according to GRI Standards 2016

2019
–
2021

# Sustainability Report Klasmann-Deilmann Group

www.klasmann-deilmann.com

# About us

Klasmann-Deilmann is the leading corporate group in the international substrate industry, with numerous sales and production companies in Europe, Asia and America, and a network of sales and production partners on every continent. Everywhere, our growing media provide a vital basis for the growth of fruit, vegetables, edible mushrooms, herbs, ornamental plants, trees and shrubs. They help ensure the success of our partners and customers in the commercial horticulture sector and are an integral part of the food sector value chain. Our product portfolio includes substrates for professional growers and the consumer sector, white and black peat as raw materials – both our own resources and externally sourced – as well as wood fibre, green compost, coir and perlite – both manufactured in-house and produced by partner companies which whom we are closely affiliated. We also distribute the Growcoon propagation system, establish ourselves as a provider of digital solutions for growers with the online platform Log & Solve, and supply peat moss to accelerate peatland restoration.

In the renewable-energy sector, we distribute regenerative raw materials. Our raw wood materials produced on our own short-rotation coppice (SRC) plantations contribute to the supply of climate-friendly energy, especially in the Baltic region.

We share in the collective responsibility for humankind, the environment and future generations. And we refer to internationally recognised benchmarks to gauge how seriously we take this. Regeling Handels

Potgronden (RHP) monitors our raw materials and production processes. Our quality-management system is certified to the ISO 9001 standard and our environmental-management system adheres to ISO 14001. We manage our peat extraction areas in compliance with Responsibly Produced Peat (RPP) guidelines. We rehabilitate former extraction sites in compliance with statutory and regulatory requirements, chiefly by means of re-wetting. We have our carbon footprint verified to the ISO 14064 standard and we prepare our Sustainability Report in line with the Global Reporting Initiative's GRI Standards 2016.

The strategic focus of our company, a medium-sized family business, is extremely forward-looking. Keen to remain the most successful and sustainable producer of growing media, we are single-mindedly building on the lead we have in the development and use of renewable resources, ground-breaking substrate blends and innovative solutions for commercial horticulture.

In all of our activities, our employees are a foundational asset. Time and again, their expertise and commitment play a crucial role in moving us forward in terms of corporate sustainability and customer satisfaction. We encourage their development and are delighted by their strong ties with our organisation.

## Sustainable Development Goals

We see our activities as contributing towards achievement especially of the following goals from among the 17 global Sustainable Development Goals under Agenda 2030. And we will continue to be guided by them into the future. You will find further details on our relevant activities in this report.


End hunger, achieve food security and improved nutrition and promote sustainable agriculture


Ensure access to affordable, reliable, sustainable and modern energy for all


Take urgent action to combat climate change and its impacts


Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

# Contents

# 1.0
# CLIMATE-FRIENDLY VALUE CREATION

# 1.0 Statement by the Managing Directors

102-11, 102-14

The Klasmann-Deilmann Group has made important decisions in the context of its sustainable development, has initiated forward-looking projects and has made significant **progress**. We are confident that we will achieve further successes in the years to come, especially in the area of nature conservation and climate protection.

We had set ourselves the goal of increasing the proportion of renewable resources in our total production to 15% (by volume) by the end of 2020. And we succeeded in doing so. We want to accelerate this development by 2025 and increase the share of alternative constituents in our substrates to 30% (by volume) overall. To put in place what we need to if we are to accomplish this, we have entered into further partnerships with leading suppliers in the raw-materials sector, in which we have also acquired relevant businesses in whole or in part. We feel that we are very much on track in this whole area. Nevertheless, securing our resource supply remains one of our major challenges, as renewable resources are equally sought-after by other branches of industry but their availability is not unlimited.

Given this, we are striking out in a new direction **production-wise**, as in other areas. For the first time, we are entrusting several partner companies with the manufacturing of our growing media. Alongside our own plants in Germany, Lithuania, Ireland, Belgium and the Netherlands, we will from now on be commissioning our production partners in France, Japan, China and Australia with the production of our growing media to our quality specifications. This will, indirectly, also help us secure our raw-materials base, as we can make use of locally available resources in these places, including bark in France, wood fibre in Australia and coir pith in Asia.

We expect that decentralisation of our production operations will result in decreasing use of peat and an increasing proportion of alternative constituents at local level. Moreover, it will lead to appreciable savings in **logistics** costs, even in the next few years. Our transport distances and volumes will be reduced, as will our associated transport-related emissions.

