HORTICERT

The International Certification System for Sustainable Peat Substitutes and Growing Media

Executive summary

Our Motivation

Peatlands are among the **most important terrestrial carbon sinks** - and yet, **peat** continues to be extracted for **use in potting soils and growing media.** Drained peatlands and the decomposition of peat in growing media lead to significant greenhouse gas emissions.

According to the German Federal Government's peat reduction strategy, the use of **peat** in **hobby gardening** is therefore to be **phased out** by **2026**, and significantly **reduced** in **professional horticulture** by **2030**.

This makes the use of **sustainable peat substitutes** increasingly important. In addition to promoting high-quality substitutes, sustainable and low-emission production methods are also crucial.
To assess the sustainability of peat substitutes, the **international certification system HORTICERT** was developed.

Our Approach

HORTICERT certifies **sustainable peat substitutes** and **growing media**. To obtain certification, the latter must not exceed the defined **maximum peat content**.

HORTICERT covers the **ecological, social, and economic sustainability** of peat substitutes and growing media.

It also supports the **traceability of product flows** across the entire supply chain to ensure that every stage is certified and that no more material is sold as sustainable than has actually been certified.

Using a standardized and transparent methodology, HORTICERT additionally verifies the **CO_2-equivalent footprint** of certified products — **from raw material to finished growing media.**

Compliance with the requirements is monitored through annual audits conducted by **independent certification bodies**.

HORTICERT was developed in **close collaboration with the industry**, making it **easy to apply** in practice.

Our Impact and Value

HORTICERT supports manufacturers of peat substitutes and growing media, horticultural businesses, and retailers in **achieving their sustainability goals** and **complying with legal requirements** around traceability and sustainability communication. These include, for example, the German Supply Chain Act (LkSG), the CSDDD, and the CSRD.

With the HORTICERT label, **certified companies** and **licensed distributors** of HORTICERT-certified products can **visibly communicate** the **sustainability** of their products at the **point of sale**.

A 2024 **study by the University of Passau** also found that the **HORTICERT label can increase end consumers' willingness to pay** for potting soils containing sustainable peat substitutes. This means HORTICERT certification not only unlocks **economic potential** for businesses but also empowers consumers to make **informed and sustainable purchasing decisions**.

Through certification, HORTICERT is helping guide the growing media industry toward a largely **peat-free future** — contributing to the **protection of our peatlands and** our **climate**.

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01
Overview

Peatland protection is climate protection

- Intact **peatlands store six times more carbon** in the soil than forests of the same area, making them a **vital carbon sink**
- In contrast, **degraded and drained peatlands** release carbon into the atmosphere and therefore **contribute to climate change**
- **Peat** is typically extracted from **long-drained peatlands** and used in **potting soils and growing media**
- **Peat decomposition** within growing media results in **substantial greenhouse gas emissions**
- Avoiding the use of peat in horticulture reduces peat-related greenhouse gas emissions and thus supports climate protection

The importance of sustainable peat substitutes continues to grow

In 2020, **emissions from drained peatlands** accounted for **7.5%** of Germany's total greenhouse gas emissions.

Germany's peat reduction strategy aims to **phase out** the use of peat in **hobby gardening** by **2026** and **significantly reduce** its use in **professional horticulture** by **2030**.

Using peat substitutes helps reduce the use of peat in growing media and contributes to the **protection of peatlands**.

It is thereby essential to ensure the **sustainable production of peat substitutes**.

Development of a certification system for peat substitutes

The German Federal Ministry of Agriculture, Food and Regional Identity commissioned Meo Carbon Solutions GmbH to develop and implement an internationally oriented certification system for peat substitutes.

