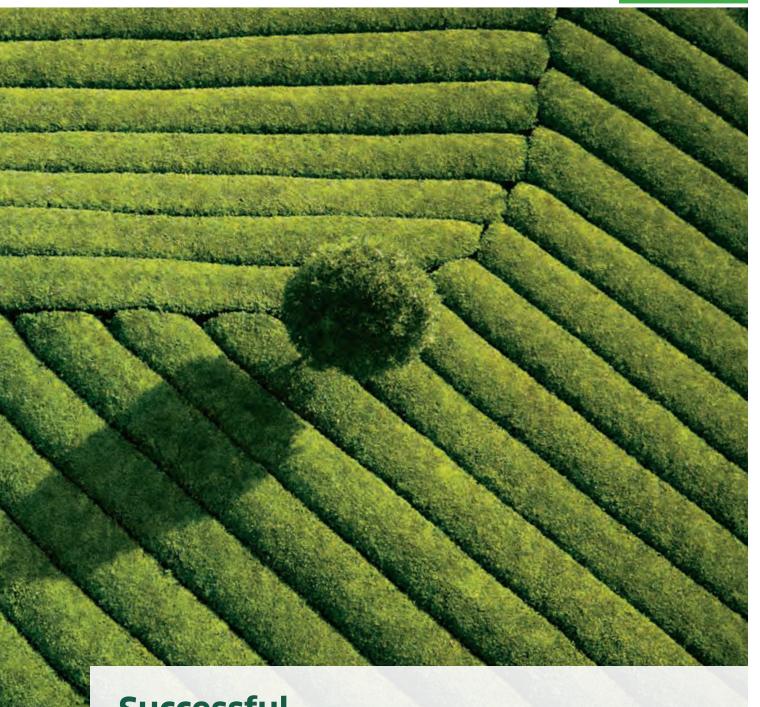


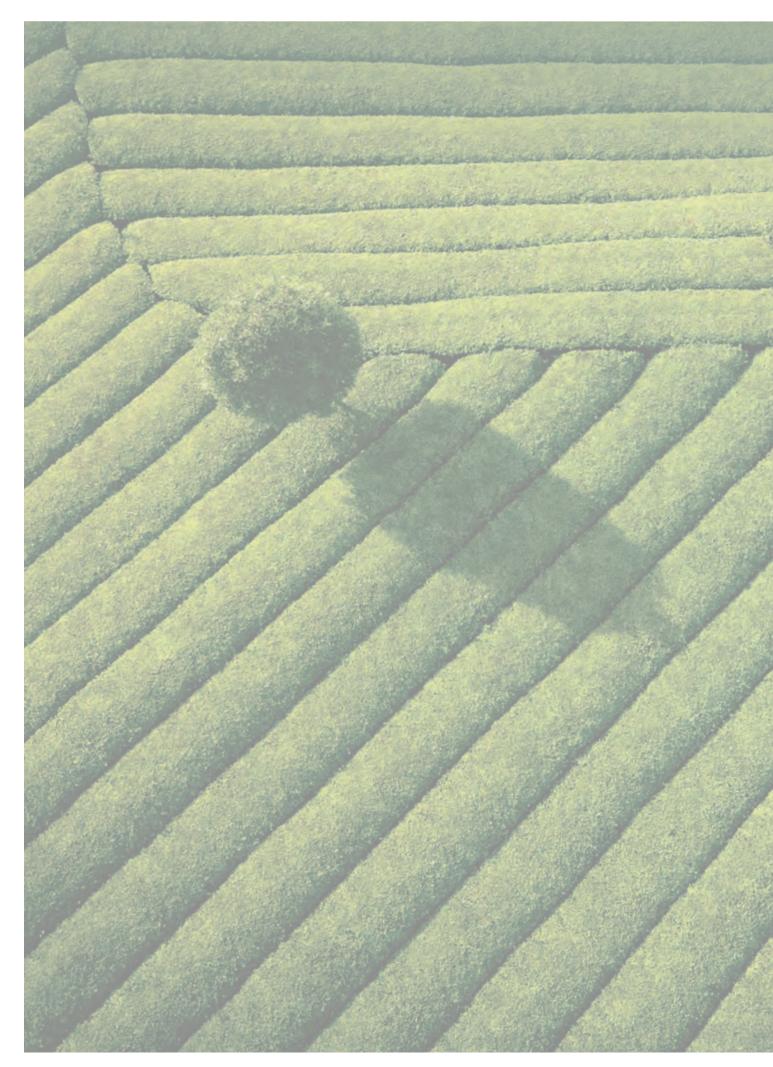
Sustainability Report

2023



Successful transformation

www.klasmann-deilmann.com







# Successful transformation

## Sustainable development at Klasmann-Deilmann

Adapting our business models to the principles of sustainability is one of the major challenges facing our company. Society's expectations of Klasmann-Deilmann relate in particular to a decrease in the use of peat and a reduction in emissions. We first reported on these key issues ten years ago and are now making real progress.

Between 2013 and 2023, we reduced our corporate carbon footprint by 19%, while our sales volumes increased by 20% in the same period. We want to continue to make significant progress on this path in the future and combine economic growth with sustainable development.

The reduction in our emissions is mainly due to the increasing use of alternative raw materials in our growing media. In 2023, we used a total of 940,000 m³ of wood fibres, green compost, cocos, bark and perlite in our recipes. At the same time, peat extraction continued to decline, particularly in Germany, as the resources of most areas are exhausted. We have completely refrained from acquiring new licenses in Germany and abroad. The last time we acquired peat extraction areas was in 2011.

Instead, we are investing heavily in renewable raw materials. Most recently, we acquired the leading Australian substrate producer "Australian Growing Solutions", which has many years of experience with wood-based substrates and further strengthens our position in the future-oriented Asia-Pacific region. The joint venture with the "Olde Bolhaar Eco Service" companies in Germany and the Netherlands has also significantly increased our options for producing a new generation of substrate mixtures. The additional capacity gives us a further head start in central horticultural markets.

We are taking a global approach to the realignment of our resources. Although more sustainable substrates are mainly in demand in Western European markets, we are vigorously promoting their distribution in all countries. At the same time, we are taking the first steps towards decentralizing our production facilities in order to make greater use of locally available raw materials and reduce emissions from long overseas transport. To this end, we are entrusting the production of our substrates to selected partner companies that produce

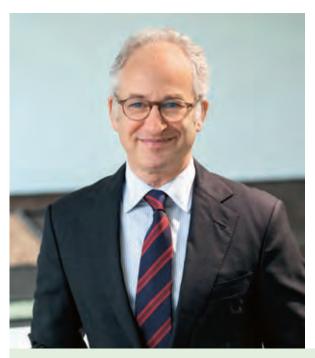
on our behalf and according to our specifications. Initial production partnerships in Japan, China, France and Canada are proving promising; further projects are in preparation. However, it will take a few more years to achieve positive effects on the groupwide resource mix and transport emissions on a larger scale.

This entrepreneurial development requires considerable financial outlay, the careful integration of new business units, the conversion of our production facilities, an ongoing revision of our product portfolio and a high level of personal commitment from our teams. Despite the necessary tempo we will therefore take all further steps on the path of transformation with the necessary caution in order to ensure the long-term success of our company, including the necessary change processes.

This means that we will not be pursuing any specific exit scenarios on the use of peat for the time being. It remains in the interests of our company, global commercial horticulture and the retail market that peat use is only reduced to the extent that horticultural crop safety and the required quantities of alternative raw materials are secured and the supply of the growing world population can be guaranteed.

This is still only the case to a limited extent. Renewable raw materials are not available in sufficient quantity and quality to supply the entire substrate industry. Moreover, these raw materials are not always suitable as a complete substitute for peat. In the ornamental plant and tree nursery sector, high proportions of alternatives are already possible without any loss of crop safety. In the food industry, on the other hand, development is progressing at a slower pace due to the particularly high quality requirements for raw materials and substrates. Especially in this segment we should continue to act with caution in the future in order to ensure a secure supply of healthy food.

We want to increase the proportion of alternative raw materials to 30% of our total production volume by 2025. We have already come very close to achieving this target, with a share of 27% in 2023. By 2030, the proportion of alternative raw materials is to be increased to 50%. By implementing these targets, our company is pursuing an ambitious growth program in the coming years.







**Damian Ikemann, Managing Director** 

However, in order to reduce our company's emissions independently of raw materials, transport and other sources of greenhouse gases, we are preparing a pilot project for decarbonization using biochar. As we have to meet the requirements of the European Union, we are having the design and operation of the pilot plant and the use of biochar closely monitored by experts. The aim is to offer verifiably climate-neutral growing media in the foreseeable future. With regard to our Scope 3 emissions, we are also in contact with our business partners to push for the development of new technologies and products to reduce our carbon footprint.

We are also driving forward the transformation of our company in other key areas. For example, the digitalization of our processes is making good progress and the first AI projects have been launched. In terms of our innovations, the "Growbag" contributes to higher yields in fruit and vegetable cultivation, while "Nygaia" and "Growcoon" ensure greater efficiency in high-tech farms and hydroponic systems. Our HR management is at a high level and will help us to attract the right staff, retain colleagues, develop them personally and professionally and be successful together.

Klasmann-Deilmann has coped very well with the global economic turbulence associated with the crises of recent years. Our company's business model is robust, our financial position remains stable, we are making rapid advances with our transformation and our sustainable development is making progress. Against this backdrop, we are confident about the future.

We look forward to your feedback on our activities and the Sustainability Report 2023 and hope to continue our dialog.

Geeste, im August 2024

Moritz Böcking

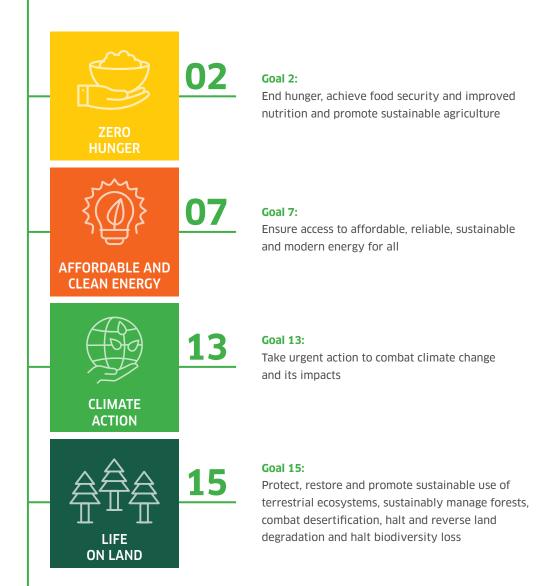
Damian Ikemann

**Managing Directors Klasmann-Deilmann Group** 



# **Sustainable Development Goals**

We see our activities as contributions in particular to the following targets of the 17 global goals for sustainable development within the UN's 2030 Agenda. We will continue to be guided by them in the future. You can find more information on our activities in this report.





# Contents

	The company	Page 08
	Growing media	Page 14
	Renewable raw materials	Page 30
	Nature & climate protection	Page 34
	Employees	Page 44
-		
	Reporting framework	Page 54









Klasmann-Deilmann is the leading group of companies in the international substrate industry with numerous sales and production subsidiaries in Europe, Asia and America as well as a network of sales and production partners on five continents. Our substrates form the essential basis for the growth of vegetables, fruit, edible mushrooms, herbs, ornamental plants, trees and shrubs everywhere. They ensure the success of our partners and customers in commercial horticulture and are an essential part of the value chain in the food industry.

where. They ensure the success of our partners and customers in commercial horticulture and are an essential part of the value chain in the food industry.

Our product portfolio includes growing media for commercial horticulture and the production of potting soils on behalf of third parties. We harvest white and black peat from our own and external resources and produce wood fibres, green compost, bark, cocos and perlite at our own facilities and in cooperation with associated partner companies. We also sell innovative system solutions such as the biodegradable Growcoon and Nygaia cultivation plugs. With the online platform Log & Solve, we are establishing ourselves as a provider of digital

solutions for nurseries. We offer peat mosses from our own cultivation for special applications in horticulture and to accelerate the renaturation of peat bogs.

In the field of renewable energies, we sell regenerative raw materials. Wood raw materials from our own short rotation plantations (SRP) and wood trading contribute to a climate-friendly energy and heat supply in the Baltic states.

We bear responsibility for people, the environment and future generations. We measure ourselves against internationally recognized standards. Regeling Handels Potgronden (RHP) monitors our raw materials and production processes. Our quality management system is certified to ISO 9001, our environmental management system complies with ISO 14001 and we manage our peat extraction areas in accordance with the guidelines of the NGO Responsibly Produced Peat (RPP). We restore former extraction areas in accordance with legal and official requirements, mainly through rewetting.

