

# CARBON FOOTPRINT CALCULATION OF SOILFOOD PRODUCTS (2025)

Soilfood provides high quality products and raw materials from industrial side streams or recycled materials for agricultural and industrial use. Main products are fertilizers, lime products and soil improvement materials. Soilfood has commissioned screening-level carbon footprint calculations for its products using two scopes: cradle-to-gate and cradle-to-application. This document provides basic information of the calculation and the results are available on request.

## **Carbon footprint – cradle-to-application**

### **Declared unit**

1 t of fresh Soilfood products, as bulk, applied to land or used in industry

## System boundary

Cradle-to-field, i.e. system boundary includes life cycle stages from raw material extraction to field application. Reactions and impacts after application are excluded due to great uncertainties. For products used for industrial purposes, application of product is not considered (i.e. system boundary ends after transportation to clients).



# **Partial carbon footprint (Emission factor)**

## **Declared unit**

1 t of fresh Soilfood products, as bulk, at the manufacturing plant gate

## System boundary

Cradle-to-gate, i.e. system boundary includes life cycle stages from raw material extraction to the manufacturing plant gate.





#### Data, allocation and cut-off

Of priority, primary data is used. Primary data of Soilfood's production represents year 2024. Secondary data from Sphera professional 2024.2 and Ecoinvent 3.11 LCA databases are used for background processes, i.e. for operations not under control of the commissioner such as production of raw materials and energy. VTT Lipasto data is used for modelling transportation emissions. Used secondary data is not older than 10 years.

Specific consumptions of auxiliary feeds to products were considered and no allocation on annual level was needed. In waste treatment, "polluter pays" principle is applied.

All raw materials received free of charge or with a reception fee are considered wastes and no burdens from earlier product systems were considered. For raw materials with economical value economic allocation was used to allocate burdens from earlier product systems.

Flows accounting less than 1% of the overall input for mass or energy flows are excluded from the study if appropriate primary, secondary or even proxy data are not available. Electricity and heat consumption of storage and handling sites were excluded as insignificant, except where electricity was used for loading of product for transportation.

#### Limitations

The results of each product have not been analyzed in depth individually and the study has not been critically reviewed. Data quality assessment and sensitivity analyses have not been performed as required by the ISO14044 standard. Data quality is estimated to be average.

#### **Impact Assessment Method**

Partial carbon footprints calculated applying IPCC 2021 (AR6) characterization factors. Biogenic carbon storage and biogenic carbon dioxide emissions were calculated as zero. Biogenic methane emissions are included.

#### Applied standards, practitioner of the study

ISO14040 and ISO14044 were followed where applicable, but the extensive reporting requirements of the standards were not met.

The calculation is not critically reviewed or verified by a third party.

CFP study and this CFP document were conducted and prepared by Etteplan Finland Oy in 2025.