Gefördert durch:
Bundesministerium für Landwirtschaft, Ernährung und Heimat
aufgrund eines Beschlusses des Deutschen Bundestages

FNR Fachagentur Nachwachsende Rohstoffe e.V.

meo CARBON SOLUTIONS

HORTICERT is structured into 3 phases

Nov 2021 — **Start Phase 1**
Concept development

Sep 2022 — **Start Phase 2**
Pilot testing and system optimization

Dec 2023 — **Start Phase 3**
Transition to regular operations, including the issuance of the first certificates

Nov 2025 — **End Phase 3**
HORTICERT will operate as an independent certification system

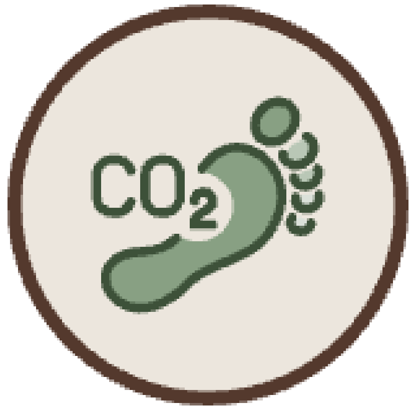
HORTI CERT

HORTICERT is the first international certification system for sustainable peat substitutes

HORTICERT Certification promotes ...

Sustainable practices in raw material extraction and processing

Traceability of sustainable materials along international supply chains



Verification of greenhouse gas emissions

... audited by independent certification bodies.

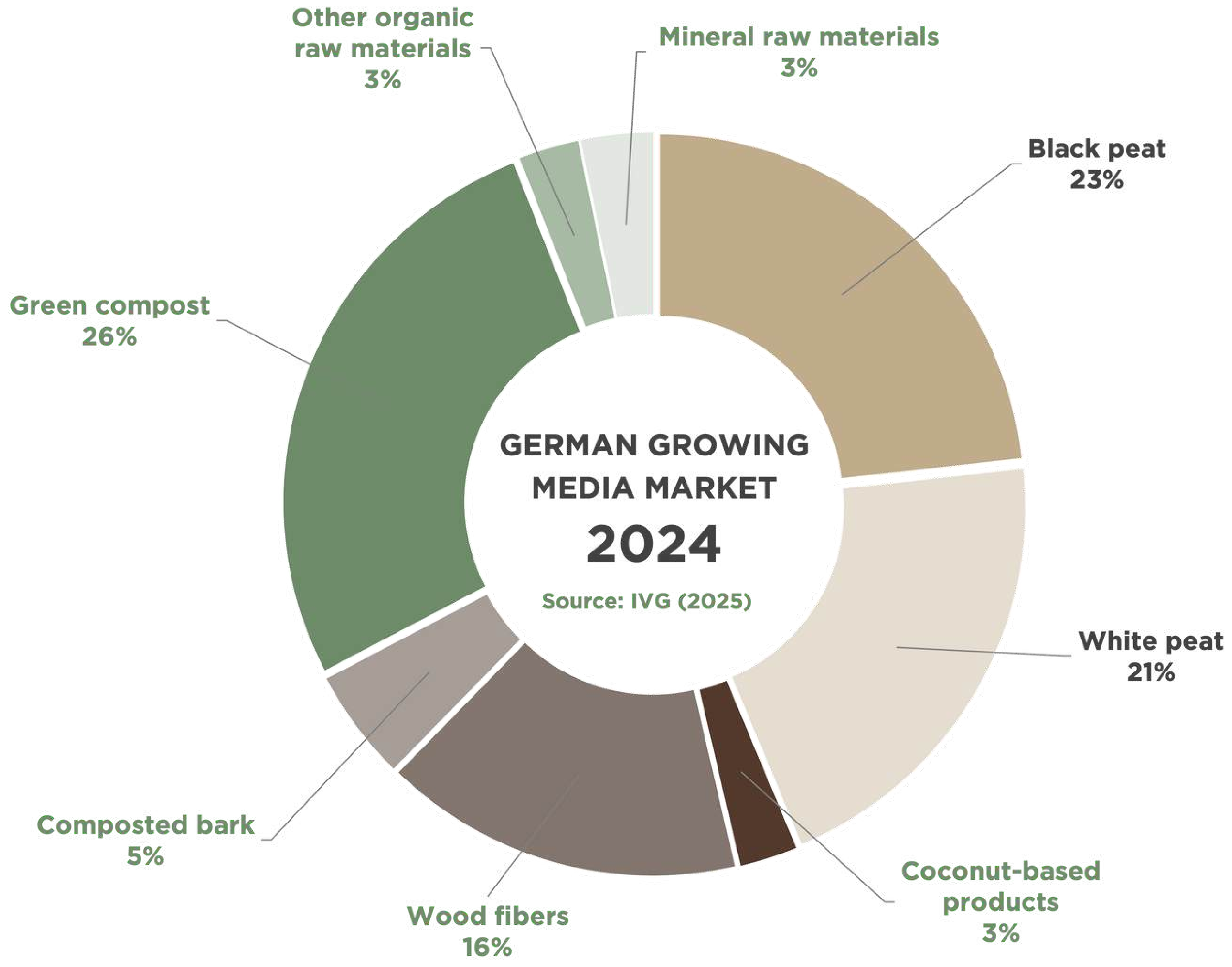
Certification of the entire supply chain for peat-reduced and peat-free growing media