After the **emissions** caused by us continued to rise in recent years, we have now succeeded in reversing this trend. The reason for our increasing greenhouse gas output to date had been our business growth, which unfortunately more than offset our climate-related progress. At the same time, however, our product carbon footprint showed a consistent decrease, so that we had anticipated improvements in the corporate carbon footprint as well. We are delighted that this has actually now happened, and we will continue unabated in our efforts to actively contribute towards climate protection.

At both German and European Union level, climate targets have been made considerably more ambitious.

***The EU would like to achieve 55% cuts in overall greenhouse gas emissions by 2030 (compared with 1990 levels), with the target for Germany as much as 65%. We welcome this aim, and are keen for our company to support these objectives actively.***

Against this background, we are considering substantial investments that will, in the medium term, help us to transition into a '**climate positive**' company. The key criteria are that these positive effects are verifiable, recognised and certifiable.

Irrespective of greenhouse gas reduction measures implemented by Klasmann-Deilmann, as well as by the substrate industry as a whole both in Germany and Europe, the debate around emissions from peat extraction and use has intensified. In conjunction with many other producers, in the summer of 2020 we announced a **voluntary self-commitment** that envisages a 20% reduction in the use of peat in growing media in Germany by 2025, and a 30% decrease by 2030. The intended reduction in the consumer segment is 50%

by 2025 and 70% by 2030. (All the above percentage figures are by volume.) Political authorities welcomed this initiative but called for more rapid progress to be made, with more ambitious reduction targets. In view of this, we stepped up direct dialogue with representatives of governments, political parties, NGOs and relevant authorities. Our aim in so doing is to make clear why completely dispensing with peat in commercial horticulture in the coming years will not be possible.

We know that the alternative raw materials required to take the place of peat are not available in the quantity and quality necessary. Klasmann-Deilmann alone would need to provide some 4.0 million $m^3$ of resources such as wood fibre, green compost, coir and perlite per annum. We also know that these raw materials are not in all cases suitable as a complete replacement for peat. In the ornamental and tree nursery sector, a high proportion of alternatives can already be used without compromising on reliability in terms of crop cultivation. In the **food sector**, however, specific requirements in terms of raw materials and substrates mean that advances are being made more slowly. Particularly in this segment, a cautious approach is required in order to ensure that populations can be reliably supplied with healthy food.

During the course of the coronavirus pandemic, it became evident just how stable this value chain is. Our substrates were available at all times, allowing horticultural cultivation of vegetable, lettuce and fruit crops.

***Whereas international supply chains experienced challenging shortages, we were able to continue production at normal levels without constraints and, in particular, to supply the food sector with our products.***

In 2020, this segment accounted for just over 44% of our growing media supplied to nurseries. Integral to this was the use of **domestic raw materials**. Peat, wood fibre and green compost sourced in Europe play a key role in ensuring reliability of supply.

In this sense, growing media form part of the critical infrastructure. It is, therefore, not sufficient to assess them solely on the basis of their components and climate impact. Their unique reliability and efficiency in terms of horticultural crop cultivation is an asset with direct societal benefits: growing media remain indispensable for the food industry and afforestation projects. And, for ornamental and tree nursery crops, they form a vital basis allowing oases of green space in public urban areas and gardens. In this way, growing media contribute to the achievement of goals under the European **Green Deal**, which is pursuing multiple approaches to sustainable development under the umbrella of climate protection.

We welcome the increasing use of a wide range of raw materials in growing media. As global market leader, we are instrumental in advancing this development. At the same time, we are committed to promoting a more nuanced way of looking at our products: alongside climate considerations, we are very much keeping other sustainability criteria in mind.

We look forward to your feedback on our activities and on our Sustainability Report 2019-2021, and to the continuation of our shared dialogue.

Geeste, September 2021
Managing Directors

Moritz Böcking

Bernd Wehming

# 2.0 TRANSPARENCY AND DIALOGUE

# 2.1 Report profile

### 102-54, 102-56 | *Procurement of external advice on GRI Standards and ISO 14064-compliant verification*

This report has been prepared in accordance with the GRI Standards: Core option. Our reporting includes all aspects identified as material to our sustainable development, as well as related internal and external impacts. In this context, the Managing Directors of our organisation set great store by the procuring of professional content-related advice from an external independent body. As in previous years, we contracted the Wuppertal-based agency triple innova GmbH, which is not affiliated with our company, with this task. The GRI Materiality Disclosures Service confirms that, at the time of publication, Disclosures GRI 102-40 to GRI 102-49 are correctly located in the GRI content index and in the final report.

