



On farm analysis

An eye on the future

Dairy farmer Jørgen Clemmensen can now take more proactive control of his dairy herd while gaining the job flexibility he needs to lead a normal family life. A new system for monitoring the health of dairy cattle has been on field test in Denmark.

Richard Mills reports for In Focus.



It is a busy day at Idaminde farm in a quiet North West corner of Jutland. In addition to *In Focus*, a Dutch agricultural magazine and a local newspaper are also visiting. We are all keen to hear about Jørgen Clemmensen's experience with the field trials of the new dairy herd management system called Herd Navigator™.

The system helps dairy farmers to proactively manage their herds through monitoring milk from individual cows for signs of possible illness, feed imbalance and readiness for reproduction. The concept was a major talking point at the Danish Cattle Federation Congress held the day before our visit and has already attracted national TV coverage at another farm involved in testing the system. Jørgen is taking all the media interest in a down-to-earth manner typical of people from this region of Denmark and no doubt because he finds it worthwhile talking about an issue of obvious importance – the future of dairy farming.

Jørgen explains how the Danish Cattle Federation has predicted ongoing industry consolidation in Denmark with the number of dairy farms expected to fall from around 5500 today to just 3000 by 2015. "I am going to be one of the 3000 he says."

Jørgen's father started farming at Idam-

inde in 1958. Jørgen, who is 40 and married with two young children, took over the farm twenty years ago and is now looking for a way to continue for another twenty in today's dynamic farming environment. To do that he will need to grow his 175 head dairy herd to achieve the economy of scale he sees as essential to thrive in an expanding global market.

A business partner has recently joined Jørgen and the farm employs one full time labourer. Together, they can handle more land and cattle, but someone still needs to keep in touch with the state of the herd to ensure that the cattle are thriving, happy and producing optimally. The prospect of being able to do that, even with more cattle and yet still with the flexibility to look after his family was a particularly appealing prospect offered by the new Herd Navigator system. It has been on test at Idaminde for around six months and has quickly become an integrated part of the working farm.

Jørgen describes how he could use the system after being away at the cattle conference for two days. "When I got back in the evening I could go over to the computer and immediately get up to date with what had been going on with the herd," he says.

As an example, Jørgen shows us the alerts for today provided by constant monitoring of milk from the herd.

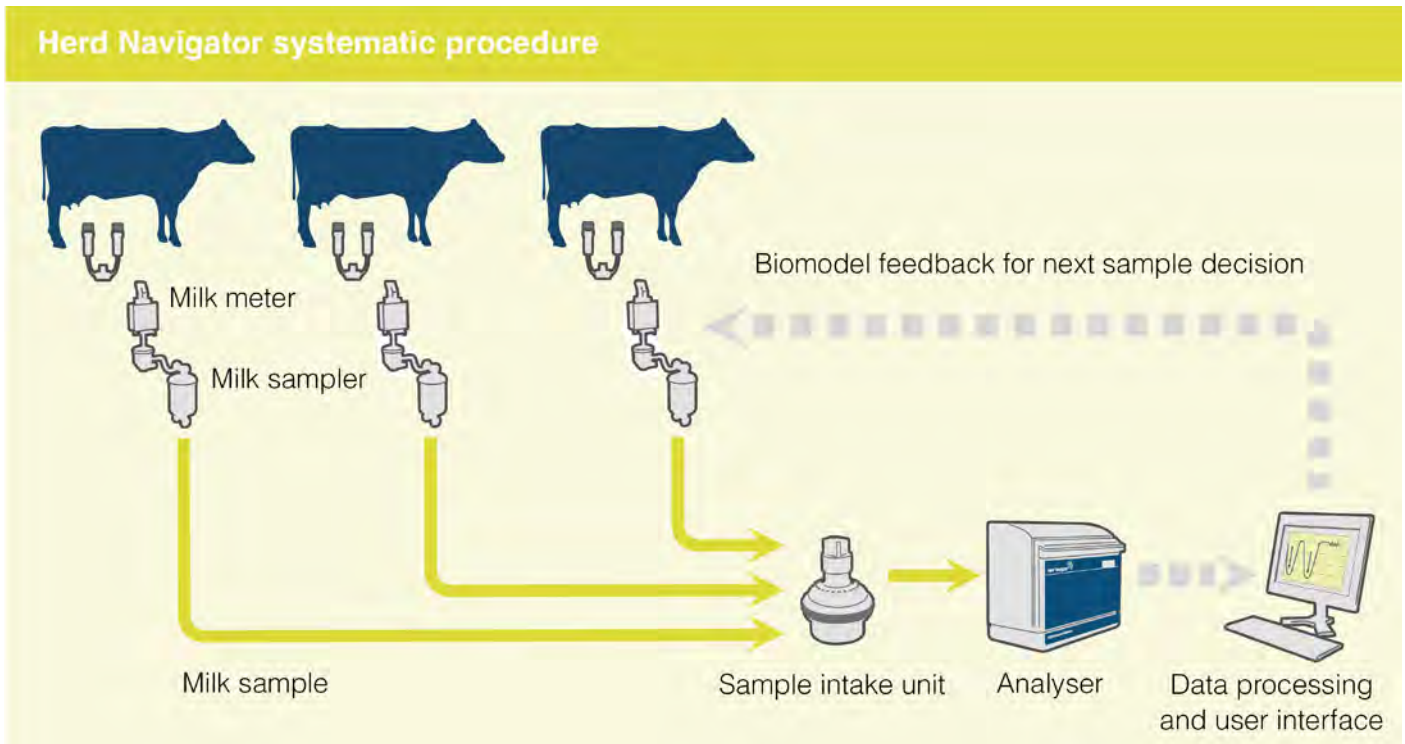
There are three cattle that need testing for possible ketosis – a form of exhaustion that can occur up to two months after calving and that can be avoided by adjusting energy levels in feed. One may have a problem with mastitis requiring possible treatment and another is ready for insemination. "I always took pride in my ability to spot a cow that needs attention, but I can see that the system can beat me to it by about three days," says Jørgen. "To start with I didn't quite believe it and did a lot of cross-checking - now I rely on it more and more," he says.