Growing, Gathering, and Extracting Raw Materials

Processing Units

Growing Media Mixing Plants

Certification of all essential peat substitutes



Numbers and facts

Certification of all essential **peat substitutes** for hobby & professional gardening

Our goal:
A sustainable and largely peat-free growing media industry

Knowledge transfer and awareness-raising concerning sustainable peat substitutes

Renowned producers are already certified

HORTI CERT

Hands-on approach through a multi-stakeholder-dialogue involving **+40 partners**

22 issued **certificates** in 5 countries

Creating value and recognition for growing media among all stakeholders in the supply chain

Collaboration with **4** independent **certification bodies** for audit implementation

02
Requirements

Ecological, social and economic sustainability requirements

Sustainability Principles	Sustainable Development Goals
Principle 1: Protection of areas with high conservation value or significant carbon stocks	2 Zero Hunger; 6 Clean Water and Sanitation; 12 Responsible Consumption and Production; 15 Life on Land
Principle 2: Environmentally friendly production to protect soil, water, and air	2 Zero Hunger; 6 Clean Water and Sanitation; 12 Responsible Consumption and Production; 15 Life on Land
Principle 3: Climate change	7 Affordable and Clean Energy; 13 Climate Action
Principle 4: Human and labor rights	1 No Poverty; 2 Zero Hunger; 3 Good Health and Well-Being; 4 Quality Education; 5 Gender Equality; 6 Clean Water and Sanitation; 8 Decent Work and Economic Growth; 10 Reduced Inequalities; 16 Peace, Justice and Strong Institutions
Principle 5: Responsible relationships with local communities	1 No Poverty; 2 Zero Hunger; 6 Clean Water and Sanitation; 11 Sustainable Cities and Communities
Principle 6: Legality	16 Peace, Justice and Strong Institutions
Principle 7: Good management practices and economic stability	8 Decent Work and Economic Growth; 9 Industry, Innovation and Infrastructure