The corporate carbon footprint (CCF) calculated for 2020 with the assistance of Meo Carbon Solutions GmbH of Cologne, and the relevant calculation tools, were verified by SGS Institut Fresenius (Berlin, Germany) to the ISO 14064-1 standard. It was found, as previously, that the calculation of product carbon footprints (PCFs) on this basis also led to verifiable outcomes. The audit report is set out on pages 97 to 98. It includes the following topic-specific disclosures: 305-1 (Scope 1), 305-2 (Scope 2), 305-3 (Scope 3) and 305-4 (carbon footprint per $m^3$ of substrate) of the GRI Standards (2016).

### 102-50, 102-51, 102-52 | *Reporting cycle*

This Sustainability Report for the financial years 1 January 2019 – 31 December 2020 also includes an overview of major developments during the first half of 2021 and is issued by Klasmann-Deilmann GmbH. Following our reports on the financial years 2011, 2012, 2013, 2014, 2015, 2016 and the Sustainability Report for 2017/2018 published in November 2019, this is the eighth time we have reported about all the key issues ('material topics') and activities relating to sustainable development within our organisation. The Sustainability Report 2019-2021 is the second to cover a two-year period. Future Sustainability Reports will also be published on a biennial basis in order to keep the time and effort involved within reasonable proportions and, above all, to give the various sustainability projects sufficient time to develop favourably.

### 102-53 | *Contact point for questions regarding the report*

The contacts for enquiries on sustainable development and the Klasmann-Deilmann Group's Sustainability Report are as follows:

***Sustainable development and carbon footprint***
*Dr. Jan Köbbing,*
*Head of Sustainability Management*
*+49 (0) 5937 31-288*
*jan.koebbing@klasmann-deilmann.com*

***Sustainability report***
*Dirk Röse,*
*Head of Corporate Communications*
*+49 (0) 5937 31-162*
*dirk.roese@klasmann-deilmann.com*

# 2.2 Material topics

### 102-2 | *Our business areas*

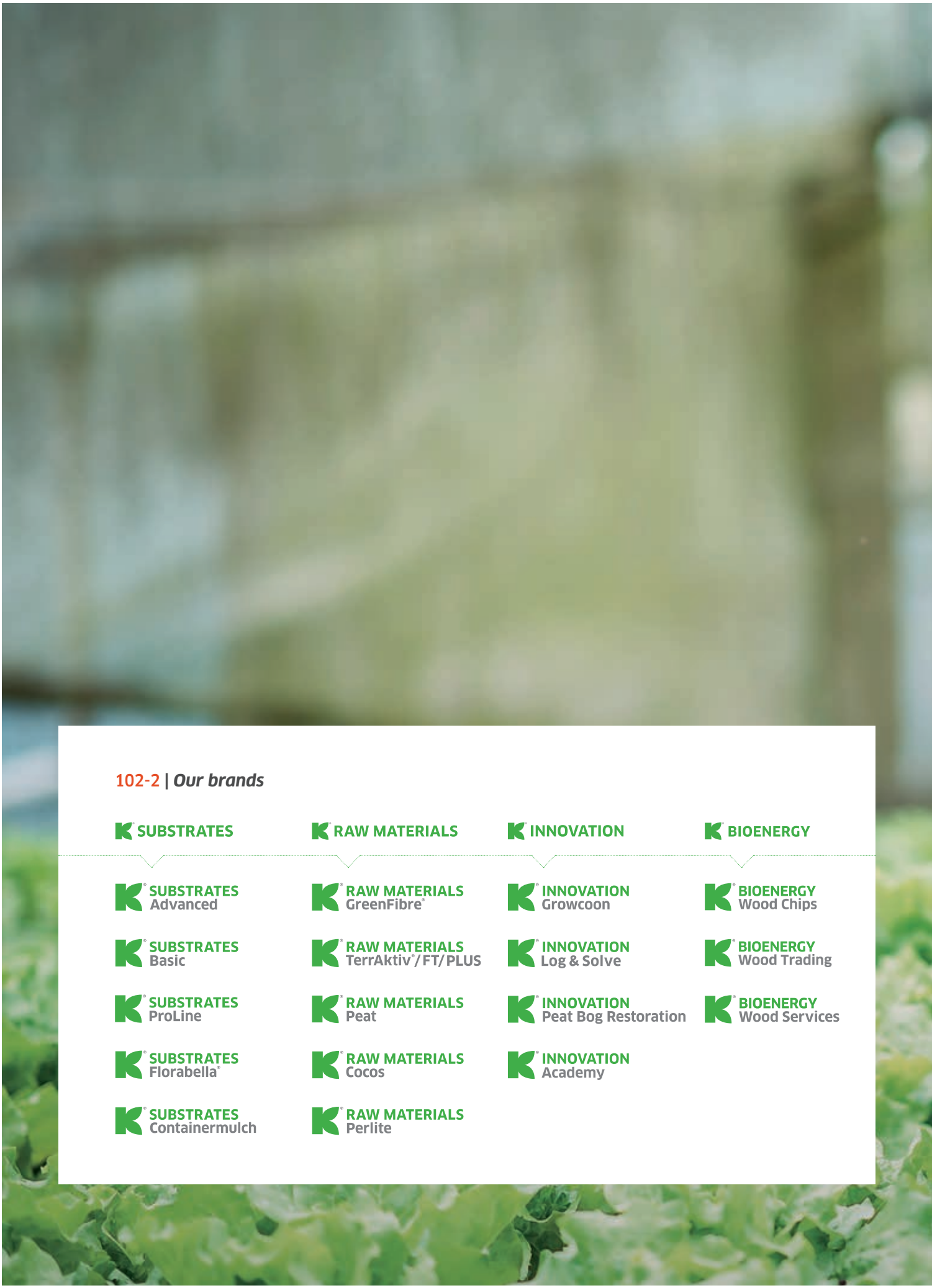
The core business area of the Klasmann-Deilmann Group is the development, production and sale of growing media, especially for commercial horticulture. These provide a vital basis for the growth of vegetables, fruit, edible mushrooms, herbs, ornamental plants, trees and shrubs. We chiefly extract our most important raw material, peat, from our own sites; other key substrate constituents are wood fibre, green compost, coir and perlite, which we produce in our own facilities or procure from partner companies with whom we are closely affiliated. Our core business includes international logistical and consulting services for our subsidiaries, sales partners and customers in international commercial horticulture, as well as trading in substrate constituents. The extraction and use of peat repeatedly provides opportunities for critical debate with NGOs, authorities, political parties and governments regarding the environmental and climate impact of our business activities.

