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smaXtec Cuts Dairy Methane Emissions by up to 15%, Research Shows

Bolus technology supports herd health, lowers emissions and saves resources.

New research conducted in collaboration between smaXtec and the Austrian Agricultural Research and Education Center (AREC) Raumberg-Gumpenstein indicates that smaXtec's state-of-the-art bolus technology can help reduce methane emissions per unit (kg) of milk by up to 15%.

The emissions reduction calculation is based on the recognized standards of the Intergovernmental Panel on Climate Change (IPCC) of the United Nations, using research-supported benefits of the advanced health system for improving animal health.

“Our calculations are based on the IPCC Guidelines and our own respiration experiments and have shown that animals with a longer useful life emit less methane per kilogram of milk at typical breed performance,” said Dr. Thomas Guggenberger, Head of Institute of Livestock Research, AREC Raumberg-Gumpenstein. “Early detection of disease and proactive health management can reduce animal losses, effectively reducing methane emissions in the dairy industry.”

According to a study done by the Clarity and Leadership for Environmental Awareness and Research (CLEAR) Center at UC Davis, sick cows produce less milk and more emissions¹. Further, severe cases of diseases like mastitis require antibiotic use for treatment, resulting in discarded milk – and wasted resources – during the required withdrawal period.

“The smaXtec system is proven to accurately detect diseases like mastitis before clinical symptoms occur,” said Stefan Scherer, CEO, smaXtec. “This enables farmers to intervene sooner with milder treatment protocols, such as home remedies or mild anti-inflammatories, before the disease course becomes more severe.”

Improved disease management and early intervention not only helps lower the emissions intensity of each unit of milk produced, but also supports overall animal welfare and lifetime productivity of the cow. Current smaXtec customers are experiencing these disease prevention benefits first-hand on their farms.

“The biggest benefit to having the smaXtec system is that we are catching sick cows and problem cows much earlier than we did in the past,” said Dan Lauderdale, fourth-generation dairy farmer at Lauderdale Farms in Elkhorn, Wisconsin.

With its products and services for dairy farms of all sizes, smaXtec is making an active contribution to achieve at least 5 out of the 17 [Sustainable Development Goals](#) developed by the United Nations. Only proactive – rather than reactive – management approaches on dairy farms globally will help achieve these goals, which is a key priority for smaXtec.

To learn more about the smaXtec system and how the technology is helping future-proof dairy operations, visit www.smaxtec.com.

References:

¹ CLEAR Center. (2021) How Dairy Milk Has Improved its Environmental and Climate Impact. University of California – Davis. <https://clear.ucdavis.edu/explainers/how-dairy-milk-has-improved-its-environmental-and-climate-impact>. Accessed 14 March 2023.

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 consistent high milk yields, reduce the use of antibiotics many times over and significantly increase animal welfare. Through 24/7 monitoring and optimization of time-consuming daily tasks, the entire work process on dairy operations 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 www.smaXtec.com

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