Developed in collaboration with NGOs

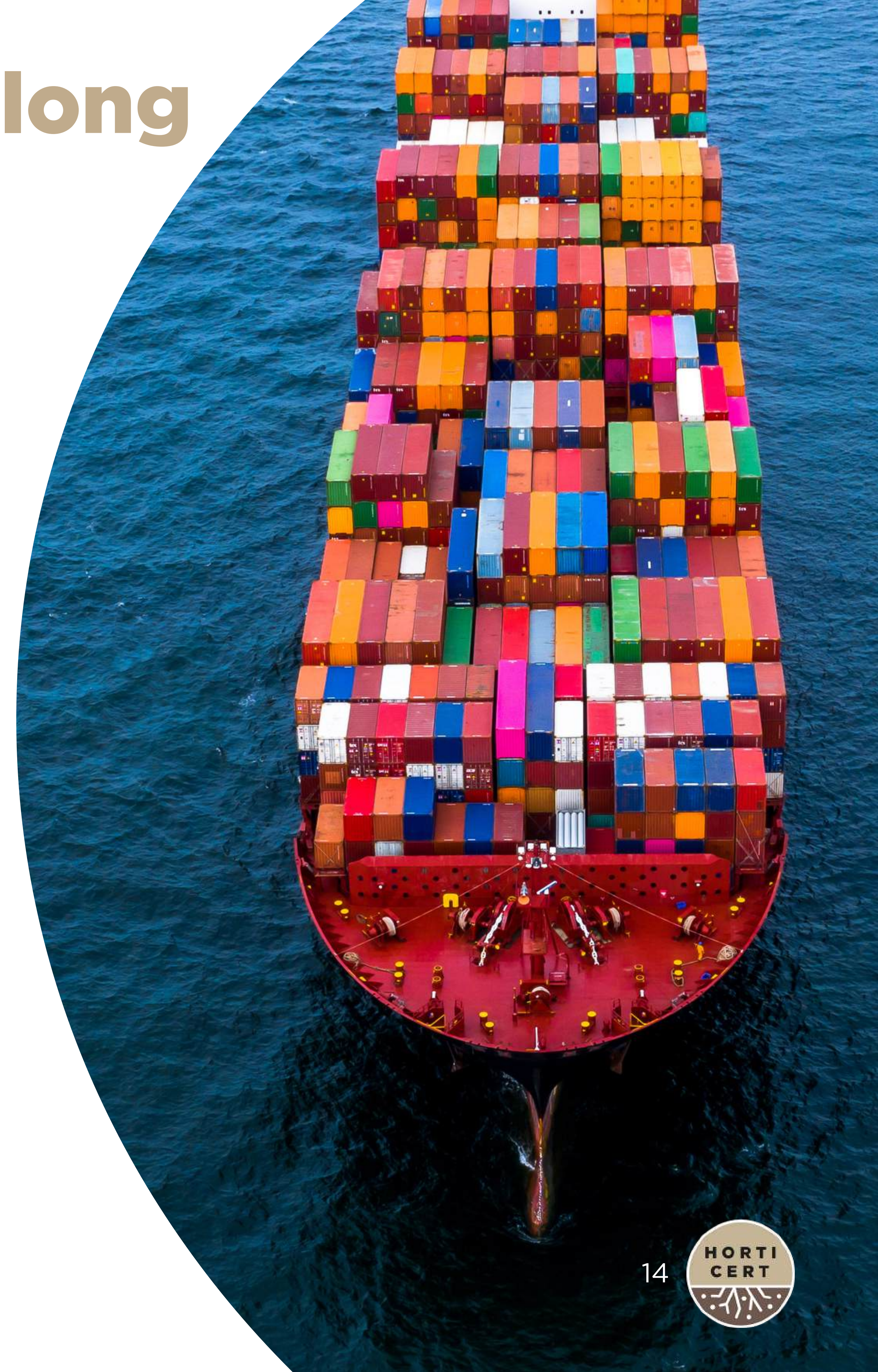
Welt Hunger Hilfe
Global Nature Fund
Bodensee Stiftung – Lake Constance Foundation

Verification of the flow of goods along (international) supply chains

- Important to ensure that **all stages along the supply chain** are certified and that no more material is sold as sustainable than has actually been certified

