

07 June 2023

## **Breakthrough approach for detecting mastitis in dairy cows**

The developers behind the smaXtec advanced health system have identified a new early standard for mastitis detection – Level Zero – which will enhance the welfare of dairy cows and reduce economic losses of the disease for farmers.

This scientific advancement is a major step in proactively tackling one of the costliest diseases impacting the dairy sector. Industry reports estimate that the loss of milk production, associated veterinary costs and premature culling costs £334<sup>1</sup> per case of mastitis.

This new early diagnostic standard has identified a specific temperature pattern that indicates the early onset of mastitis through in-depth analysis of data collected through smaXtec's continuous monitoring. This sets a new 'Level Zero' standard for the detection and proactive prevention of the disease.

Based on the highly accurate measurements of inner body temperature generated by its health monitoring boluses, smaXtec has identified three rapid temperature increases in a short period as the trigger for mastitis.

The Level Zero classification, the lowest in severity, is described as inflammation already being present but with a normal-appearing mammary gland and visibly normal milk.

Data also shows that a cow's inner body temperature increases up to four days before clinical symptoms of mastitis become visible<sup>2</sup>.

Until now, it's been considered good practice to detect and treat mastitis from Level One. But, if you can identify mastitis at Level Zero before the somatic cell count (SCC) reaches pathological levels, it gives producers the ability to administer a preventative treatment.

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<sup>1</sup> [Kingshays-Dairy-Costings-Focus-Report-2022.pdf](#)

<sup>2</sup> Adams, A. E./Olea-Popelka, F. J./Roman-Muniz, I. N. (2013): Using temperature-sensing reticular boluses to aid in the detection of production diseases in dairy cows, in: J. Dairy Sc. 96: p. 1549-1555

# Press Release



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“By detecting mastitis at Level Zero using our award-winning technology, dairy farmers will experience routinely healthier cows, consistently higher milk yields, less antibiotic usage and, ultimately, less dumped milk – saving both time and money. It’s win win,” says the company’s global sales director, Chris Howarth.

smaXtec customers typically report a 55% reduction in antibiotic usage for mastitis cases in the first few months of using the bolus technology, with longer-term customers reporting antibiotic reduction by up to 70%. This is encouraging data for an industry focused on reducing antibiotic usage.

Managing a herd of 650 cows, Cornish farmer, Bill Jewell introduced the health system in 2021 and says that mastitis outcomes have improved significantly.

“Since installing smaXtec, I honestly can’t say that we’ve had any prequartered cows from having mastitis. There has not been a case that we’ve missed,” he says.

The new level of detection for mastitis is just one example of smaXtec’s ongoing efforts to develop innovative solutions that improve the health and productivity of dairy herds worldwide.

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## **About smaXtec**

We offer professional dairy farmers the most technologically advanced health system aimed at preventing diseases in dairy cows. As a result, farmers achieve stable high milk yields, reduce the use of antibiotics many times over and significantly increase animal welfare. Through 24/7 monitoring and optimisation of time-consuming daily tasks, the entire work process on dairy farms can be made more efficient. In this way, we make an important contribution to the stability and profitability of dairy farming worldwide.

For more information, please visit us at [smaXtec.com](http://smaXtec.com)