The strategic orientation of our medium-sized family business extends far into the future. We want to remain the most successful and sustainable producer of growing media in commercial horticulture. To this end, we are investing worldwide in securing renewable resources, extending our lead in the development and use of renewable raw materials, reducing the emissions of our products and driving forward activities for the production of climate-neutral growing media. We are also gradually decentralizing our production plants in order to make greater use of local raw materials worldwide and reduce transport emissions.

We rely on our employees in all our activities. Their expertise and commitment make a decisive contribution to the sustainability of our company and the satisfaction of our customers. We encourage their development and are delighted with their close ties to our company.

Our company history goes back to 1913, when Georg Klasmann founded Heseper Torfwerk GmbH, which was renamed Klasmann Werke GmbH in 1971. The later C. Deilmann AG, founded in 1888, began harvesting peat in 1920. In the first decades, Klasmann mainly produced bedding for horse stables and peat for burning and built its own peat power plant. From the late 1950s onwards. Klasmann and Deilmann concentrated more and more on the production of growing media for commercial horticulture and began developing black peatbased growing media in 1974. The merger of Klasmann and Deilmann in 1990 created Klasmann-Deilmann GmbH, which has since acquired extensive raw material reserves in Germany, Ireland, Lithuania and Latvia and invested in modern substrate factories at central locations. At the same time, subsidiaries were founded in important European countries as well as in Asia-Pacific and North America in order to have a local presence in the markets. In addition, a network of sales partners was established that now spans the entire world.

## **Organization**

The lead company of our corporate group is Klasmann-Deilmann GmbH with strategic and controlling functions for all affiliated subsidiaries. The headquarters is based in 49744 Geeste, Germany. Klasmann-Deilmann Service GmbH at the same location is our internationally orient-

ed service company with operational, commercial and advisory functions in the areas of finance, greenhouse, laboratory, logistics, human resources, product development, customer service and sales. All other subsidiaries are subdivided into production and sales companies.

Production	Service			
Production  • Klasmann-Deilmann Produktionsgesellschaft Nord mbH  • Klasmann-Deilmann Produktionsgesellschaft Süd mbH  • Schwegermoor GmbH  • UAB Klasmann-Deilmann Silute  • UAB Klasmann-Deilmann Laukesa  • UAB Klasmann-Deilmann Ezerelis  • Klasmann-Deilmann Ireland Ltd.  • Klasmann-Deilmann Potgrondcentrum B. V.  • Klasmann-Deilmann Brugge N.V.  • UAB Klasmann-Deilmann Bioenergy  • Bol Peat B.V.	DE DE LT LT LV IE NL BE LT NL	Klasmann-Deilmann Service GmbH  Sales      Klasmann-Deilmann Europe GmbH     Klasmann-Deilmann Asia Pacific Pte. Ltd.     Klasmann-Deilmann Americas Inc.     Klasmann-Deilmann France S.A.R.L.     Klasmann-Deilmann Benelux B.V.     Klasmann-Deilmann Belgium N.V.     Klasmann-Deilmann Austria GmbH     Klasmann-Deilmann Italia S.R.L.     Klasmann-Deilmann Polska sp. z o.o.     Klasmann-Deilmann China Ltd.     Klasmann-Deilmann Japan Co. Ltd.	DE SC US FF NL BE AT IT PL CN	
<ul> <li>Bol Peat GmbH</li> <li>Australian Growing Solutions Pty. Ltd.</li> <li>Olde Bolhaar Eco-Service GmbH (Anteil 50 %)</li> <li>Olde Bolhaar Eco-Service B. V. (Anteil 50 %)</li> </ul>	DE AU DE NL	Klasmann-Deilmann Bioenergy SIA	LV	



In addition, we are responsible for the operating business of the Dutch company Shakti Cocos B.V., including the exclusive international distribution rights, the "Shakti Cocos" brand and the patent for the buffered coco fibre "Shakti Amla®". Shakti Cocos B.V. remains an independent company.

The "Growcoon" is a product of the Dutch company Maan Biobased Products. Klasmann-Deilmann is responsible for international sales of the biodegradable net pot. The "Nygaia" propagation plug, which is also biodegradable, is a joint development by Klasmann-Deilmann and Maan Biobased Products.

## Shareholders, board of directors, management bodies

The shareholders of Klasmann-Deilmann GmbH are

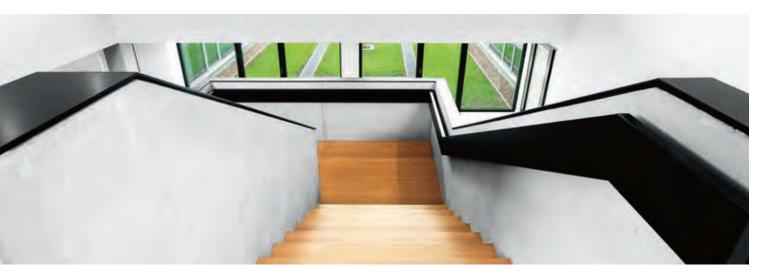
- Deilmann-Montan GmbH, Bad Bentheim, shareholding 57.5%
- Klasmann Anlage- und Verwaltungs GmbH & Co. KG, Meppen, shareholding 42.5%

The shareholders appoint the Supervisory Board of Klasmann-Deilmann GmbH.

The Chairman of the Supervisory Board has been Carl-Gerrit Deilmann since 2007.

Moritz Böcking and Damian Ikemann have formed the Management Board of Klasmann-Deilmann GmbH since 2024. Moritz Böcking joined our company as Managing Director in 2011. Damian Ikemann has been Managing Director since 1 July 2024. He succeeds Bernd Wehming, who retired on 30 June 2024.

The Managing Directors of Klasmann-Deilmann GmbH consult with the Supervisory Board on key corporate developments - particularly with regard to their strategic, economic, ecological and social impact. The highest operational body is the Executive Board with the Managing Directors Moritz Böcking and Damian Ikemann (since 1 July 2024) resp. Bernd Wehming (until 30 June 2024) as well as Eric Lekkerkerk (Commercial Director) and Ted Vollebregt (Managing Director Klasmann-Deilmann Benelux until September 2024). As another key decision-making body, the Management Board forms the interface between the strategic and operational level and the individual specialist areas and subsidiaries. In addition to the members of the Management Board and Executive Board, a number of division heads and managing directors of the Klasmann-Deilmann Group subsidiaries are represented here.



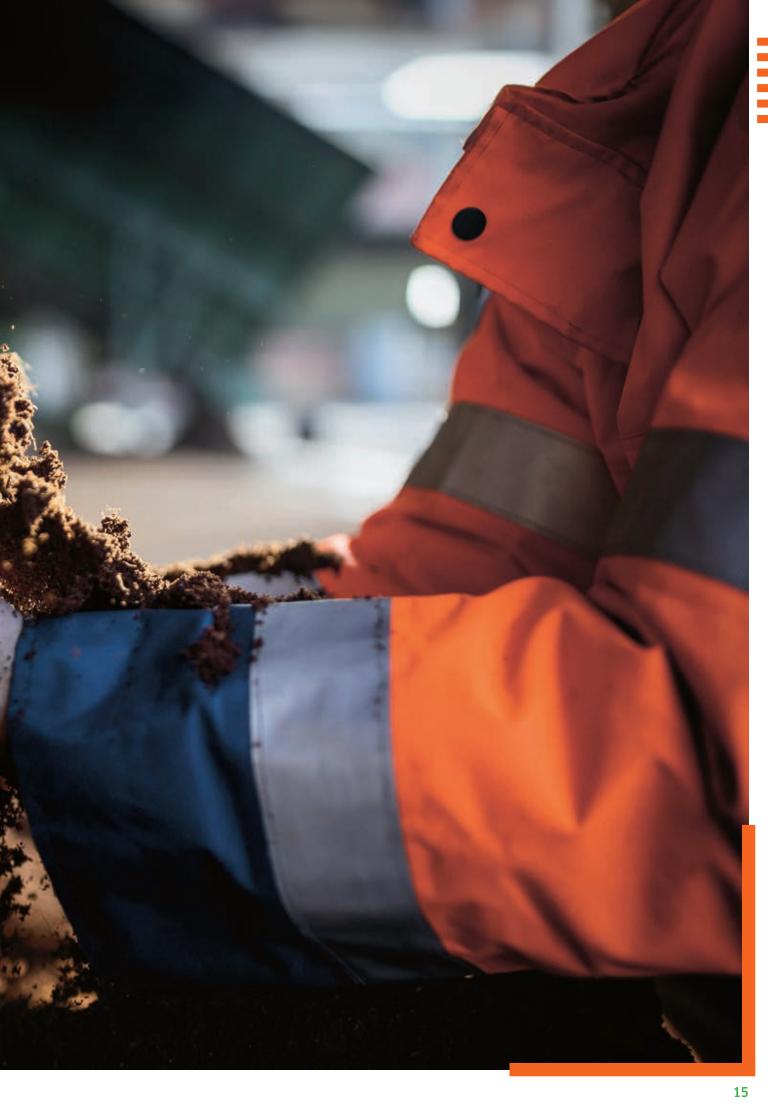
# **Key figures 2013-2023**

Selected key figures provide information on the sustainable development of our company. In addition to the key economic data, the raw materials sector and the reduction of emissions are particularly important for assessing our activities. All figures refer to the Klasmann-Deilmann

Group including all subsidiaries. The audited business figures of Klasmann-Deilmann GmbH are published regularly on the official German "Unternehmensregister" website.

	2023	2020	2018	2016	2013
Financial data in million EUR					
• Turnover	281.9	226.8	219.5	185.6	160.1
Balance sheet total	259.7	208.7	198.4	186.6	148.2
Shareholder's equity	140.7	112.8	93.9	80.4	61.1
• Investments in property, plant,	18.3	15.6	16.1	17.1	17.0
equipment & financial assets	10.5	13.0	10.1	17.1	17.0
Growing media sales volumes in tm <sup>3</sup>					
Commercial horticulture	3,412	3,681	3,599	3,161	2,943
Consumer segment	339	511	469	402	179
Raw materials in tm <sup>3</sup>					
Harvest peat	2,313	2,972	4,126	2,887	3,683
Use of alternative raw materials	939	613	457	301	131
Share of alternative raw materials	27.0	14.8	11.5	8.5	4.0
in total production in %					
Renewable energies					
Area under short rotation plantations in ha	3,559	3,547	3,350	3,131	2,442
Production woodchips in tm³	540	317	273	160	59
Rewetting cumulated in ha	4,916	3,836	3,503	3,388	2,704
Emissions					
• Corporate Carbon Footprint in t CO₂e	239,736	263,816	300,006	295,452	294,561
• Durchschnitt pro m³ Kultursubstrat in kg CO₂e	63.9	61.2	71.9	82.9	90.7
• Umrechnung pro EUR Umsatz in kg CO₂e	0.85	1.16	1.37	1.59	1.84
Scopes					
• Scope 1	81,906	114,203	148,439	154,213	172,307
• Scope 2	5,059	2,890	4,018	3,570	4,319
	152,771	146,722	147,549	137,669	117,935
• Scope 3	102,771				
Staff					
	966 94.2	907	1,041 94.7	938	915 95.1







## Overview

Cultivated plants are an integral part of everyday life. Vegetables, fruit, herbs, microgreens and edible mushrooms are becoming increasingly important as more and more people are adopting a conscious diet. Ornamental plants, shrubs and trees create green oases in private and public areas and contribute to the well-being of many people. Nursery plants play an important role in reforestation projects and are also very important for climate protection. Nurseries all over the world ensure the reliable growth of ornamental and nursery plants and secure the supply of healthy food.



At the same time, horticulture and agriculture are facing major challenges as the world's population grows and soils are severely affected by climate change and extensive use. In the future, it will therefore be even more important than before for nurseries to achieve larger quantities and higher yields. Our growing media, which, like seeds and fertilizers, are among the essential resources of horticultural businesses, make a key contribution to reliable growth and efficient crop management.

A growing medium is created when our raw materials peat, green compost, wood fibres, coco and perlite are refined with lime, fertilizers and additives such as sand or clay. Organic and mineral fertilizer formulations ensure the targeted supply of all nutrients and trace elements to the plants. The addition of lime regulates the pH value in the substrate.

We produce our growing media in our own production facilities, which are equipped with modern technical equipment. We have a range of around 150 different peat raw materials, alternative raw materials, additives and fertilizers at our disposal. In total, we have more than 10,000 actively used substrate recipes that are tailored to the individual crops, the respective cultivation method and the accompanying geographical and climatic conditions. We counter the resulting complexity for the production processes with digital recipe management, which aims to reduce the number of substrate mixtures where this is possible without disadvantages for the nurseries.

