Selko®

**Selko®** IntelliBond

# Knowing the exact invironmental impact of the trace minerals in your feed

www.selko.com

trouw nutrition
a Nutreco company

# Reduce the $CO_2$ footprint of your trace mineral source with Selko® IntelliBond®

## The need: Meeting sustainability objectives. A team effort

Progressive feed compounders and premixers are being asked by their customers to provide the total carbon footprint of the feeds and premixes they are manufacturing. This need is being driven by the industry's need to reduce the total carbon footprint associated with the production of livestock and to comply with a series of climate accords. They need to calculate their total footprint, including emissions from the production of feed supplied to the farm.

Reports indicate that 42% of the total carbon footprint is coming from farm operations including the production of feed (see Figure 1).

## The importance: Feed Additives can help lower $CO_2$ emissions

When formulators are aware of the individual carbon footprints of the ingredients being selected for inclusion within their customers' blends, they can knowledgably select those ingredients and additives that offer the lowest total carbon footprint.

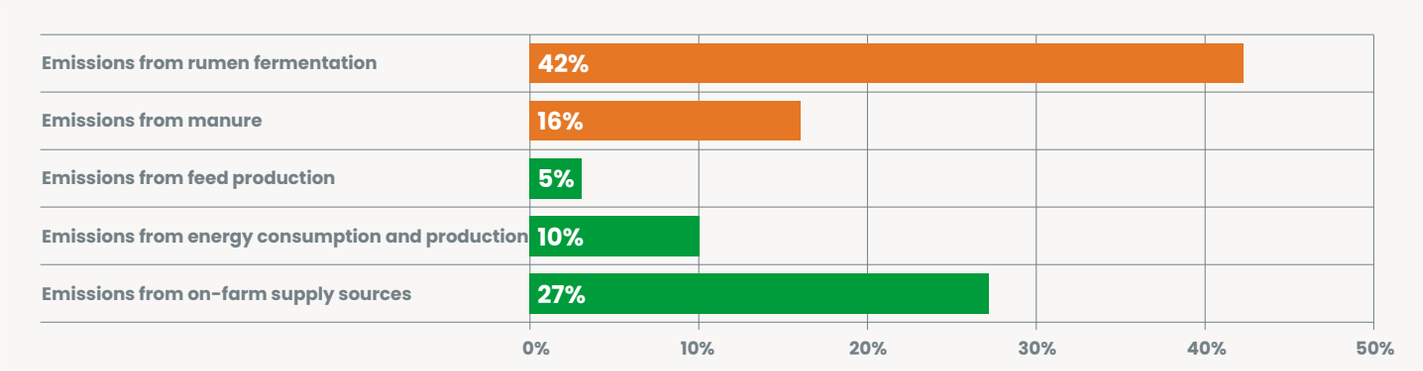


Figure 1: Total carbon footprint from cows and other activities on a dairy farm expressed as a percentage for the total carbon emissions of the farm. As much as 40% of total emissions can be attributed directly to the production and delivery of purchased feeds.

| Product | $CO_2$ eq/ Kg Product | $CO_2$ eq/ Kg Metal | %Metal |
|---|---|---|---|
| **Selko® IntelliBond® C** | 2.37 Kg | 4,39 Kg | 54% |
| **Selko® IntelliBond® Z** | 1.94 Kg | 3,46 Kg | 55% |
| **Selko® IntelliBond® M** | 2.53 Kg | 5,75 Kg | 44% |

Figure 2: $CO_2$ equivalents per metric ton of Selko® IntelliBond® produced and per kg of metal for Selko® IntelliBond® C, Selko® IntelliBond® Z and Selko® IntelliBond® M.

## The Solution: Life Cycle Assessments as a tool to validate $CO_2$ emission

To assist with this need, Selko completed a comprehensive Life Cycle Assessment (LCA) to verify the total carbon footprint of its Selko® IntelliBond® Copper, Zinc and Manganese trace mineral products (see Figure 2). The LCA is a globally accepted method for reviewing the ability of a product, ingredient, practice etc. to reduce carbon emissions under a well-defined set of conditions.

## The Proof: How does a LCA work?

Completion of the LCA for each Selko® IntelliBond® product started with a full assessment of all raw ingredients, energy requirements, water use and reclamation, etc. (see Figure 3) to arrive at a total $CO_2$eq value that was later verified by an outside auditor, Dr. E. Kebreab, Prof., University of California, Davis to be in compliance with all applicable statutes (FAO, LEAP, PEFCR, IPCC and ISO 14040/44) (See Figure 4).

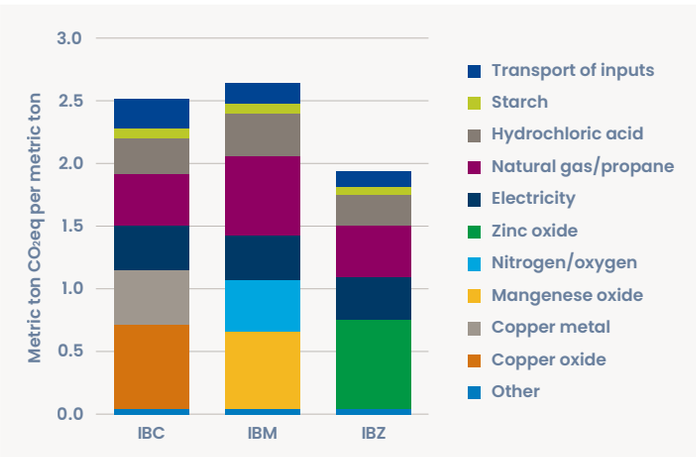


Figure 3: Total $CO_2$eq value verified by Dr. E. Kebreab, Prof., University of Ca. Davis to be in compliance with all applicable statutes

## Selko® IntelliBond®: First trace mineral with a verified LCA

The Selko® IntelliBond® family of trace minerals is the first source of improved trace mineral nutrition to provide an independent verification for the total $CO_2$eq values of its products. The availability of these values will allow feed compounders, premixers and nutritionists to better formulate their blends to comply with their customers' need to reduce $CO_2$eq emissions associated with livestock production.

After a comprehensive review of Selko® IntelliBond®'s prior LCA by the Global Feed LCA Institute (GFLI) staff, GFLI has concluded that Selko® IntelliBond® Z, C and M have met all GFLI standards allowing for the listing of Selko® IntelliBond® Z, C and M as branded ingredients within the GFLI database.


Figure 4: LCA certificate

For more information about the science behind Selko visit:

**selko.com**

Selko is the Feed Additives brand of Nutreco. In an era defined by global trends that include increased regulation, pressure to reduce antibiotics, climate change, raw material shortage, and scarcity of land use, the demand is rising rapidly for sustainable and safe feed-to-food production. Selko products and services help to achieve this.

Selko specializes in research-proven feed additives to animal feed that help reduce harmful microorganisms and mycotoxins at various stages in the feed-to-food chain, leading to improved quality at the feed mill and farm level.

We offer a wide range of solutions related to health and mineral optimization. All aiming to support animal health and help reach your animals' full production potential. This way, we help you get the best results for you, your animals and your customers.

Selko-202311-23