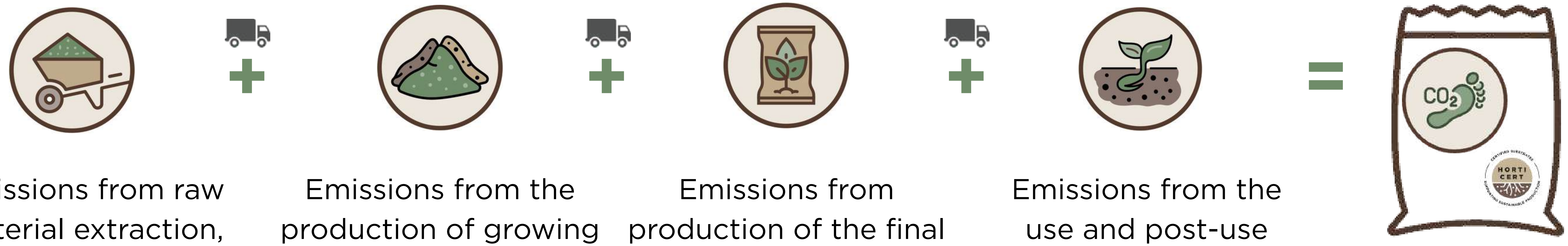
HORTI-TRACE

- **Digital tool** for tracking goods flows along international supply chains
- **Digital transmission of quantities, sustainability data, and GHG values** of products throughout the supply chain
- Faster, simpler, and less error-prone **documentation of mass balance**
- **Blockchain-like approach** ensuring high **confidentiality** and **data security**



Transparent method for greenhouse gas calculations

Cradle-to-Grave calculation for the entire supply chain



Emissions from raw material extraction, cultivation, and collection + Emissions from the production of growing media components + Emissions from production of the final product + Emissions from the use and post-use phases =

- **Peat substitutes** can help **reduce the CO_2eq emissions** of growing media
- The peat-free or peat-reduced growing media is compared with a peat reference mix*. Accordingly, in addition to the label, the final **CO_2eq savings** can be promoted on the product

*HORTICERT has defined a reference mix for growing media consisting of 100% peat.
This mix is made up of 50% black peat and 50% white peat, resulting in an emission value of 238.5 kg CO_2eq/m^3.

03
Our Value

HORTICERT's impact for responsible businesses

Sustainability Principles

Verification of **fair working conditions, biodiversity, forest protection** and more along the supply chain through strict sustainability requirements

Monitoring of **sustainability risks** through risk analyses and risk-based audits

Due Diligence & Transparency

Transparency in the supply chain supports **compliance with due diligence requirements of legal regulations**, such as the LkSG, CSDDD, and CSRD*

GHG-Bilanzierung

Reduction of GHG emissions through a robust and transparent methodology —from raw material to growing media— verifiable and **reportable** for Scope 3 accounting

Communication

Support in meeting **sustainability communication** requirements—such as those outlined in the EmpCo*— through a transparent, independent certification system

Implementing sustainability commitments enhances the **brand image** and can be integrated into **annual reports and marketing.**

*__LkSG__: German Supply Chain Act (Lieferkettensorgfaltspflichtengesetz) | **CSDDD**: Corporate Sustainability Due Diligence Directive
*__CSRD__: Corporate Sustainability Reporting Directive | **EmpCo**: Empowering Consumers Directive

HORTICERT logo allows for robust environmental claims on products

Minimum share of certified components:

- Min. **25% of the total growing media** must be certified (based on mass balance)
- The **entire supply chain** must be certified
- A **certified growing media component** must be **100%** certified (based on mass balance)

Maximum Peat Share:

Max. 70% Peat

Professional Growing Media

Max. 30% Peat

Hobby Growing Media

Use of the HORTICERT logo with additional explanations:

Mandatory

Type of certified **peat substitutes and proportion** of certified material (based on mass balance)

Optional

Greenhouse gas savings based on GHG calculations of the growing media formulation compared to a peat reference mix

Optional

Information on **social and economic requirements**

Example

AT LEAST 60 % CERTIFIED SUBSTRATE *

HORTI CERT

AT LEAST 45 % $CO_{2}eq$ SAVINGS

Packaging **Front**

* [Name of company] has been HORTICERT certified by an independent Certification Body. HORTICERT verifies ecological, social and economic sustainability requirements.

This growing media mixture is linked to 60 % HORTICERT certified materials via the HORTICERT mass balance approach. This certified share comes from two fully HORTICERT certified components: green compost (33 % of the growing media mixture) and wood fiber (27 % of the growing media mixture).

According to calculations, this growing media mixture saves at least 45 % greenhouse gas emissions compared to a specified reference mixture of 100 % peat.