#### Peat

Raised bog peat has been the most important raw material for the production of growing media since the late 1950s and has proven its worth in modern horticulture. Peat is the only raw material that has all the physical, chemical and biological properties required for commercial horticulture in their entirety. For reasons of nature and climate protection, peat is now increasingly being replaced by alternative raw materials. Renewable raw materials such as wood fibres, green compost, coco and bark, which require no intervention in nature and produce less CO<sub>2</sub>, are the way forward.

Our company increased the proportion of alternative raw materials to 940,000 m³ or 27% of the total production volume in 2023. By 2025, we will increase this share to 30% and by 2030, we want to achieve a total of 50%. These are ambitious targets with a massive impact on our product development, customer advice, resource security and investments.

Our product development department, for example, is faced with the task of continuously developing thousands of substrate formulations and constantly pushing the boundaries of what is feasible.

At the same time, the use of substrates with increasing proportions of alternative raw materials requires nurseries to make careful changes to crop management in order to minimize the risk of failure. Basically, irrigation and fertilization of the crops must be adapted. This process takes time, during which we work closely with each individual customer.

While companies in the ornamental plant and tree nursery sector can use up to 50 % by volume alternatives in the substrate, lower proportions are likely in the food industry, even in the longer term. This is due to the special requirements placed on the substrate constituents, for example in the cultivation of young vegetable plants. Here, cultivation safety has additional weight in order to ensure a secure supply of healthy food.

Many nurseries want to continue to be supplied exclusively with pure peat growing media. Aspects of nature and climate protection are of secondary importance. We are responding to this with the "Advanced" product line, with which we have declared hybrid substrates to be part of our core range. At the same time, we are stepping up our sales activities, as commercial growers in many countries still need to be advised in detail on the properties of the new generation of substrates.

Securing resources and the conversion of our factories and production lines are associated with high costs, including financial and personnel expenses. Through acquisitions and partnerships, we are increasing the available quantities of alternative raw materials every year.

It is questionable whether there are enough alternative raw materials available to enable the entire substrate industry to make the switch. The complete elimination of peat in potting and planting soils for the consumer sector would already lead to a significant increase in demand for alternatives, which would consequently also delay progress in commercial horticulture. In addition, there is still competition from other sectors, particularly the renewable energy sector, which also relies on wood and green waste.

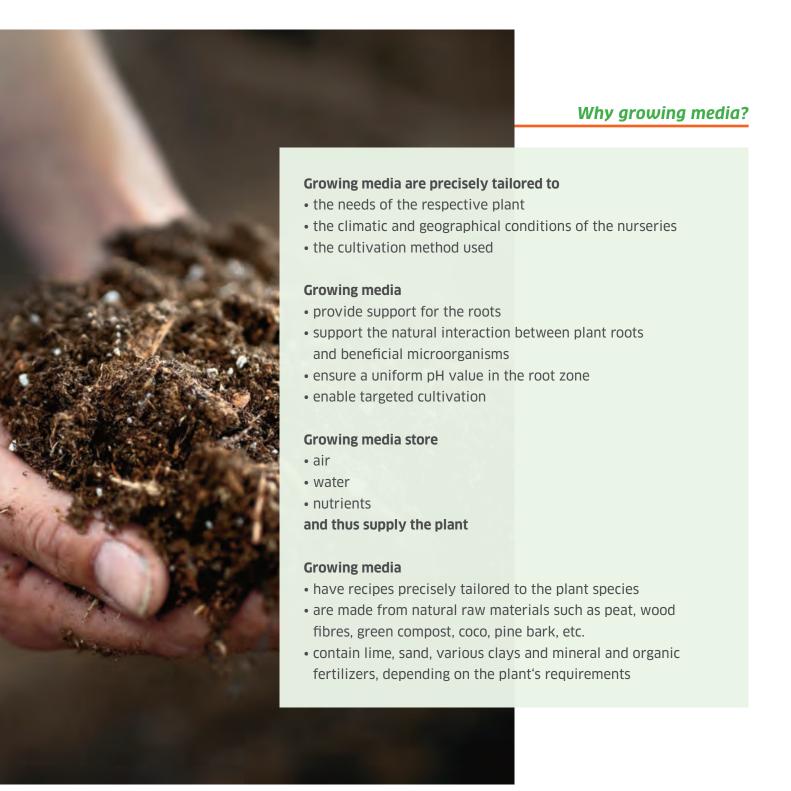
Regardless of the many challenges, we will continue to press ahead with the use of alternative raw materials without getting involved in overly ambitious peat phase-out scenarios prematurely. It remains crucial for us to reliably supply our customers with crop-safe substrates that contain as little peat as necessary and as many alternatives as possible.



## **Innovation management**

Systematic and cross-divisional innovation management is of central importance to the long-term success of our company. To this end, we have set up product development teams and an incubator that work closely with universities, institutes and suppliers and carry out joint research projects. The aim is to develop raw materials as well as growing media and growing systems that also

take sustainability criteria into account while adhering to proven horticultural standards. An essential basis for these projects is the application-oriented dialog with commercial horticulture. We take up our customers' ideas and requirements and develop them into product solutions that are designed for long-term use and bring tangible benefits to nurseries.



#### Why peat?

#### **Physical properties**

- High structural stability
- Optimum ratio between air and water capacity
- Good wettability

#### **Chemical properties**

- Optimum pH value
- Optimum nutrient content
- Good buffering of nutrients
- Free from harmful substances

#### **Biological properties**

- Largely free of weed seeds
- Free from pathogens

#### **Economic properties**

- Long-term availability
- Consistent properties
- Quality meets the horticultural requirements of the various plants



#### Why green compost?

#### The green compost TerrAktiv

- is biologically active
- suppresses root diseases
- improves the shelf life of potted herbs
- is quality assured
- serves as a slow-flowing source of nutrients
- has a high buffering capacity
- improves rewettability
- promotes the conversion of organic fertilizers

#### The wood fibre compost mixture TerrAktiv FT

- is nitrogen-stable
- increases the air capacity in press pots
- optimizes germination and plant development
- enables a peat replacement of up to 50% by volume in combination with other raw materials
- reduces the risk of excessive ammonium supply in seedlings

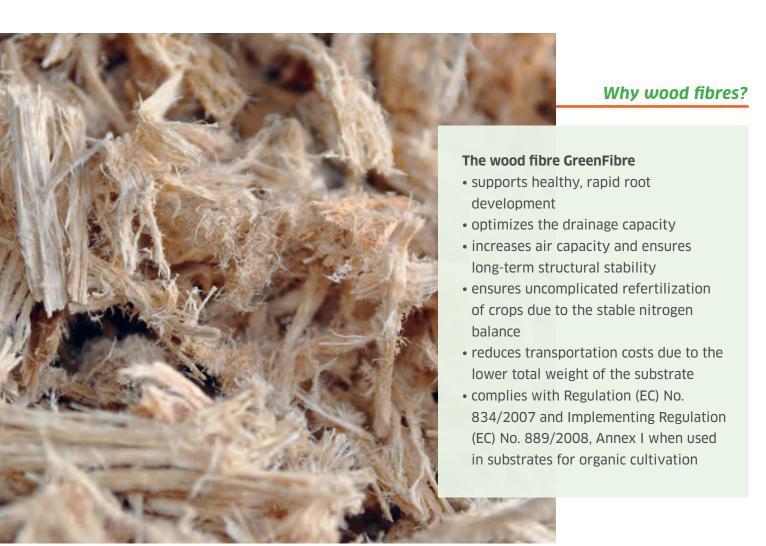


#### Why perlite?

#### **Perlite**

- supports the structural stability of a substrate
- optimizes the air capacity and drainage
- is chemically neutral and does not affect the fertilization of plants
- proves to be ideal in substrates for sowing and propagating cuttings
- reduces the substrate weight and thus contributes to the optimization of transport











#### **Production sites**

	Substrate production					
	Peat	Compost	Wood fibres	Perlite	Processing	
Klasmann-Deilmann Produktionsgesellschaft Nord	•		•		•	•
Klasmann-Deilmann Produktionsgesellschaft Süd	•		•		•	•
Schwegermoor	•	•	•		•	•
Klasmann-Deilmann Silute	•		•	•	•	•
Klasmann-Deilmann Laukesa	•					
Klasmann-Deilmann Ezerelis	•					
Klasmann-Deilmann Latvia	•					
Klasmann-Deilmann Ireland		•	•		•	•
Klasmann-Deilmann Potgrondcentrum			•		•	•
Klasmann-Deilmann Brugge					•	•
Bol Peat					•	
Australian Growing Solutions			•		•	•
Olde Bolhaar Eco-Service		•	•		•	

As part of the decentralization process, we are transferring substrate production in selected markets to independent production partners who produce growing media on our behalf and according to our specifications.

#### As of August 1, 2024, these are:



## **Quality** assurance

It is of central importance for our customers and for us to ensure that the raw materials required for substrate production, such as peat, wood fibres, green compost, coir or perlite, meet the highest product standards in terms of functionality and impact on health and safety. We therefore continuously test proven and new raw materials for substrate suitability. We test their physical, chemical and biological properties and subject them to vegetation trials. This also applies to our own solutions for fertilizer formulations, wetting agents and other additives.

In order to guarantee impeccable quality in every case, we have our raw materials - including suppliers where applicable - inspected in accordance with the specifications of the Dutch "Regeling Handels Potgronden" (RHP). The assessment criteria applied here are among the strictest in the world. The RHP's quality assurance covers all the peat raw materials we use, the "TerrAktiv" green compost, the "GreenFibre" wood fibre and our cocos products. In addition, the production sites in Germany, Ireland, Lithuania, Belgium and the Netherlands are

RHP-certified, and a large proportion of the substrate volumes marketed from these production sites are also subject to inspection in accordance with RHP standards.

Klasmann-Deilmann GmbH has been certified to ISO 9001 since 1998 and to ISO 14001 since 2008. Since then, both certificates have been confirmed at each regular audit. Our quality management currently complies with ISO 9001:2015 and our environmental management with ISO 14001:2015.

The majority of our peat extraction areas are managed in accordance with the guidelines of the non-governmental organization "Responsibly Produced Peat" (RPP). By the end of 2023, 86% of the total extraction area was certified according to RPP. This means that 89% of extraction volumes also came from RPP-certified areas.

Complaints in connection with the production or use of peat and alternative raw materials are dealt with as part of our differentiated complaints management system, which is a prerequisite for our ISO 9001 and ISO 14001 certifications, among other things.

# **Packaging**

The packaging for our growing media is mainly made from petroleum-based granulates. The films produced from these must be puncture and tear resistant, support fast and stable weld seams, run smoothly through machines and on conveyor belts and at the same time enable high print quality. The further development of raw materials by our suppliers opens up opportunities to save packaging material without any loss of quality. For packaging substrates in 70 L bags, we now use films with a thickness of 70  $\mu$  instead of the 90  $\mu$  previously used. We were able to reduce the film thickness for 210 L bales from 120  $\mu$  to 110  $\mu$ . Many films also consist of 30% recyclates.

In addition to their technical suitability, we are also testing the economic, ecological and social compatibility of innovative materials that are currently being developed, e.g. from renewable raw materials. For example, it would be unacceptable if agricultural land were to be cultivated for the production of packaging materials instead of being made available to the food industry. With this in mind, there is currently no alternative raw material that meets the requirements for our packaging.





## **Product responsibility**

All our products are produced to the highest industry standards. One hundred percent of products and services are subject to industry-standard health and safety testing to identify additional potential for improvement. In addition to our own raw materials, we only use products that meet RHP standards when selecting purchased raw materials and additives.

The labelling of our products and the ingredients we use on packaging and delivery bills always complies with the current requirements of the respective recipient country.

As substrates usually have high weights due to their raw materials, we also offer smaller and therefore lighter packaging sizes in the consumer sector. With our 210-liter bales, we have also developed a packaging size for commercial horticulture that is significantly lighter

than other standard packaging units. These bales are often exported to countries where they are still transported and processed by hand.

We determine the filling quantities of our substrate containers and the delivery quantities of loose substrates on the basis of the applicable legal requirements using calibrated measuring instruments and the methodology described in EN 12580. The responsible office of the "Mess- und Eichwesen Niedersachsen" (MEN) carries out independent tests of the filling quantities at the German production sites at regular intervals. In addition, Klasmann-Deilmann has committed itself to voluntary self-monitoring of filling quantities, which is the result of a joint initiative between the German "Industrieverband Garten" (IVG) and German substrate producers.