From computer novice to online farmer

When the system was first installed at Idaminde farm Jørgen had only a little experience of using a computer. That was soon solved by the training provided by the Danish Cattle Federation which gave him with the skills he needed to use the system. The same level of training will be part of the overall solution package when the system is commercially available. "The main thing is to learn the software," he says. "The training is very good."

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How it works



Milk is monitored during milking and an alert is given via the computer software to indicate that a specific test should be made. The test options are:

- Mastitis – a disease of the udder that can lead to poor quality milk with lumps in it
- Ketosis – a form of exhaustion sometimes occurring after calving and that can be prevented with the right feed

- Progesteron to identify cows ready for insemination
- Urea to monitor feeding for protein and energy balance

The farmer can give access to the system to veterinarians and feed advisors allowing on the spot online consultation

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He also demonstrates how tests are performed in response to the alerts we saw earlier on the computer screen. These are made using a test unit that looks perfectly at home mounted on a wall in the milking parlour in a sturdy metal box. The tests are made using individually sealed test kits that are opened and loaded into the test unit. Each tests takes around a minute to perform and the results are immediately visible on the computer screen.

Proactive herd management

According to Jørgen, the Herd Navigator system can prove a good investment for average-sized dairy farms, but that it will be up to individual farmers to get the best out of the system by exploiting the proactive management opportunities provided.

Initial predictions are that the commercially available Herd Navigator system will cost dairy farmers around €135-150 per cow per year. The return on investment then comes from improved reproduction, optimal production and efficient use of increasingly costly feedstuffs. Estimates

from the Danish Cattle Federation show that optimising udder health, reproduction, feeding and energy balance can boost economic performance by a significant margin in the region of €200-300 per cow per year.

Herd Navigator though is about more than just making money, as Jørgen is keen to highlight.

The health and happiness of the herd go hand in hand with productivity and this is an obvious source of pride as he shows us around the farm. The cows are inside for the winter and look calm, clean and healthy. One cow that has become accustomed to attention from Jørgen's children even welcomes a friendly pat on the shoulder.

In the future, this level of attention will be available to the whole herd even if it doubles in size. In fact, the level of management will improve because, as the field test at the Idaminde farm shows, it will be possible to keep a closer eye on individual cows using unprecedented levels of information. Jørgen and other dairy farmers

like him can look forward to proactively managing a larger dairy herd, but still with the job flexibility for a normal life away from the farm.

by Richard Mills, FOSS (rim@foss.dk)

Herd Navigator™

The new system for dairy herd management was unveiled at the Agromek 2008 trade show in Herning, Denmark in January. It received the Agromek prize for best new product within dairy farming.

Herd Navigator™ is designed to address the needs of professional farmers for proactive herd management. It has been developed in collaboration between FOSS, DeLaval and the Danish Cattle Federation and will be marketed and sold through Herd Navigator A/S, initially in Denmark.

www.herdnavigator.dk