

Advanced activity-generated data on tap

Stepping ahead with cow care

Producers can now take advantage of more advanced data, generated by activity tags, for health and fertility monitoring. Used to the full, this information can keep producers and vets a step ahead, particularly in larger herds where these developments take individual-cow management to a new level.

text **Karen Wright**

Picking up changes in movement through activity tags on collars has proved its worth on many units. Used properly, it out-performs 'walk and chalk' systems. Remotely accessing data gives producers 24/7 coverage of the cow yards and, as herds get larger and labour is more challenged, these systems prove their worth even more.

The technology has moved on now. The latest generation of collar tags can pick up advanced cow behaviour, including rumination patterns. "Undoubtedly, this technology is beneficial," says north west-based dairy vet Den Leonard, of Lambert, Leonard and May, who has

Activity collars: an invaluable extra management device



dairy clients successfully using activity collars as part of their heat detection and fertility management. "It's not a replacement for good stock management, but it's an invaluable extra device.

"We don't have many herds of 50 cows that are still milked through an abreast parlour and known by first names – that's rare these days. And in many herds, time is the limiting factor. Yet good stockmanship is vital across the whole herd," he says.

Early warning

When it comes to heat detection, activity collars complement the watchful eye of good staff who may be working among the cows. But changes in rumination activity isn't something that staff would normally pick up. "Fluctuations here are an early sign that things aren't quite right," says Mr Leonard, admitting that there's a lot of information here that can be picked up and turned to good use, subject to accurate interpretation.

"Yes, a fall in rumination is an early warning signal that the cow may be unwell. But a trained eye reviewing the data regularly will pick up changes in a cow's pattern and in groups of cows. Monitoring times taken to recover normal rumination patterns and intake levels in key periods in the cow's lactation, like immediately post calving, are equally valuable if detected through this technology."

He sees real benefits in these advanced collar tags in dairy herds, particularly where the vet or adviser is fully involved.



Activity collar tags: data must be reliable, accurate and accessible

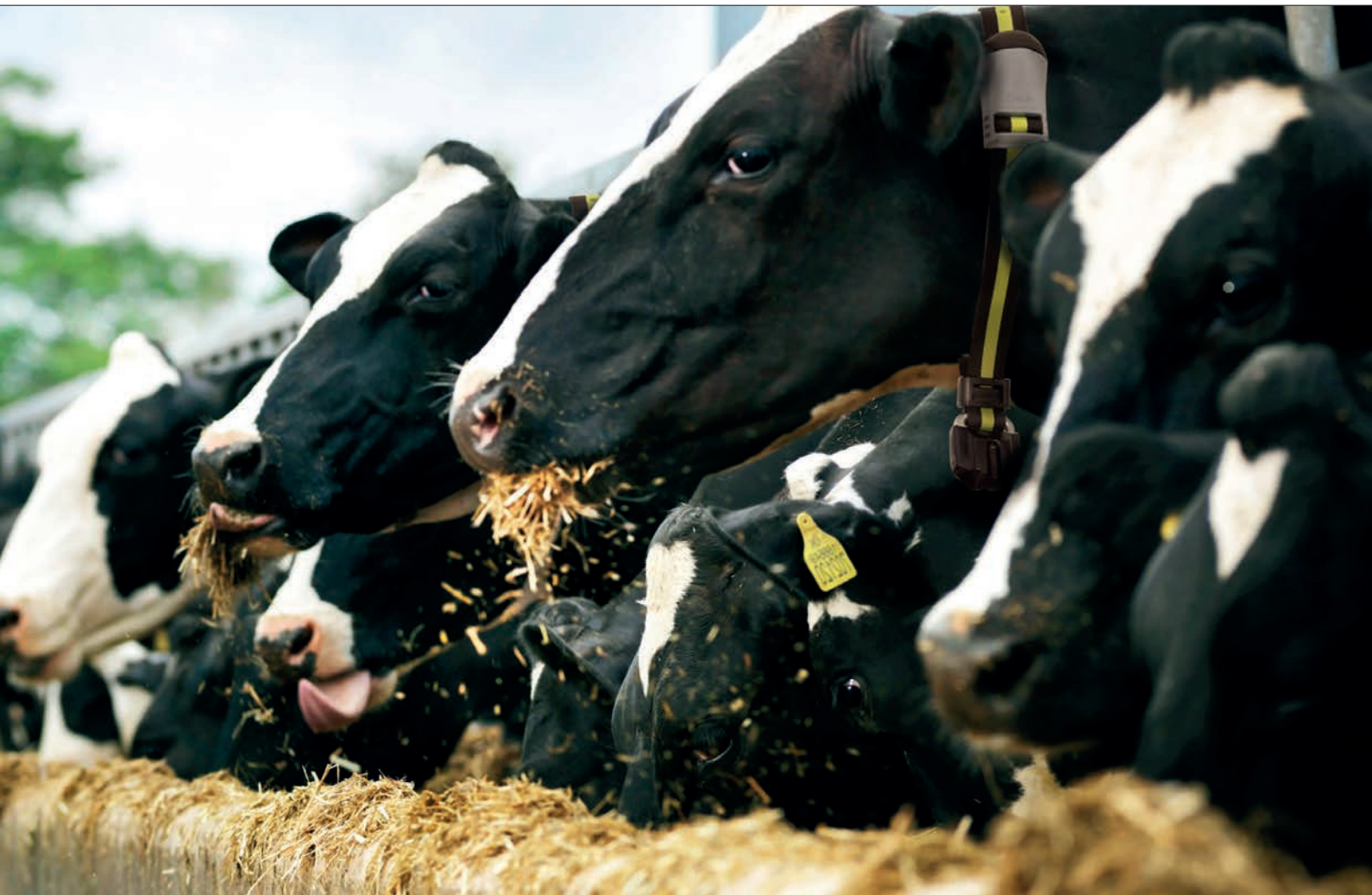
"Ensuring that you use the captured data is critical," he adds, acknowledging that the value will hang on regularly reviewing the information. "By both farm staff and veterinary technicians, who can pick up deviations from the norm and know when and where veterinary input is needed.