#### Water

The production of growing media does not require exceptionally large quantities of water, meaning that consumption in the context of production is of secondary importance for our sustainability activities. Nevertheless, our use of water complies with the applicable legal provisions and is designed to minimize consumption and ensure environmentally friendly use.

However, the interventions in the water balance of an intact moor are worth mentioning. The peat mosses that form the bog body can absorb many times their own weight in water. Drainage in the course of preparing for peat extraction drains away stored water. Klasmann-Deilmann extracts peat raw materials solely from degenerated peatlands that were drained decades ago, so that these interventions in nature are a thing of the past. However, even during land use, stored water is drained through a ditch system and ultimately flows into rivers, canals or natural bodies of water. We strictly adhere to the applicable regulations and coordinate closely with the relevant approval authorities. In the course of renaturation, a large part of the former extraction areas are rewetted. In this way, they gradually regain their function as water reservoirs.



## **Disposal**

There are no functioning recycling concepts for our products and packaging. In many cases, plants together with our growing media are planted out in a field or garden, where they continue to grow and the substrate makes a lasting contribution to improving the soil. Other substrates are disposed of when the plant's life cycle ends. In the best case, both are then composted as green residues or organic waste. In the more likely international scenario, the plant and substrate are disposed of as waste. Our packaging is disposed of in accordance with local regulations.

Returning packaging and substrate residues or passing them on for professional recycling would involve a disproportionate amount of effort, high costs and additional emissions from transportation. We see this situation as an ongoing challenge. We are pursuing solutions by

- reducing the film thickness for our packaging
- larger packaging units that require less packaging than smaller units
- the delivery of unpackaged goods, which is particularly possible for customers in the vicinity of our production facilities

Klasmann-Deilmann does not produce any hazardous waste, harmful substances or significant quantities of waste water.

#### **Brands**



"Advanced Substrates" form our international core range, which exclusively includes substrate mixes with a higher proportion of alternative raw materials.

"ProLine" comprises our substrates for organic horticulture, which comply with the guidelines and requirements of the growers' associations in Germany, Austria and Switzerland. ProLine substrates are tested and certified by the international inspection body Ecocert® in accordance with the EU Organic Regulation.

For the end consumer segment, we mainly produce high-quality substrates on behalf of third parties. We have been selling our own potting and planting soils under the "Florabella" brand since 1957.

Since 1971, "Neuhaus Substrates" have formed a range of selected growing media that have a regular customer base, particularly in Mediterranean markets.

## **Product lines**

We have divided the entire range of our growing media for commercial horticulture and the end consumer segment into product lines according to the various customer groups.



# **Growing solutions**

Our "Growing Solutions" division develops horticultural solutions that are primarily geared towards special crops and cultivation methods:

- The "Growcoon" is a biodegradable net pot that forms a stable root ball in combination with a growing medium and the roots of a plant. Less substrate is required, the plant can be moved more easily during cultivation and cultivation times are shortened. More and more companies are using the Growcoon instead of the usual plastic pots, saving resources and avoiding waste.
- "Nygaia" is a biodegradable plug for growing young plants, e.g. in hydroponic systems. Nygaia completely replaces the conventional growing medium.
- "Growbags" are a globally established packaging unit for certain cultivation methods in the vegetable and soft fruit sectors. Our growbags are distinguished by substrate mixtures based on wood and without peat.
- "Sphaxx" stands for cultivated peat moss, which is used as a high-end product for growing sophisticated plants.
  - With the digital platform "Log & Solve", we are doing pioneering work in the digital control of analog processes in horticulture. Key elements are the collection, consolidation and evaluation of data, the documentation of ongoing cultivation batches and the measurement of important cultivation parameters using special sensors.

#### Sales structure

Our sales of growing media covered more than 100 countries worldwide in the reporting period. In the majority of markets, we supply independent sales partners with whom we have long-term contracts and who are

exclusively responsible for local sales. In central sales markets, our own subsidiaries are in charge for sales and support for sales partners.



## **Logistics**

Long-standing business relationships with reliable freight forwarders and transport service providers in Germany and abroad ensure that we can process orders reliably and quickly. We use rail and ship whenever this is practical and possible. On the move for Klasmann-Deilmann in 2023 were:

- 36.000 trucks
- 100 ships
- 19,500 containers (20 feet), which are transported by truck in the initial leg and by ocean-going vessel in the main leg
- numerous inland transports of the containers from the overseas port of landing

Our raw materials and growing media are comparatively bulky and heavy. The main recipients are nurseries in around one hundred countries on five continents. The resulting transport emissions add up to a good 40% of the total greenhouse gases produced by Klasmann-Deilmann. This is why logistics is so important in terms of sustainability. At the same time, however, it is precisely in this area that we repeatedly come up against the limits of what is feasible and economically viable.

Rail transportation is still often uneconomical compared to road transportation - not least because of the high handling costs. Many customers also want the fastest possible delivery within a few days. This is often not feasible by rail. With regard to the transportation of goods between Western and Eastern Europe, there are also no direct rail connections due to the different track gauges. However, we regularly use the Deutsche Bahn network for transportation to Southern Europe.

Within Western Europe, we also make use of inland waterways. The necessary waterways are not available for a comparable exchange of goods with Eastern Europe, so the only alternative is chartering ocean-going vessels. Ocean-going vessels are a good solution for the transportation of raw materials and loose materials, but the damage rate is too high when loading pallets. For overseas deliveries, we only use transportation in containers.

All in all, truck transportation is indispensable for us, be it as part of direct deliveries to our customers in Europe or as a means of transport in combined truck/ship/truck traffic.

Nevertheless, we are pursuing several medium-term approaches to avoid emissions in logistics as well:

- A starting point stems from the weight of our substrates. The drier and therefore lighter they are, the larger the volumes that can be shipped per transport unit.
- We expect positive effects from increasingly decentralized production, which will shorten transport routes to our customers and allow significantly more raw materials to be transported by ship in a more climate-friendly way.
- We are in constant contact with our freight forwarders and transport service providers to explain the need for more climate-friendly logistics and to discuss possible approaches with them. Decisive progress can only result from the efforts of the industry.





## Supply chain

Our "Sustainability Guideline for Suppliers", which has been in place since 2012, supplemented our selection criteria for suppliers with requirements relating to human rights, working conditions for employees, environmental standards and a business code of ethics. In 2023, the document was converted into a "Code of Conduct" that meets globally recognized requirements.

The Code of Conduct is used as a voluntary commitment by our suppliers. Recognition of the standards set out in it is a prerequisite for every supplier contract with Klasmann-Deilmann. By accepting an order, our suppliers undertake to ensure that all their processes comply with the provisions of our sustainability guidelines. In the course of recurring discussions with our suppliers, we discuss our guidelines and ensure that we have a common understanding of social, ethical and ecological standards.

#### The main contents of our sustainability guidelines are

Prohibition of child labour - also at the suppliers of our business partners

Prohibition of forced and compulsory labour

Prohibition of discrimination of any kind

Freedom of association and the right to conduct collective bargaining

Minimum wages and overtime pay in accordance with the legally prescribed social benefits

Support for continuous improvement and further development of occupational health and safety in accordance with national regulations

Prohibition of bribery, corruption and embezzlement

Evaluation of suppliers based on their optimization in the use of resources, the minimization of environmental pollution, the precautionary principle and the promotion of environmental responsibility and technologies

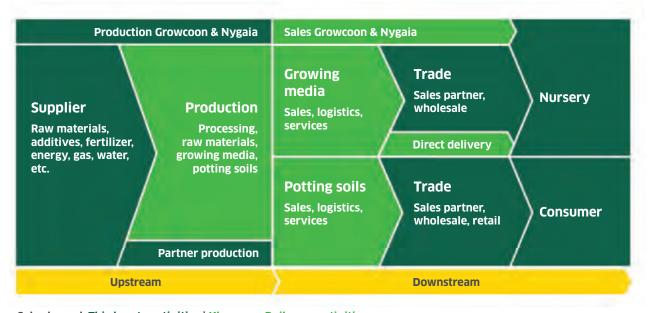
To date, we have not identified any human rights issues with our direct suppliers. With regard to our indirect suppliers, we did not receive any indications during the reporting period that would require us to carry out

a risk analysis. We will align our comprehensive risk management with the additional requirements resulting from the German/European supply chain acts.

### Value chain

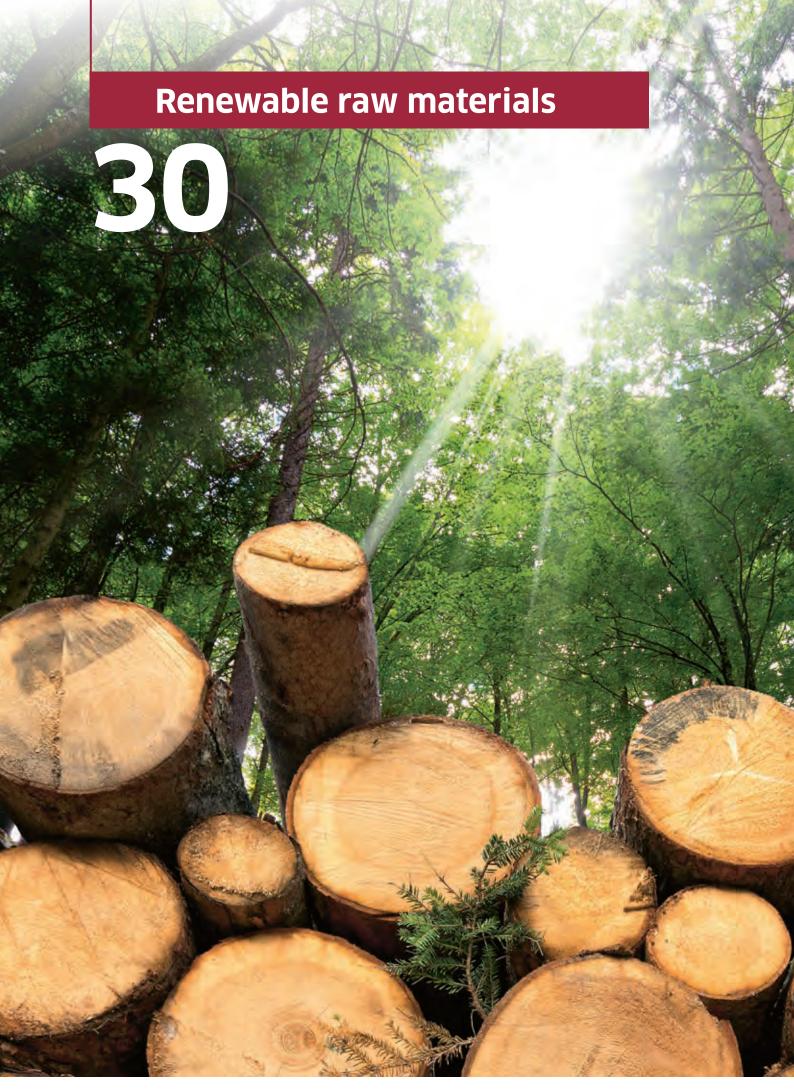
Our most important market segment is commercial horticulture, which we supply with ready-to-use growing media. Our end customers are nurseries all over the world. Around 10% of our total annual production volume of substrates is destined for the consumer sector.

