

RESPONSIBLE MINERALS
ENVIRONMENT • SCIENCE • PERFORMANCE

Intellibond on Reducing Carbon Footprint

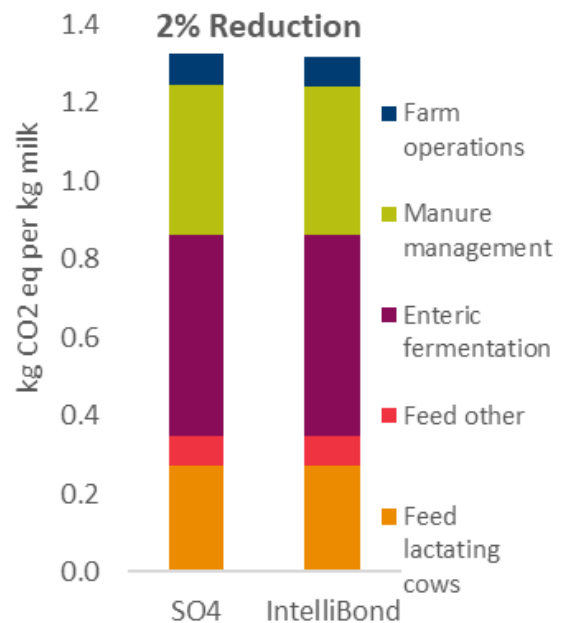
As part of Trouw Nutrition’s Responsible Mineral Strategy alternative mineral sources to oxides and sulphates is advised. Intellibond has been shown through Life Cycle Assessment (LCA) to have the potential to decrease the carbon footprint of a dairy cow (kg CO₂eq/Kg ECM) by 2%. An LCA is a methodology used to assess the carbon footprint of milk production by considering the entire life cycle of a product.

What are Responsible Minerals?

Trouw Nutrition’s Responsible Mineral strategy aims to optimise mineral and vitamin delivery for safe, efficient, and environment conscious results which maximise performance and farm profitability while minimising oversupply. Recent research emphasises the vital role of mineral source in bioavailability and achieving an ideal mineral balance.

What is Intellibond?

Intellibond minerals (Copper, Zinc, and Manganese) by Trouw Nutrition offer enhanced stability and bioavailability. They disassociate in the abomasum’s low pH environment (<4.0), promoting absorption in the intestine and bypassing antagonistic effects often observed in feed or rumen. This minimizes negative impacts on fiber digestion observed with sulphate sources, ultimately improving overall ration digestibility and performance. [Click here to read more about Intellibond Minerals and a Responsible Mineral Strategy.](#)



What Impact can Intellibond have on Carbon Footprint?

By enhancing the mineral supply and avoiding the potential issues linked to lower quality sources, Intellibond minerals play a crucial role in optimizing animal performance and reducing the carbon footprint of dairy cows through impacting the following parameters:

- 2% shorter calving interval,
- 8% lower replacement rate,
- 1% higher milk production per cow

2% lower impact of climate change with Intellibond

How have Trouw Nutrition demonstrated this through a LCA?

Trouw Nutrition utilised a model farm in Kansas, USA as a baseline scenario for a comparative meta-analysis between Intellibond or sulphates being fed to lactating dairy cows.

An LCA model was developed following ISO standards (14040:2006, 14044:2006) and guidelines from IDF (2022), PEF Guide (2019), PEFCR of dairy products (EDA, 2018), PEFCR of animal feed (FEFAC, 2020), and related references.



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