

Impact of Dairy Production at Farm Level – How Do We Measure the Actual Carbon Footprint and Environmental Impact on South African Dairy Farms?

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Abstract

Amid the dairy sector's invariable and ongoing cost increases and squeeze on profit margins, it faces the high and mounting pressure to become sustainable and regenerative. Negative perceptions, especially via social media platforms, where a negative and often false perception regarding the sector's perceived environmental impact is spread has become a profound liability. This led to an ever-increasing threat of losing a significant degree of its market share as a protein supplier, necessitates the sector, and the producer specifically, to demonstrate positive contribution toward sustainable production through science-based adaptive management practices. It has become critical to effectively calculate, monitor and reduce the environmental impact from dairy farms and assist farmers to become more resilient especially within the complex and integrated systems involved in dairy production. Therefore, Milk SA in association with ASSET Research, initiated a project to calculate and evaluate the on-farm carbon footprint by means of a web-based system dynamics tool.

The goal of this study was to develop, assess and analyse a web-based system dynamics tool that can assist dairy farmers in calculating and evaluating their on-farm carbon footprint. Through this freely available web-based tool, dairy farmers should be able to take informed action when incorporating management decisions that can lead to a lower environmental impact and increased resilience towards climate change.

PRESENTER BIOGRAPHY: RIANA REINECKE

Riana always knew she wanted to make a difference and do something meaningful with her career. Riana is an enthusiastic researcher at heart and has always had a keen interest in the environment, animals, and the interaction with humans, which makes her current research highly valuable to assist the dairy industry to improve their environmental impact, while improving their social and economic status. Riana completed a BSc Agric (Animal Science) degree at the University of Pretoria in 2002. The work Riana has done and the comprehensive research in the study set forth the foundation for further research, resulting in a PhD at Stellenbosch University. Through her career in dairy processing plants as well as being a dairy farmer consultant, positioned Riana to approach her current research in a holistic manner which transfers effectively into advising farmers to optimize their enterprises, enhance a healthier environment and contributes to economic profitability.