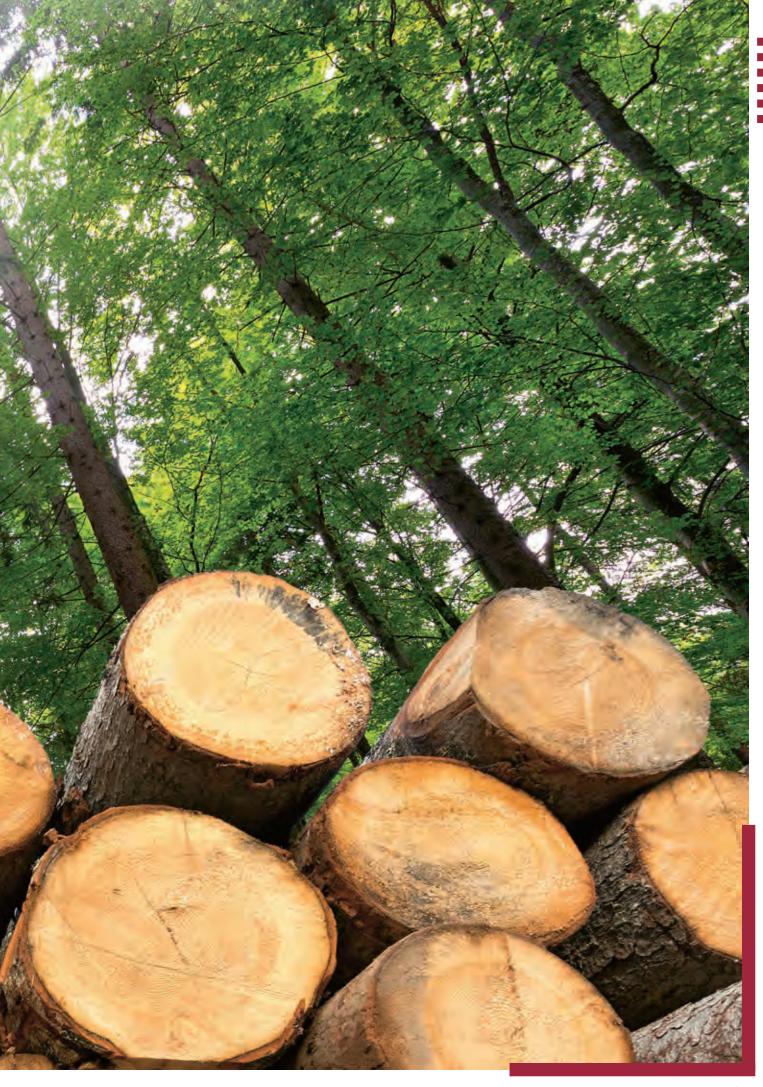
We also trade in our own and purchased raw materials. As a supplier, we are an essential part of the material value chain in commercial horticulture. Our consulting and services as well as our innovation management are embedded in this.



Color legend: Third party activities | Klasmann-Deilmann activities









## Wood as an energy source

Alternative energy sources are increasingly contributing to a balanced and reliable overall mix of different energy sources. The aim is to provide environmentally friendly electricity and heat. Renewable raw materials such as wood are firmly established in this context.

In contrast to fossil fuels such as oil, natural gas and coal, which are finite resources, renewable raw materials are available again and again in certain cycles. Their preferable carbon footprint in energy production results from the

- the extent to which fossil fuels are replaced
- the fundamentally climate-neutral cycle of releasing CO<sub>2</sub> during energy recovery and binding carbon through photosynthesis during growth
- from the use of ultra-modern and energy-efficient technology, e.g. in combined heat and power plants

Among the renewable raw materials in demand are residues from forestry and the wood industry. As biogenic solid fuels, they are utilized as wood chips in biomass cogeneration plants.

Short-rotation coppice (SRC) also play an important role in this context. This involves planting cuttings of fast-growing tree species such as willows or poplars, whose wood growth can be harvested after three to four years and used to generate energy. Over a period of at least twenty years, growth and harvesting are repeated on the same area in further cycles of three to four years. Compared to other energy crops, such as maize, SRC has a particularly positive cost-benefit ratio.

## Short rotation coppice

We have been pursuing extensive SRC projects in the Baltic region since 2010. At the end of 2023, our areas covered a total of 3,559 ha. The demand for biomass for energy use has stabilized at a high level and the economic conditions for sustainable energy concepts remain favourable.

In order to secure the high demand for wood as a raw material, particularly in cold winter periods, we have supply contracts with external suppliers for extensive resources. In addition to wood chips, energy peat also continues to play a role in the Baltic energy mix.

In Lithuania, our own or purchased woodchips and biomass mixtures of woodchips and energy peat are marketed via UAB Klasmann-Deilmann Bioenergy. Since 2017, we also have a sales company for biomass for energy and heat generation in Latvia, Klasmann-Deilmann Bioenergy SIA.

#### Land use

The cultivation of renewable raw materials for energy use is fundamentally in competition with infrastructure and settlement development as well as agricultural food production in terms of land requirements. We therefore mainly use fallow land with little benefit for the food industry and ensure that land is used as effectively as possible.

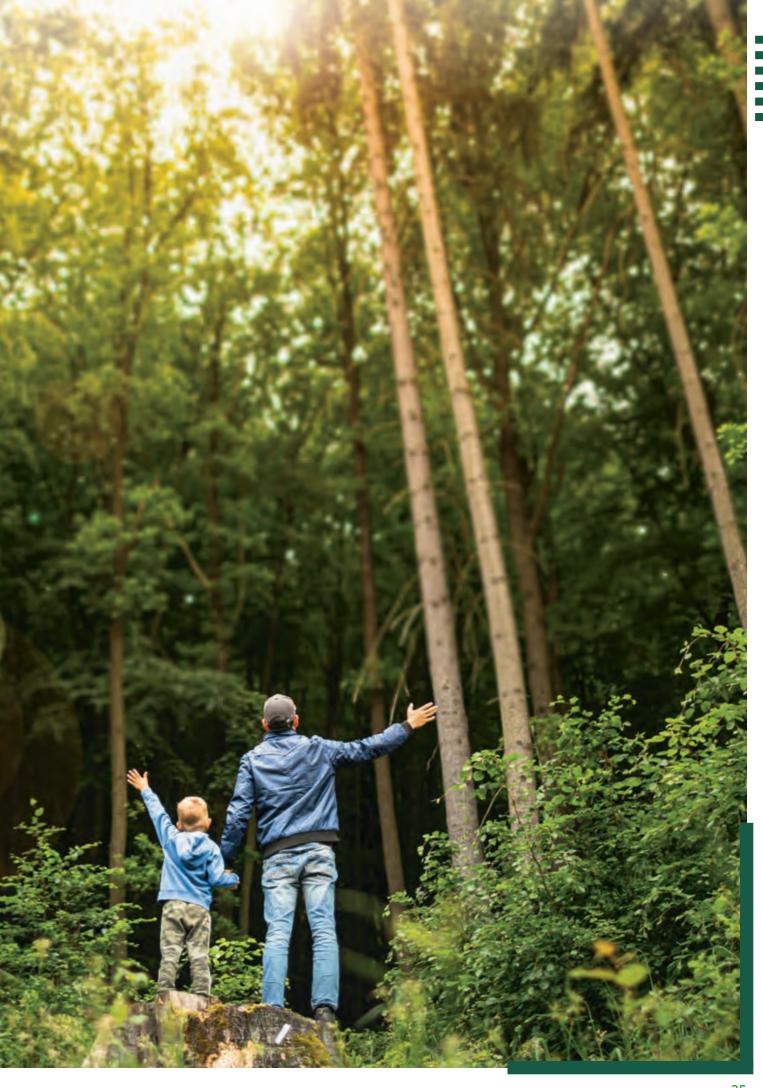
In contrast to agricultural land, which is usually cultivated twice a year, SRC areas are only cultivated every three years. Over the entire cycle of 21 years, SRC is only treated once with herbicides. In addition, an agricultural area that was previously used conventionally is ecologically enhanced by planting SRC. Among other things, the lack of tillage leads to

- humus build-up in the soil
- reduced erosion due to the permanent ground cover and
- improved infiltration capacity and water storage capacity of the soil due to permanent soil rooting

All in all, we value and use short rotation plantations as a modern, responsible way of cultivating land and producing energy sources. The main risk to this is the increasingly mild weather conditions in the winter months, which lead to a decline in demand for wood chippings. We are monitoring this development very closely and as part of our ongoing risk management are assessing the extent to which our business model will develop sustainably.











Since 1981, the Lower Saxony Peatland Protection Act has been in force, which places the remaining intact moors under nature conservation. In accordance with the requirements of the law, the peat and substrate industry has since then only been allowed to extract raw materials from areas that have already been drained or used for agricultural purposes. For the period after the end of peat extraction, the responsible authorities specify a subsequent use for each area, which nowadays usually consists of rewetting. Our company is also bound by these framework conditions.

Similar principles apply to our activities abroad. For example, we only use areas for peat extraction in the Baltic States that were drained during the Soviet era. We do not touch intact peatlands. There are also official regulations for the period after the end of extraction. In Ireland, large-scale peat extraction has been effectively ended nationwide since 2019, as national planning and environmental law was found to be in conflict with EU legislation and there is no new regulation in sight.

The highly regulated requirements for peat extraction show that the sensitivity to the displacement of a special type of landscape, including its biodiversity, through the commercial use of peatland is high. This makes it all the more important to realize that this process is not irreversible. The successful rewetting of many extraction areas in recent decades shows that the typical flora and fauna are gradually returning. The original peat body has not been restored, but the renaturation areas are permanently available as biotopes for nature conservation. The rewetted areas are also a benefit for climate protection as soon as the peat mosses grow again and store carbon.

Climate protection has dominated the debate on peat extraction and use for around fifteen years. Drained peat soils release significant amounts of CO<sub>2</sub> when peat decomposes through contact with the air. A good 40%

of our company's emissions come from peat extraction and use. By ending peat extraction and rewetting the land, Germany's carbon footprint could be reduced by <0.2 %. Germany, the UK and Switzerland in particular are therefore pursuing strategies to reduce or phase out peat. Other countries - including some in the EU - remain neutral on this topic or reject restrictions.

Against this backdrop, our company is pursuing the goal of replacing peat with alternative raw materials to the greatest extent possible. The unrestricted functionality of our growing media and the sufficient availability of wood fibres, green compost, cocos, bark and other raw materials remain the guiding principles. This process is associated with great efforts in product development and high investments in securing resources. There is no state support and we are not asking for it. We are carrying out our transformation under our own steam and are pushing the boundaries of what is economically and entrepreneurially justifiable. Nevertheless, this transformation will take many years, and we do not yet see the prospect of a complete phase-out of peat, as there is a lack of sufficient and qualitatively suitable sustainable alternatives.

Nevertheless, we are refraining from investing in peat extraction areas. We last acquired new areas in 2011, but the purchase of raw materials on the spot market remains unavoidable for the time being. We are making rapid progress with the renaturation of our extraction areas. This is also increasingly important in view of the effects of climate change, as dry and hot summers increase the decomposition of peat in the areas. We are taking a variety of measures to restructure our company and adapt it to an economy characterized by sustainability. Limiting the impact of land management and reducing emissions are essential for Klasmann-Deilmann. With our sustainable development, we aim to achieve a consensus between economic interests and responsibility for nature and climate protection.





#### RPP certification

The European certification system "Responsibly Produced Peat" (RPP) was founded in 2013 with the intention of

leaving natural peatlands with a high value for nature conservation and climate protection (High Conservation Value) untouched and preserve them permanently

only allowing areas that have already been drained and/or used for agricultural purposes to be used for controlled peat extraction

ensuring the long-term availability of peat as a valuable substrate raw material

accelerating the extraction of raw materials from degenerated peatlands so that restoration can begin as early as possible

As a European non-governmental organization, RPP brings together relevant interest groups in the peat and substrate industry, including recognized scientists, environmental protection associations and numerous companies in the sector. RPP strives to achieve a practicable balance between the interests of the substrate industry and those of nature conservation and climate protection at the highest possible level. To this end,

RPP has established a reliable and transparent certification system for responsible peat extraction. Member companies and their extraction areas are reviewed by independent auditors.

At the end of 2023, 86% of our extraction areas were RPP-certified. This means that 89 % of our peat extraction volumes also came from RPP-certified areas.

# Rewetting

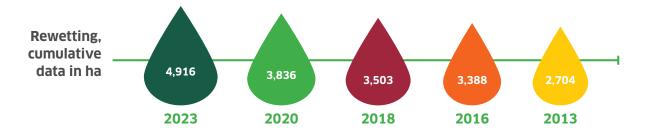
Depending on the method used, peat extraction on individual areas can take several decades. After the extraction of raw materials has been completed, at least the legally prescribed residual peat thickness remains on the land. There are basically four different options for subsequent use. Which of these is implemented in each individual case is determined by the responsible authorities in the approval documents before the start of raw material extraction.

The most important type of subsequent use in Germany is rewetting. The aim is to create the conditions for the establishment of peat mosses (Sphagnum) and other plants characteristic of raised bogs, such as cotton grass. The former hydrological conditions are restored by water impoundment, so that the rewetted areas have bog-like vegetation (renaturation) or even typical bog vegetation (regeneration) and become CO<sub>2</sub>

sinks when the peat moss body begins to grow. Thus, a rewetted area can contribute to biodiversity - in this case the diversity of ecosystems - and again shape the landscape. By the end of 2023, we had rewetted a total of 4.916 ha.

However, due to different geological and hydrological conditions, not all areas can be renaturalized in this way once peat extraction has ceased. Instead, some of the former extraction areas are reforested or prepared for subsequent agricultural use. In some cases, buffer zones are also established between differently used areas and left to natural succession.