"This makes sure that actions are timely and that production losses are minimised through more proactive cow care."

Advanced management

The immediate 'call to action' on rumination patterns, as well as movement activity, is now being offered through SCR Heatime's latest developments. The company uses an advanced tag that fits on a collar and records the time that the cow spends ruminating – typically between 450 and 500 minutes a day or more depending on her ration – along with her movement activity," says SCR Heatime's Nick Pitkin. "The increased volume of data from this new tag, and its reliability demonstrated in trials, opens the door to more advanced cow management."

He admits that the value of this data lies beyond recording. "It needs to be



reliable, accessible and interactive,” he adds.

SCR Heatime continues to rely on an aerial and radio waves for relaying data from the tags to the terminal – that might be in the parlour or cow house.

Information is picked up continuously if the cow is within 100m side to side or 500m in front of the aerial. Otherwise the data is stored in the tag for 24 hours and will transmit as the cow passes the aerial. Relying on radio waves overcomes any problems with intermittent broadband signals.

Data flow

However, once stored in the terminal, the data can be sent via the Internet to mobile devices or the farm PC. Likewise cow data, such as NMR records that are managed on the dairy recording system Uniform Agri, can be transferred to the SCR Heatime device along with event data. “This can be added via the PC or, conveniently, through a dedicated mobile phone app,” adds Mr Pitkin.

This extended data flow has allowed producer-friendly reports to be generated, as well as the sharing of data with third parties.

“This is invaluable as producers gain confidence in the system and in developing the usefulness of the rumination data. It’s a whole new arena. With heat detection, producers know to expect a cow to come into heat in many cases and the data confirms this. A blip in rumination patterns and recovery pattern for an individual and for groups of cows is a bit more complex if used to its full potential.”

One example is a where a fall in rumination was detected, by the system, in a group of cows that appeared well and at that point there wasn’t a drop in production. “But the latest silage analysis test revealed that a new clamp of silage, started on the same day as the data was generated, was particularly low quality.

“Milk yields would have dropped within a few days, but the data flagged up the problem early and the ration was adjusted. This highlights the benefits of the rumination data and its usefulness beyond rationing.

“When justifying advanced activity tags, it takes just two or three early warnings and good data interpretation to warrant the investment.” |

More data on board

Recording, interpreting and making good use of data should add to the bottom line and incorporating new information, such as rumination patterns, is the next step forward in cow management.

“Individual cow management has always been core to the progress of any dairy herd,” says NMR director Jonathan Davies. “Adding rumination data is a step forward, but incorporating it with other data on individual cows means that real progress can be made when it comes to breeding a healthier, fertile and more profitable herd.”

NMR’s Jonathan Davies

