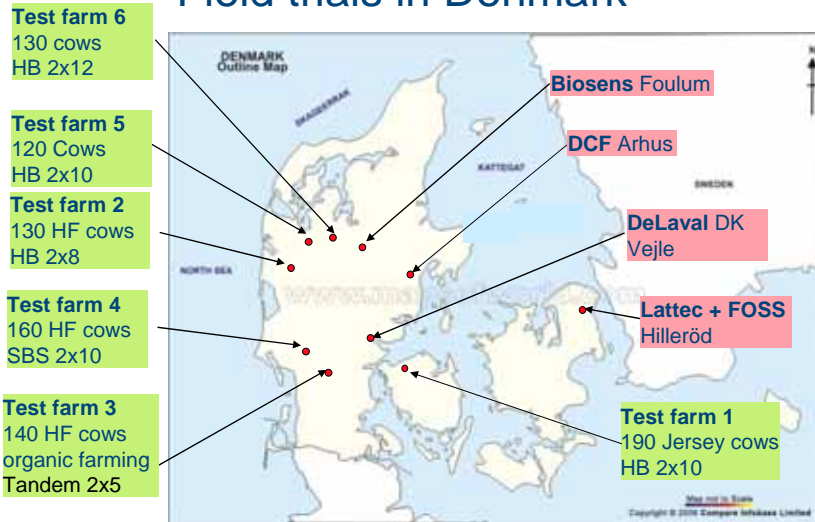


## Ketosis



- Herd Navigator finds approximately 50% more Ketosis cases than the test farmers identify.
- Ketosis alarms can be caused by several disorders
- Not only typical ketosis cases are found, we detect all cases of Cow Fat Syndrome (NEFA cows)
- Consolidation of the test farm data from veterinarians, advisors and Herd Navigator is ongoing.

## Field trials in Denmark



## Value for the farmer

### Reproduction

- Early focus on heat and optimal time of insemination
- Increased pregnancy rate and reproduction efficiency
- Less work with special treatments
- Herd Navigator detects 95% of all heats



## Value for the farmer

### Udder health

- Keep healthy animals healthy!
- Early focus on changes in milk components
- Fewer and less severe cases of mastitis
- Reduced milk loss and decreased use of medicine
- Increased milk quality and less work with special treatments
- Herd Navigator detects >80% of all mastitis cases



## Value for the farmer

### Nutrition balance

- Early focus on discrepancies in energy and protein balance
- Fewer nutrition related disorders
- Fewer cows show “stress syndromes”
- Improved forage quality
- Herd Navigator finds 50% more Ketosis cases than the test farmer



## Value for the farmer

### Surveillance

- Focus on the “right” cows
- Prevention instead of treatment
- Focus on gathering information  
⇒ reduced time consumption
- Automation of practical tasks



## Proven preliminary values from the 6 test farms

	€cow/ year
□ Reproduction	€ 40 - 110
□ Ketosis	€ 15 - 38
□ Mastitis	€ 47 – 186
□ Other	€ 47 - 80
□ Total per test farm	€ 173 - 307





## Status today

- Six test farms operational in DK ( 2 for > 4 years)
- Success criteria fulfilled
  - Robustness and performance
  - Verification of Biomodels
  - Validation of Standard Operational Procedures
  - Proven farmer added values and profit
- Launched at Agromek expo in DK Jan 2008
- Released for sales in Denmark May 2008



## Future

- Planning reference installations in 2 new regions 2008
- Start up of cooperation with central herd improvement organizations
- Continued development of Herd Navigator for
  - Greater than 2x14 parlours
  - Other parlour brands
  - DeLaval VMS
  - Other AMS brands
  - Rotaries
  - New parameters



## Distribution in Denmark

 **DeLaval**

Automation  
of milking

**Herd Navigator** 

Sales  
company

**FOSS**

Automation of  
Analysis

**dansk kvæg**

Education and advisory services

 **DeLaval**

**dansk kvæg**

**FOSS**

## More information

[www.herdnavigator.com](http://www.herdnavigator.com)

- Video
- Brochure & Facts Sheets
- Press release
- Q&A

[www.lattec.com](http://www.lattec.com)

- Scientific publications



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