Usually, Klasmann-Deilmann is responsible for implementing the measures. Their success is regularly monitored over a period of several years by the responsible authorities and by Klasmann-Deilmann.



Projects for the restoration of former extraction sites are also pending at locations in the Baltic states and in Ireland. In doing so, we adapt to local conditions

and follow the applicable legislation. Our responsible local subsidiaries are in close contact with the relevant authorities.

#### **Peat moss cultivation**

In cooperation with the University of Hanover and the Thünen Institute in Braunschweig, we carried out a research project on peat moss cultivation from 2015 to 2018. A total of 10 ha of former extraction areas were prepared for the cultivation of peat mosses on black peat. The peat mosses required for the project were taken from near-natural peatland areas and successfully planted on the already rewetted extraction sites or those intended for rewetting. As the peat mosses have grown very well since then, we can still use the areas as a sphagnum bank today. High-quality hummock peat mosses are harvested here - including valuable species on the Red List that are worthy of protection.

The process developed in this context for restoring degraded peatlands has been so successful that it is now offered as a service for renaturation projects. In contrast to spontaneous colonization as part of regular rewetting, we can accelerate the transformation of

degraded raised bogs into growing raised bogs through active hydromanagement and the targeted introduction of typical raised bog vegetation. The typical raised bog vegetation forms up to twenty years earlier and leads to a significantly improved climate balance as well as carbon storage in the medium term.

The original aim of the research project was to achieve conditioned, reproducible growth of peat mosses that could be used as a substrate component. During this time, various internal and external studies confirmed the very good suitability of peat mosses for substrate production. At the same time, however, we realized that their use is not economical as long as cultivation takes place on natural areas. We are therefore now pursuing other promising, practice-oriented and area-independent experiments with which we can develop a renewable and sustainable raw material for substrate production from peat mosses.



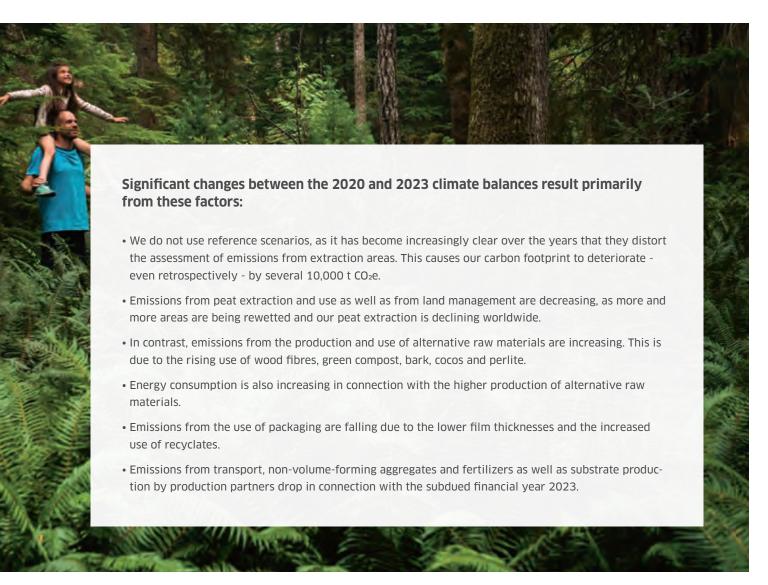


# **Corporate Carbon Footprint**

We published a carbon footprint for the first time in the 2013 Sustainability Report. It gave us an overview of the emissions for which Klasmann-Deilmann is responsible and contributed to greater transparency in the dialog with our stakeholders. Since then, we have had the calculator developed several times, particularly in order to map complex issues relating to land management and the use of raw materials as accurately as possible. We have also refined our data management in the course of several digitization projects. In 2023/2024, we transferred the model to a web-based calculator. The preparation of our carbon footprints is critically monitored by Meo Carbon Solutions GmbH, Cologne, which compares the calculation model with regard to its assumptions, functions and internal logic with the requirements of ISO 14064-1 in order to enable reporting in accordance with the European Sustainability Reporting Standards (ESRS).

The new base year for calculating our corporate carbon footprint (CCF) is 2020.

All carbon footprints since 2013 include all emissions within the "cradle to customer" system boundary. The "end of life" phase is not included. This separates the emissions that are attributed to our company from the emissions that are attributed to subsequent users, such as nurseries or consumers. We are aware that a significant proportion of greenhouse gases are not included in our carbon footprint this way. The background to this approach is the assumption that a substrate producer is not responsible for the use of a product by the customer, just as an oil producer is not responsible for the individual fuel consumption of a car driver. At product level, on the other hand, the carbon footprint is shown in the "cradle to grave" system boundary in order to provide a nursery, for example, with reliable information for calculating its own carbon footprint.



Emissions in t CO₂e	2023	Share	Change	2020
Peat, SRC & land use	99,571	42 %	-16 %	118,038
Alternative raw materials	25,819	11 %	+62 %	15,903
Energy	21,436	9 %	+10 %	19,504
Operating resources	10,294	4 %	-28 %	14,378
Logistics	82,617	34 %	-14 %	95,993
Corporate Carbon Footprint	239,736	100 %	-9 %	263,816
Total production volume (tm³)	3,751		-13 %	4,309
Product Carbon Footprint (kg CO₂e/m³)	63.9		+4 %	61.2

#### **Comments**

#### Peat, SRC & land use

- Emissions from peat extraction and use, e.g. from active peat extraction areas, peat storage
  in piles, the purchase of peat raw materials and the peat content in growing media. There are
  also emissions from renaturation measures.
- Emissions from the decay of peat as a raw material or in the substrate, converted into CO<sub>2</sub> equivalents with a climate impact potential for the next 100 years. The resulting aggregated average value of 1% for the current reporting year is included in the corporate carbon footprint. The emissions generated during the use and "end of life" of the products are only reported in the Product Carbon Footprint (PCF).
- Emissions from the establishment and maintenance of forests and SRC areas. Beyond this, we do not operate any CO<sub>2</sub> sinks or storage facilities that must be included in the carbon footprint.

#### **Alternative raw materials**

• Emissions from the production and use of alternative raw materials such as green compost, wood fibres, bark, cocos and perlite.

#### Energy

- Emissions from the consumption of diesel, heating oil, electricity, natural gas and district heating.
- Emissions from the operation of photovoltaic systems and wood chip heating systems.

#### **Operating resources**

- Emissions from packaging materials such as film, paper, cardboard and pallets.
- Emissions from fertilizers and non-volume-forming aggregates such as sand, clay and lime.
- Emissions from substrate production by our production partners.

#### Logistics

- Emissions from the transport of raw materials within the Klasmann-Deilmann Group.
- Emissions from transport as part of the procurement of goods.
- Emissions from our worldwide transports to our customers. Truck, container, ship and rail transports are included in detail.



## Scopes

The classification of emissions within the greenhouse gas calculator into three scopes corresponds to ISO 14064 and the requirements of the Kyoto Protocol.

**Scope 1** includes all directly generated emissions, e.g. from combustion processes in our own plants and the decomposition of peat raw materials.

**Scope 2** includes emissions associated with purchased energy such as electricity or heat energy sources such as wood chips.

**Scope 3** covers emissions from third-party services and purchased inputs.

The base year is 2020 and the global warming potential is calculated over 100 years. The electricity mixes AT, BE, CN, DE, FR, IE, IT, LT, LV, MY, PL, SG and US as well as district heating in accordance with Ecoinvent 3.10 form the basis for calculating the energy mix in accordance with Scope 2.

Data in t CO₂e	2023	Share	Change	2020
Scope 1	81,906	34 %	-28 %	114,203
Scope 2	5,059	2 %	+75 %	2,890
Scope 3	152,771	64 %	+4 %	146,722
Corporate Carbon Footprint	239,736	100 %	-9 %	263,816

Emissions and other factors not derived from calculations using company data were taken from the databases "ecoinvent.org", "searates.com" and the "Quantis Study" published by the former EPAGMA in 2011. The calculation of emissions from peat extraction and use is based on the results of our study in this area.

The following greenhouse gas emissions are not included in the Corporate Carbon Footprint and are reported here in accordance with the Greenhouse Gas Protocol, Chapter 4:

#### Not included in **Scope 1** are:

- intentional or unintentional releases of fugitive emissions such as CFCs from refrigerators.
- empty return journeys for internal and customerrelated transports; instead, only the outward journey is included, but with a value of 2/3 of the total journey.

**Scope 2** is fully taken into account.

**Scope 3** emissions are only partially taken into account. Not reported are emissions from:

- internal and customer-related empty runs, as contracted freight forwarders and transport companies in accordance with the joint agreements are responsible for providing connecting or return transportation. This agreement influences the prices per transport kilometre.
- transports of purchased fuel and waste.
- journeys by car, bus, train or plane in connection with business trips or journeys to and from the workplace, as they are not material according to the GHG Protocol.
   Journeys by company-owned cars, on the other hand, are included in diesel consumption.
- leased assets, franchise companies and outsourced activities.
- waste emissions (Section 7 (1) of the 36th German Federal Immission Control Regulation), as they are already included in the emission factors for purchased packaging and are not generated by Klasmann-Deilmann itself. Waste from administration is negligible and is therefore not reported.

# **Product Carbon Footprint**

Unlike the Corporate Carbon Footprint (CCF), we report each Product Carbon Footprint (PCF) in the "cradle to grave" system boundary, i.e. we also take into account the use phase and the "end of life" of our substrates. Like the calculator for the CCF, the calculation model for the PCFs was also completely redesigned in cooperation with Meo Carbon Solutions. The calculation is closely based on ISO 14067 and the horticultural certification system HortiCert. The table below shows the PCF of selected growing media with different compositions.

Product and recipe	Composition	kg CO₂e/m³
Base Substrate (413)	100% white peat	163
Potgrond P (002)	100% black peat	231
TS 1 Strawberry (X68)	50% white peat, 50% wood fibres	93
Container Substrate (3RX)	70% white peat, 30% cocos	124
BP Substrate 2 (872)	30% white peat, 20% black peat, 30% wood fibres, 20% green compost	133
ProLine Herb (9Q3)	45% cocos, 35% wood fibres, 20% green compost	89

Since 2018, we can send a growing media related carbon footprint to our customers. On request, the product-related information in  $CO_2e$  can be calculated individually and sent to the respective nursery by email as a product carbon footprint. In this context, further discussions with our experts are expressly desired in order to switch to substrates with a more favourable carbon footprint where possible.

### **Emission reduction**

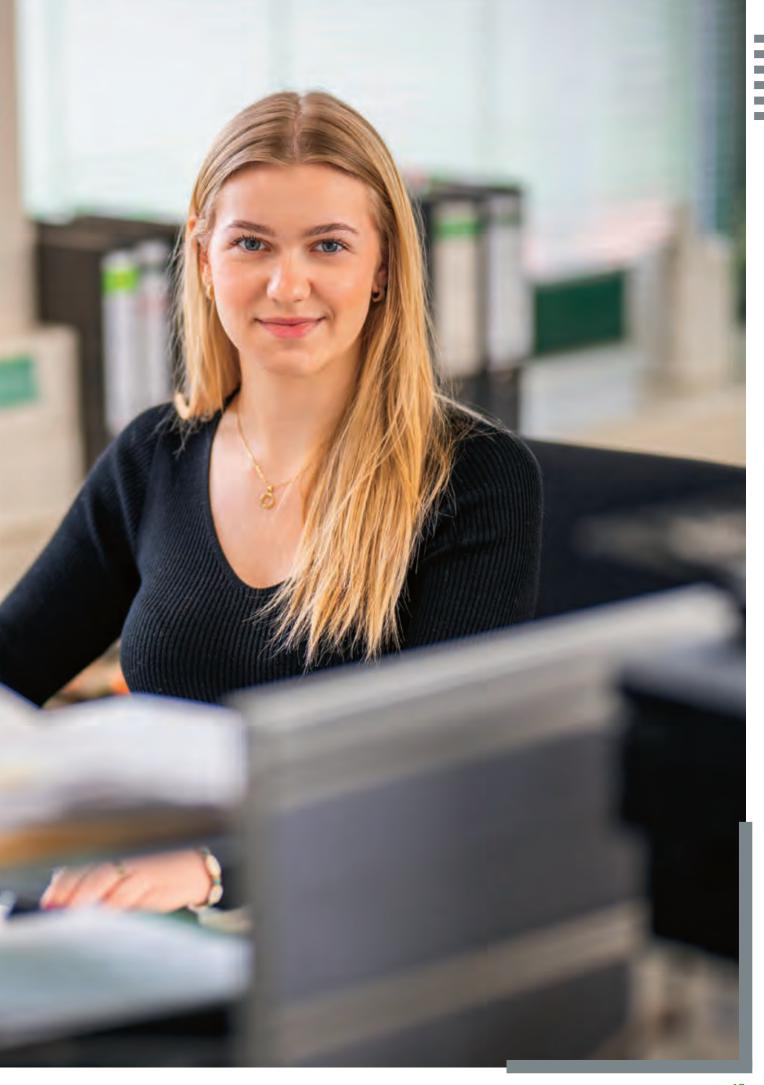
Between 2013 and 2023, we reduced our carbon footprint at company level by 19%, even though we increased sales by a total of 20% at the same time. Our economic growth, high transport emissions and the use of peat stand in the way of an even greater reduction in our carbon footprint. Nevertheless, the ambitious climate protection targets of the Federal Republic of Germany and the European Union also apply to us.

