



Carbon footprint of feed

How to measure your footprint and develop an action plan

Feed manufacturers, integrators and farmers in the livestock industry are facing increased demand to reduce the environmental impact of their products e.g. compound feed, blends, milk, meat, eggs etc.



The starting point is to conduct an accurate assessment of the current environmental impact, including carbon footprint, of the products that are manufactured. This enables identification of improvement opportunities, looking at raw materials, inclusion levels and total formulation. Tools should also be employed to look at how much energy is being used to produce feeds and if this can be reduced. As such, it has never been more important to accurately report on the environmental footprint of products.

Feed companies are going to increasingly need to provide carbon footprint figures for their feeds for two main reasons:

- 1 Farmers will be demanding accurate figures to use in their carbon footprint assessments.
- 2 Businesses need to demonstrate they are working towards more sustainable practice, driving efficiency and stay ahead of evolving legislation.

Trouw Nutrition have developed MyFeedPrint which is an online environmental footprint service that helps feed mills become more environmentally and financially sustainable. Producing a compound diet with lower environmental impact is a great start to more sustainable animal production.

Rationale for MyFeedPrint environmental footprinting tool

- ✓ Easy to use
- ✓ Automatic updates for latest accredited footprint values
- ✓ Allows specific parameters (not based on averages)
- ✓ Provides insight for purchasing decisions and marketing
- ✓ Data exportable to mill software
- ✓ Includes other environmental impacts not just CO₂e
- ✓ Industry recognised

Raw materials

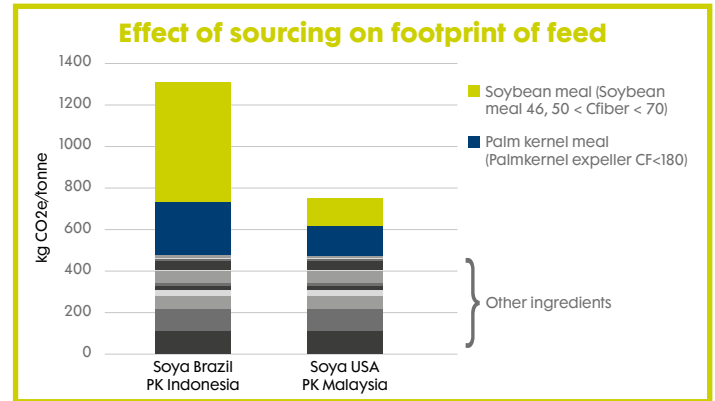
Every feed ingredient has its own environmental impact value, based on origin, land use, transportation, processing and more. Crops produced under regenerative farming practices or more locally, can have a lower impact than the same ingredient sourced from regions marked by deforesting practices or low output per hectare.

Sourcing of raw materials

Did you know that the country of origin where a feed is grown makes up almost 85 to 90% of the footprint of that raw material? This includes all the inputs in terms of energy, fuel use and water usage.

Looking at soya and palm kernel alone, we can see the massive impact that country of origin can play when looking at sustainable purchasing choices. MyFeedPrint insights demonstrate that by swapping Brazilian

Soya to US Soya and Indonesian Palm to Malaysian Palm, the nutritional profile and cost can remain neutral whilst boasting a 50% carbon footprint reduction.



Example impact on the carbon footprint of milk

Using the above example where the feed carbon footprint was reduced by 50% we used our MyMilkPrint online life cycle assessment tool to calculate the impact of that reduction on the carbon footprint per kg FPCM:

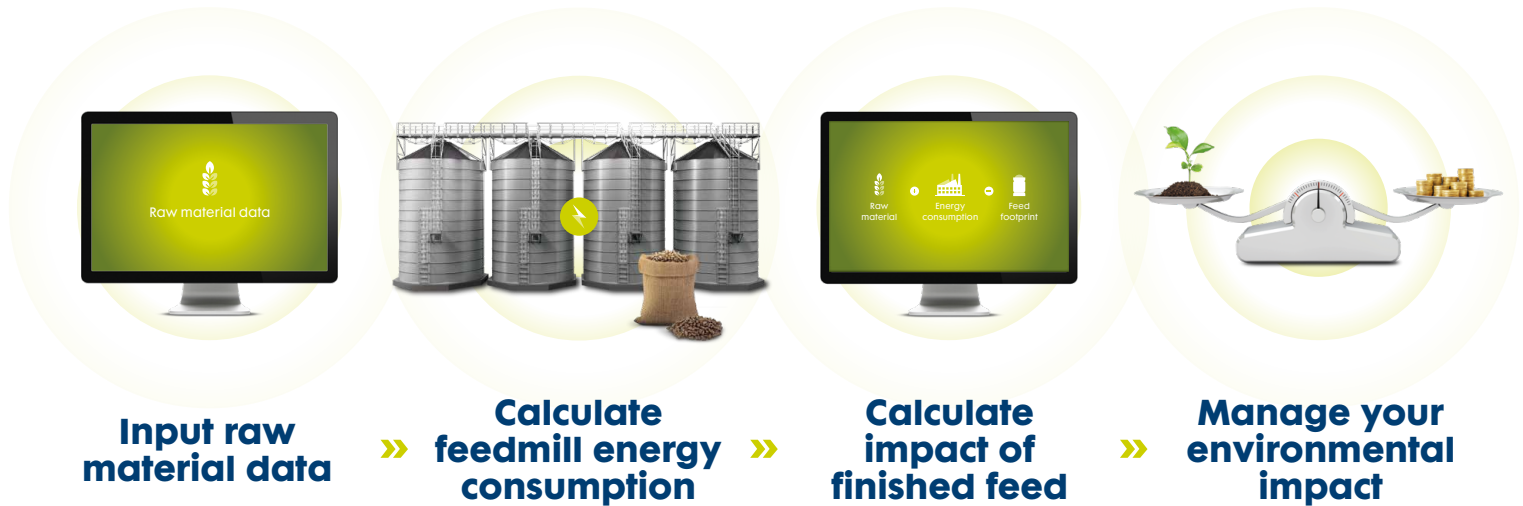
- Carbon footprint of the compound feed decreases by 50%.
- The footprint of the ration decreases by 30%.
- Ration contribution from feed decreases by 26%.
- Enteric methane remains unchanged due to constant nutrient supply and animal numbers.

Consequently, carbon footprint per kg FPCM decreases by 10%.

Energy usage

Our feed mill efficiency team can help you to review manufacturing processes to explore ways to reduce energy usage and waste. The aim must be to reduce cost per tonne of manufactured feed while reducing energy consumption, for example by managing moisture content more effectively.

Your carbon footprint measurement plan



Trouw Nutrition offers a comprehensive suite of models, tools and nutritional expertise to deliver a holistic understanding, identify carbon hotspots and optimise accordingly. This approach underscores a commitment to assisting farmers and nutritionists in achieving their sustainability objectives while ensuring the stability of farm income.

- ✓ Time saving
- ✓ Easy to use
- ✓ Cost-effective
- ✓ Up to date at every log in
- ✓ No need for LCA expert in house, we have a team of experts in the palm of your hand

Future-proofing your business

Whilst carbon footprint is the main area of focus in the industry at present, in the future other impacts will come into the spotlight. With this in mind MyFeedPrint will also measure other environmental impacts of feed:

- 1 Carbon footprint**, kg CO₂e → Indicates potential global warming from greenhouse gas emissions.
- 2 Land use**, m² → The land occupied to produce a product over a specific period.
- 3 Eutrophication**, kg PO₄³⁻-eq → The build up of excess nutrients, such as nitrogen and phosphorus, in water bodies.
- 4 Particulate matter**, disease incidence → The potential disease incidence from particulate matter emissions.
- 5 Acidification**, kg SO₂-eq → The potential acidification of soils and water due to the release of gases such as nitrogen oxides and sulphur oxides.
- 6 Water use**, M3 world eq. deprived → Indicates relative water consumption based on regionalised water scarcity factors.



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