



Case Study

*Next generation hydroxy
trace minerals with
verified LCA for cattle*



Overview

A wealth of research data from over 250 independent studies on particular zinc, manganese and copper hydroxy trace minerals was the basis for an independently verified LCA. It was shown that, due to its unique crystal structure and associated solubility pattern, these trace minerals have a very high uptake and thereby inclusion rates may be lowered while maintaining optimal animal health and performance. In addition to their reduction in total CO₂ emission, each hydroxy chloride product has had its scope one and two carbon footprint verified and listed within the Global Feed Life Cycle Assessment Institute (GFLI).

Moreover, independent research supporting LCA verification in dairy cows showed efficiency gains that translated into a 2.6% reduction in total CO₂ emissions equivalent per kilogram of energy corrected milk, making this hydroxy trace minerals one of the first trace mineral sources to receive an independently reviewed endorsement for total CO₂ emissions equivalent reduction per unit of milk produced.

Impact

An independently verified LCA for next generation hydroxy trace minerals that provides producers and formulators with the ability to more accurately align their nutritional program with their objective to reduce the carbon

footprint of their herd. Additional gains on carbon footprint can be expected for the product itself (cradle to gate) and for dairy production (cradle to farm gate). These products now provide the industry with branded footprint data for trace minerals to be entered into the Global Feed LCA Institute (GFLI) database.

Supporting Materials:

- [GFLI verifies the improved carbon footprint of hydroxy trace minerals for inclusion in its global ingredients database](#)

*This sustainability-related case study was provided by **Nutreco**.*

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