- We are therefore examining costly and promising investments that will enable us to make parts of our product range climate-neutral within a few years and thus significantly reduce our corporate carbon footprint. Pilot projects started in 2024.
- Increasing the proportion of alternative raw materials will have a noticeably positive impact on the product carbon footprint of numerous substrate blends. An

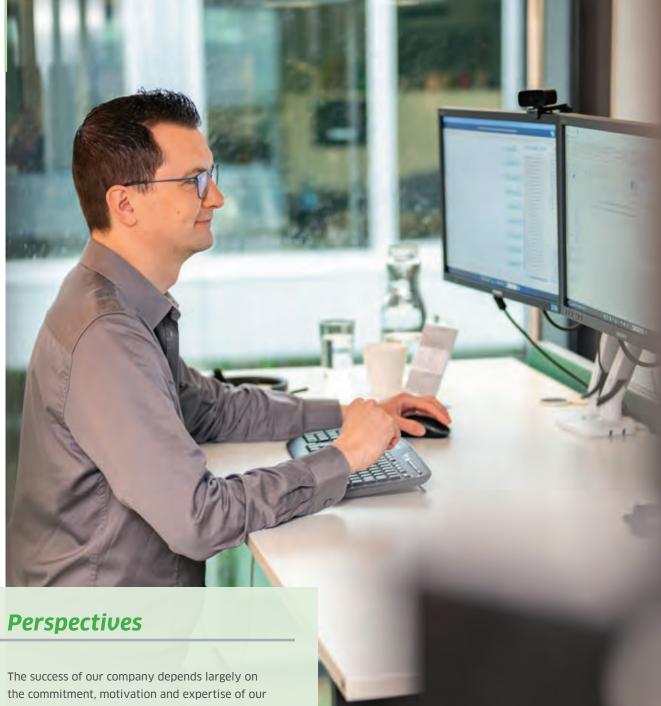
increase to a total of 30% by volume of annual production by 2025 and 50% by volume by 2030 is strategically anchored. We are promoting this development worldwide through the "Advanced" product line.

- Increasingly decentralized production with greater proximity to customers will help to avoid transportrelated emissions in the medium term, as raw materials will be delivered by ship in a more climate-friendly manner and supplemented by regionally available, renewable raw materials.
- The decommissioning and renaturation of further extraction sites is planned, primarily in Germany, but also in the Baltic region.









The success of our company depends largely on the commitment, motivation and expertise of our employees. It is therefore very important to have a working environment in which people enjoy working, which facilitates dialog and transparency, which creates a climate that encourages innovation, which is technically up to date and which looks to the future. This is why we continuously invest in our internal attractiveness as an employer.

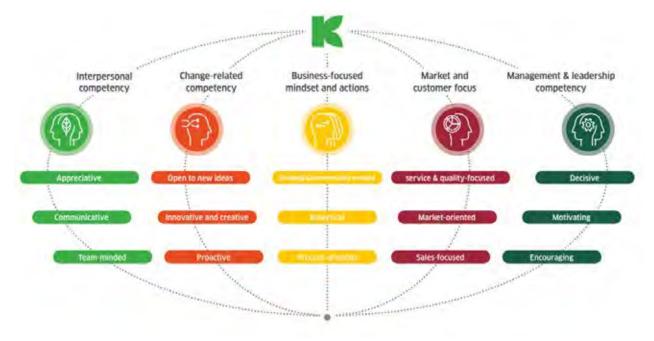
For some years now, we have been experiencing a comprehensive generational change, which also affects key positions in our company. When it comes to succession, we rely primarily on our own junior staff at all levels. In view of our growth, we need additional expertise, particularly for highly specialized business and task areas, which we build up internally and supplement with new hires as required.

In light of these developments, we established a strategic HR management system at an early stage, which is anchored in Klasmann-Deilmann GmbH as our lead company. It is managed centrally and implemented with support from the subsidiaries. Instruments, measures and processes are continuously reviewed for their effectiveness. In this way, any necessary corrections, additions or discontinuations can be implemented promptly.

Talents	As part of our long-term personnel development, we have established several programs that serve to deepen the skills of our employees, involve them in the company's development and strengthen their identification with our company.
go on®	<ul> <li>International talent program for junior staff to further develop personal skills</li> </ul>
<b>go</b> ahead®	International leadership program for employees in key positions based on the newly developed leadership approach and to strengthen and develop skills; also development program for new managers to prepare them for their new role
<b>go</b> lean®	<ul> <li>Program to implement lean management methods in production and administration with the aim of continuous improvement</li> </ul>
<b>go</b> forward®	<ul> <li>go forward: International program to strengthen innovative strength, including workshops on idea generation and creativity methods as well as the submission of suggestions for improvement</li> </ul>
<b>go</b> together®	<ul> <li>go together: Program for all levels of the workforce and all subsidiaries to strengthen dialogue, particularly with management</li> </ul>
<b>go</b> start®	— go start: Internal program for trainees and dual students with offers for an easy start to professional life, for further training, to deepen technical issues and to strengthen personal and social skills
just <b>go</b> ®	just go: Open format in the test phase, which is aimed at all interested employees and addresses selected topics (e.g. feedback)

# Competence management

Since 2017, our internal competence management model has formed the central starting point for many of our strategic HR development tools. The requirements set out in this model enable targeted development measures.





# Leadership approach

Our team leaders are faced with a wide range of conflicting interests. Special demands are placed on them - by their employees and also by their own superiors. Added to this are the requirements that apply when dealing with customers and suppliers. Our team leaders also have a major influence on how work is carried out, what the working atmosphere is like and how a department

is positioned in the overall network of a company. With this in mind, we have leadership standards that form a binding framework for each of our team leaders.

In 2024, the leadership approach was revised and adapted in part to the particular challenges of the coming years.



#### Leadership approach



Promotes and implements ideas which lead to change in the future.

- Communicates attractive and clear vision for the future
- Motivates and inspires employees to be change drivers
- Promotes innovative ideas and projects
- Proactively drives and implements change



Encourages the constant search for improvements to the current state.

- Strives for continuous improvements with a permanent process-oriented mindset
- Keeps agility by dealing with changing requirements
- Makes transparent decisions
- Ensures active participation of employees



Promotes the development of each individual and encourages independent action and decision-making.

- Deals with employees in a trusting and appreciative manner
- Motivates employees to use their strengths
- Promotes (interdisciplinary) team spirit
- Establishes constructive feedback culture



Sets operational and strategic targets and creates a framework in which the employees are most effective.

- $\bullet$  Continually and collaboratively pursues strategic goals with the team
- Drives for achievements of results
- Lives an open and honest error culture
- Proactively drives employee development





# Female team leaders

We currently employ seventeen female team leaders, ten of them at international locations. One of the female team leaders is the managing director of a large production and sales company. Out of a total of 76 team leaders worldwide, they account for 22%.

# Apprenticeships, traineeships and scholarships

Every year, we offer apprenticeships in commercial and IT professions. The dual study program and part-time or work-integrated degree courses are also well established. At the end of 2016, the Osnabrück-Emsland-Grafschaft Bentheim Chamber of Industry and Commerce awarded us the "IHK Top Training Company" seal, which was confirmed in 2021 and 2024. We also make regular use of work placements and internships to accompany young people's studies, as well as the opportunity to write a Bachelor's or Master's thesis.

In order to attract particularly interesting candidates for us in the international field, we offer the opportunity to join us as a trainee. We have been employing international trainees for several years. The focus here is on future opportunities in market development, production and digital business models. With this in mind, we are also expanding our contacts with universities that specialize in key professional fields for us, including Osnabrück University of Applied Sciences in Germany and Wageningen University & Research in the Netherlands.

In all cases, we guarantee intensive support in the relevant departments. It is important to us not only to provide high-quality professional training, but also to strengthen their personalities. Many young people who successfully complete their training with us are subsequently taken on as employees.

# Working life

In future, our employees will be working for more years than in the past. We are supporting this development by creating suitable framework conditions for working hours, providing the right and ergonomic work equipment and also in the area of health promotion. The mechanization and automation of work processes in the

industrial sector and the equipment of office workplaces have reached a high level at all locations, so that heavy physical work only has to be performed in exceptional cases. In Germany, our employees also benefit from the opportunities for partial retirement.



#### Health

We operate an active health management system that is integrated into all operational processes in order to maintain, improve or restore the health and well-being of our employees. At regular intervals, a committee ("health circle") made up of team leaders, works council members and our company physician discusses measures to promote health.

The focus is on carrying out regular check-ups and promoting various measures to improve the general health of the workforce. This includes, for example, offering flu vaccinations free of charge. We also provide a monthly allowance to support employees who take part in sports activities at gyms and public swimming pools. Moreover, smaller teams are formed time and

again with varying compositions to take part in regional sporting events. In addition to health aspects, the main focus here is on the community-building aspect. A new feature in 2023 was the organization of "health days" at the German locations, where external experts advised and instructed our employees on various aspects of health. In view of the positive feedback, a repeat is firmly planned.

There are also measures to prevent mental stress. In the risk assessment that has been in place since 2020, mental stress is listed and weighted for various areas of work, resulting in work instructions for line managers. The underlying concept is constantly being developed further.

# **Occupational safety**

Klasmann-Deilmann maintains an occupational health and safety management system aimed at the complete prevention of accidents. Potential hazards in the plants are to be identified in good time and eliminated as far as possible. This is achieved primarily through regular plant inspections by internal and external safety specialists, company physicians and safety officers, as well as in meetings of the occupational safety committees. In addition, there is automatic documentation of incidents at an organizational level. Near-accidents are also documented and evaluated by the occupational safety committee. Employees receive regular training on occupational safety issues. In order to involve them closely in the implementation of occupational safety measures, ideas for improving occupational safety are particularly rewarded in the company suggestion scheme.

Nevertheless, there were fatal accidents in Germany and Lithuania in 2022/2023. The investigation of the incidents in cooperation with the responsible authorities revealed that our occupational safety precautions went beyond the legally prescribed level and were intact. Nevertheless, habit and carelessness led to tragic fatalities. As a result, we strengthened the occupational safety department by appointing a specialist who is responsible for the continuous improvement of safety levels throughout the Group. We also expanded our technical safety precautions and tightened the mandatory safety regulations.

# Family friendliness

Klasmann-Deilmann is one of the founding members of the Emsland Work and Family Foundation (www.familienstiftung-emsland.de), which has set itself the goal of reconciling work and family life in the region. The foundation awarded us our first certification as a family-friendly company in 2012, after which the certificate was regularly confirmed. Since 2022, we have been recognized by the foundation as a "perma-

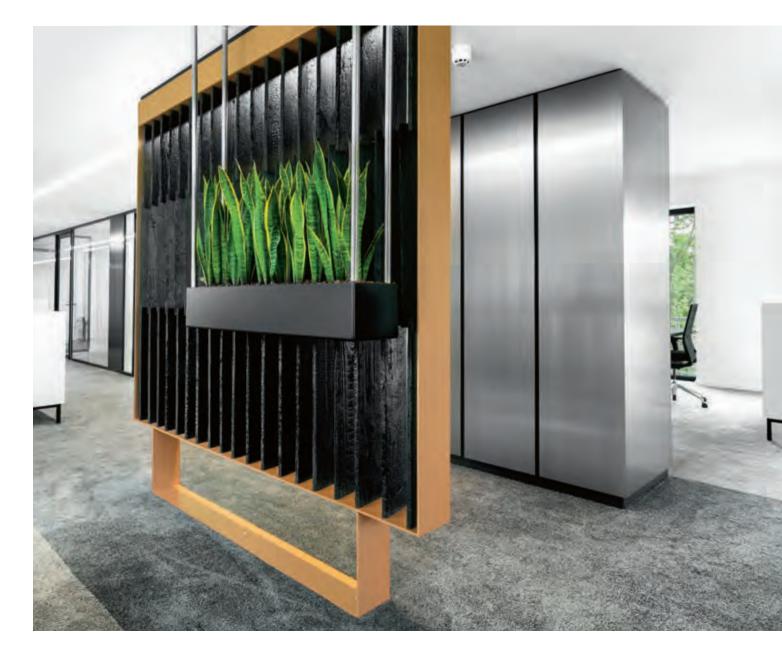
nently family-friendly company". Our future work will focus on forward-looking approaches and opportunities. As every phase of life leads to different demands on work and family, employers should prepare for a more flexible working environment at an early stage in order to remain attractive to good employees in the long term.