More information at www.horticert.org

Packaging **Back**

The HORTICERT licensing scheme for retailers

- **Brand owners** and **retailers** can apply for licenses to use **logos** and **claims**
- This applies to **bagged growing media as well as potted plants** grown in HORTICERT-certified substate

Horticultural businesses & retailers benefit from:

- Increased **visibility** of sustainability efforts at the point of sale and in marketing campaigns
- A higher share of sustainable products

The HORTICERT logo on potting soils can increase consumer's willingness to pay

- In 2024, the **ReValueD** project (University of Passau) and the **HOT** project (HfWU) conducted a choice experiment to assess consumer preferences and willingness to pay for peat substitutes, emission reductions and HORTICERT certification.

The results show:

- **Peat reduction and certification offer economic potential**, as:
  - **Peat-free** products are considered an important feature by study participants
  - **Peat substitutes** are perceived as environmentally **beneficial**
  - **Certification** can **positively influence** purchasing decisions
  - Study participants show a **willingness to pay more** for potting soils containing peat substitutes, reduced GHG emissions, and the HORTICERT label

Willingness to pay identified in the study*

HORTICERT: **+ 1,58 €**

10% less CO_2-Emissions	**+ 0,80 €**
30% less CO_2-Emissions	**+ 2,40 €**
50% less CO_2-Emissions	**+ 4,00 €**

*Referece product: 60 L peat-free growing media mix

Sources: H. Braun, HOT-Choice Experiment 2025.
H. Braun, Was wird gesehen und was wird wahrgenommen? – Konsument*innen-Entscheidung über Blumenerden, IVG Branchentag Erden & Substrate 2024, p.1-11.

What our system users are saying

„As partners of HORTICERT, toom Baumarkt and Gebrüder Mayer value the certification process as a means of safeguarding the social, ecological, and economic aspects of peat substitutes. The rigorous traceability and sustainability standards align with our commitment to producing sustainable and climate-friendly products without peat.
With HORTICERT, we can verify our value chain and credibly support our customers in making sustainable purchasing decisions.

Dominique Rotondi
COO toom Baumarkt GmbH

„For us, it was a natural decision from the very beginning to actively support and accompany HORTICERT. HORTICERT brings us significantly closer to our most important corporate goal: increasing the use of sustainable and climate-friendly peat substitutes. Thanks to our successful HORTICERT certification, we can now not only transparently demonstrate the CO_2 footprint of our growing media production to professional growers, but also set new standards for the industry.
At the same time, the our certified raw materials increase their acceptance in the market—across the entire value chain."

Ulrike Fockenberg
Head of Sustainable Product Development
Gramoflor GmbH & Co. KG

„As one of the first pilot partners, we have supported HORTICERT from the very beginning and view the certification as an important foundation for ensuring transparency in ecological, social, and economic sustainability criteria within the substrate industry.
With HORTICERT certification, the carbon footprint of our products—both for professional and hobby gardening—can be transparently verified, allowing us to actively involve our customers in our sustainable corporate strategy.
We see HORTICERT as a benchmark for evaluating sustainability criteria and ensuring traceability of peat substitutes, potting soils, and substrates—an added value for the entire industry!

Jonas Velz
Sales, EIFEL-HOLZ AG

An affordable certification for system users

Fee structure certification

The fee structure for HORTICERT certification consists of a **certification fee** and a **quantity-dependent** fee. The annual fees for HORTICERT certification are based on company revenue and the quantity of certified outgoing material.

Additional costs apply for audits conducted by an independent certification body. These costs vary depending on the provider.

<u>**More details on the certification fee structure can be found here**</u>

Fee structure licensing

The fee structure for HORTICERT licenses includes an **annual license fee**, which is charged for each individual contract concluded.

Similar to the certification fee, the HORTICERT license fee is based on the quantity of certified material sold within the contractually defined region.

<u>**More details on the licensing fee structure can be found here**</u>

Ready for the next step?

Interested in sourcing and distributing HORTICERT-certified products?
First manufacturers are already on board:

copertiz experts in coco
EIFELHUM® Von der Natur – für die Natur
GRAMOFLOR
KLEESCHULTE ERDEN

- We act as a link between horticultural businesses, growing media producers and retailers
- We offer tailored consultations and support you and your suppliers throughout every step of the certification process

MORE INFORMATION ON

www.horticert.org

and on LinkedIn

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