# Headquarters

The "Innovation Center" in Geeste has been the head-quarters of the Klasmann-Deilmann Group since 2018. PC workstations and open-space areas are available here for more than forty employees. The building offers an academy and a multimedia exhibition area, thus fulfilling representative purposes. The previous "Business Center" administration building was also extensively renovated and modernized. The "Research Center" is a modern experimental greenhouse and is used for research projects on innovative growing media, growing systems and substrate raw materials. The "Technical

Center" attached to it is equipped with the modern facilities typical of nurseries and enables practical trials in the context of research and development. This means that the entire site is geared towards research, development and innovation.

We also transfer the demands we place on the equipment at our workplaces to our international locations. Our company can only remain successful if high standards are implemented everywhere and our employees experience the associated appreciation.





# **Digitization**

The digitization of processes in administration, sales, production and logistics is one of our company's primary goals. With the IT solutions we use, we are at the cutting edge of technology and ahead of developments in international commercial horticulture. It is essential that all the applications we use are future-proof and enable our global network of subsidiaries, sales partners and customers to communicate securely, reliably and intuitively. We therefore invest heavily in IT solutions from well-known providers and develop our own programs that are precisely tailored to our business model and also offer our customers added value. The first process optimizations through the use of artificial intelligence started at the beginning of 2024. In this context, it is important that our employees can follow the process of

digitization at all times, continue to identify with their tasks and are able to cope with them. Coaches from our own specialist departments are therefore part of the change management associated with digitization. We meet the increased need for further training by offering internal and external courses.

We also have fully digitalized our internal communication and support it with a smartphone app that provides the latest news from the company several times a week and is gradually being expanded to include additional functions. This ensures that all employees worldwide have access to a comprehensive range of information with response options. This also applies to the many employees without a PC workstation.

#### Code of Conduct

The starting point for our compliance measures was training courses for team leaders in Germany in 2009. Since then, new managers have been familiarized with the principles as part of their induction and have committed to upholding them. In 2013, an agreement between the management and the General Works Council in Germany also came into force, which obliges all employees of the Klasmann-Deilmann Group in Germany to comply with competition and antitrust law, a ban

on offering and granting benefits and a ban on money laundering, among other things. Managing directors and team leaders from the finance departments of our international subsidiaries were trained on our Group-wide compliance requirements in 2018. They were also given responsibility for implementing the applicable regulations in their respective companies. Our Code of Conduct was revised in 2023 and explained and made available to all employees as part of internal communication.

# Whistleblower protection

In accordance with the requirements of the European Union, we set up an online platform in 2023 that can be used to anonymously report possible and actual misconduct in our company. The workforce was informed on the website as part of internal communication. So far, no reports have been received via the platform.



# **Figures**

In 2023, the average number of employees in the Klasmann-Deilmann Group was 966. Of these, a total of 411 men and women were employed in the administrative sector and 554 in the industrial sector. 68.6% of employment relationships were outside Germany.

		2023			2020			2018			2016			2013	3
	Σ	o'	Q	Σ	o <sup>*</sup>	Q	Σ	ď	Q	Σ	ð	Q	Σ	ð	Q
Germany	303	246	57	301	246	55	344	276	68	356	283	73	371	302	69
Lithuania	355	282	73	324	265	59	392	335	57	306	257	49	295	259	36
Latvia	100	79	21	96	77	19	110	86	24	106	81	25	88	59	29
Ireland	36	30	6	52	49	3	71	68	3	62	58	4	69	66	3
Netherlands	64	56	8	55	50	5	47	44	3	37	34	3	34	32	2
France	20	12	8	21	12	9	20	11	9	21	12	9	19	11	8
Australia	30	24	6												
Belgium	15	13	2	13	11	2	14	10	4	10	8	2	9	7	2
Singapore	13	5	8	11	3	8	11	3	8	10	2	8	9	2	7
China	11	6	5	15	7	8	14	8	6	10	7	3	0	0	0
Poland	8	5	3	8	6	2	8	6	2	9	7	2	9	7	2
Italy	6	3	3	6	3	3	6	3	3	6	3	3	6	3	3
USA	2	2	0	2	2	0	2	2	0	3	2	1	4	1	3
Austria	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1
Japan	0	0	0	1	1	0									
Sum	966	764	202	907	733	174	1041	853	188	938	755	183	915	750	165

The majority of our activities are carried out by permanent employees. In addition, employees from external employers also work at the Klasmann-Deilmann Group's extraction sites, particularly during the summer months. This can involve between 100 and 200 people at any one time. In order to cushion the impact of seasonal surges in delivery orders on the production side, we use interim warehouses in Germany, France, Austria, Hungary, the USA and Australia that are not operated by employees of the Klasmann-Deilmann Group.

Permanent and fixed-term employment contracts by employees in FTE.								
Permanent contracts:	845	Men: 680	Woman: 165					
Fixed-term contracts:	121	Men: 84	Woman: 37					









#### Our key sustainability topics are:

- the debate on the appropriateness of peat use in commercial horticulture and the demand for
  a significant increase in the use of alternative raw materials, both of which were initiated by
  nature conservation organizations in particular and have long since become relevant at the
  political level as well
- securing the peat raw materials required for substrate production
- securing resources for the raw materials required for substrate production, such as wood fibres, green compost, cocos and perlite, which are at risk of becoming scarce due to constantly increasing demand
- guaranteeing the highest product standards in terms of functionality and the impact on the health and safety of everyone involved along the horticultural value chain, from our own employees to the consumer
- the relevance of peat extraction areas from a climate and nature conservation perspective, which is being discussed by nature conservation associations, the relevant authorities and at a political level, among others
- the reduction of emissions, particularly from peat extraction and use, as well as from transportation, which should form our contribution to fulfilling the 13th Sustainable Development Goal and the climate protection targets set at the UN Climate Change Conference COP21 in Paris
- the expansion of activities in the field of renewable energies and renewable raw materials, with which we transfer our core competencies - not least in terms of risk diversification - to new economic sectors that suit us
- Recruiting and retaining employees, which we support through a wide range of training and development opportunities, the promotion of young talent and individual opportunities for personal and skills development, among other things

# **Materiality**

The material topics for our company were developed and defined for the first time in two workshops moderated by the German sustainability agency "triple innova GmbH" in 2011. The materiality analysis carried out in this context led to the identification of the key sustainability topics for Klasmann-Deilmann, which we have been developing strategically and operationally ever since. We also benefit from the results of the

continuous and diverse dialog with our internal and external stakeholders, impetus from the association's work and feedback from the readership of our publications. In 2018, the key topics were reviewed as part of a master's thesis. Interviews and industry comparisons confirmed most of the existing topics, while others were expanded and discussed.

In this context, we maintain an ongoing dialog with our internal and external stakeholders and interest groups, in particular with representatives of politics and NGOs in Germany and at European level. Since the publication of the last sustainability report, we have implemented the following measures, among others:

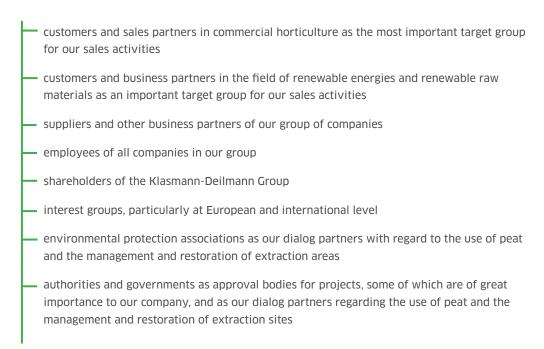
- increasing the use of alternative raw materials, which has been ongoing since the early 1990s, to a share of 27% by volume of total annual production by the end of 2023 and setting the new target of a total of 30% by volume by the end of 2025 and 50% by the end of 2030
- a massive increase in raw material resources and production capacities for alternative raw materials
- the continuation of numerous research projects under our own direction or in cooperation with institutes and universities to develop new raw materials and cultivation systems
- the extensive use of certifications from the Responsibly Produced Peat (RPP) association in order to provide independent proof of our responsible actions in the selection, use and renaturation of peat extraction areas
- the reduction of packaging material through thinner film thicknesses and the increased use of recyclates in our packaging films
- an increased involvement in public affairs via the industry associations Industrieverband Garten e.V. (IVG) in Düsseldorf and Growing Media Europe AISBL (GME) in Brussels
- the expansion of our activities in the field of renewable energies, with which we have already established ourselves as a supplier of renewable raw materials in the Baltic region
- the implementation of extensive and varied personnel management and development programs





#### Stakeholder

#### Our main interest and stakeholder groups are the:



# As part of our sustainable development, we seek and maintain direct dialog with our stakeholders:

The board of directors of the Klasmann-Deilmann Group is therefore in constant contact with our shareholders. Meetings are held several times a year with the supervisory board appointed by the shareholders.

Our employees are informed as comprehensively and promptly as possible and are involved in a multilayered dialog. To this end, we have been using an internal smartphone app since 2018, in which news and announcements from the company are published daily and which can also be used to reach employees without a computer workstation. In addition, we use well-established options such as staff meetings, departmental meetings, notice boards, circulars, the intranet, staff meetings and, since 2020, increasingly the uncomplicated options for meetings with a large number of participants via video link.

The responsible employees at all hierarchical levels maintain close contact with our sales partners,

customers, suppliers and other business partners as well as with authorities and environmental protection associations. We prefer to talk to them in person, but also use the usual media.

Discussions of particular importance - such as dialog with representatives at government level - are handled by the management of the Klasmann-Deilmann Group with the involvement of the relevant experts.

In the case of issues and projects of overarching importance, discussions take place at association level. This applies, for example, to the dialog between Growing Media Europe AISBL and representatives of the EU Parliament and the EU Commission in Brussels. It also applies to the dialog between the Industrieverband Garten e.V. and representatives of the ministries in Berlin and Hanover. We have significantly increased our involvement in this area in recent years and are represented on the associations' central committees.

#### **Associations**

We strengthen political and scientific exchange through our membership of key international, European and national associations, societies and organizations. This dialog can in turn influence political decisions that affect our industry and society. The focus here is on

- the future of peat extraction and use for horticultural purposes
- the (further) development of raw materials as part of public research projects
- securing resources, in particular renewable raw materials
- the standardization and further development of quality standards
- legislation, particularly at European level
- image-promoting projects and information measures in the European and international peat and substrate sector

Klasmann-Deilmann is - among others - a member of:

- Industrieverband Garten e.V. (IVG)
- Growing Media Europe AISBL (GME)
- International Peatland Society (IPS)
- Deutsche Gesellschaft für Moor- und Torfkunde e.V. (DGMT)
- Regeling Handels Potgronden (RHP)
- Responsibly Produced Peat (RPP)
- Bundesgütegemeinschaft Kompost e.V.
- Gütegemeinschaft Substrate für Pflanzenbau e.V. (GGS)
- Emsländische Stiftung Beruf und Familie
- 3N Kompetenzzentrum e.V.

## **Customer satisfaction**

In order to assess how satisfied our sales partners and commercial growers - our most important customers - are with our substrates, services and employees, we rely on direct dialog worldwide. As our experts are regularly on site, we receive continuous feedback from the international markets and directly from nurseries. We evaluate it and - if necessary - draw the necessary conclusions. In this way, we receive criticism and praise

promptly and pass it on to the responsible teams. Problems are solved immediately and errors are rectified. This creates a continuous improvement process that benefits our customers. At longer intervals, we supplement this unregulated feedback with a targeted survey on customer satisfaction in production horticulture. A web-based solution for customer satisfaction surveys is also being planned.

#### **ESRS**

We are currently preparing for the implementation of the European Sustainability Reporting Standards (ESRS). It will be mandatory for us from the 2025 reporting year. We will carry out the double materiality analysis in 2024. We do not expect this to result in any signifi-

cant changes to our material topics, but we do expect to gain new insights into our impacts, risks & opportunities (IROs) and the resulting tasks. Our disclosures in accordance with the ESRS will be published in the company register in future.