We have, additionally, been distributing the Growcoon propagation system for some years now; we are also currently establishing ourselves, with the online platform Log & Solve, as a provider of digital solutions for horticultural growers, and we supply peat moss sourced from our own cultivation areas for accelerated peatland restoration.

Furthermore, we are active in the field of renewable energy and resources in the Baltic region. We have established ourselves by creating and managing large-scale short-rotation coppice (SRC) plantations on agricultural sites, by increasing our trade in raw wood materials, and by selling woodchips and biomass blends as energy sources e.g. for local cogeneration plants. We also provide close-to-nature forest management services. Within this context, we are facing up to the debate on the use of fuel peat for energy production in the Baltic region, which remains common but is declining.

### *Integration within the company*

The first publicly visible indication of sustainable development at our organisation was when two composting facilities came onstream back in 1991. In so doing, Klasmann-Deilmann led a trend towards the use of novel raw materials in the production of potting soil and garden compost for the consumer segment. Further steps followed, such as our pioneering efforts in the development of substrates for organic horticulture and the use of wood fibre. Establishment of an environmental-management system and obtaining ISO 14001 certification for the first time in 2008, engagement with GRI guidelines including the first materiality analysis, and publication of our inaugural Sustainability Report for 2011 - all of these things demonstrated that sustainable development has long been of crucial importance to our company. Sustainability has been firmly integrated within our corporate strategy, and at operational level, ever since.



102-2 | *Our brands*

**SUBSTRATES**
- SUBSTRATES Advanced
- SUBSTRATES Basic
- SUBSTRATES ProLine
- SUBSTRATES Florabella®
- SUBSTRATES Containermulch

**RAW MATERIALS**
- RAW MATERIALS GreenFibre®
- RAW MATERIALS TerrAktiv®/FT/PLUS
- RAW MATERIALS Peat
- RAW MATERIALS Cocos
- RAW MATERIALS Perlite

**INNOVATION**
- INNOVATION Growcoon
- INNOVATION Log & Solve
- INNOVATION Peat Bog Restoration
- INNOVATION Academy

**BIOENERGY**
- BIOENERGY Wood Chips
- BIOENERGY Wood Trading
- BIOENERGY Wood Services

## 102-46 | *Report content and topic boundaries*

Our sustainable development is actively overseen by in-house experts from our central divisions who are in constant contact with each other:

- the Managing Directors of the Klasmann-Deilmann Group;
- representatives of Production & Sustainability, Technology & Procurement, Human Resources & Legal, and Corporate Communications (all at Klasmann-Deilmann GmbH);
- representatives of Sales Administration & Logistics, Financial Services, and Advisory Services & Quality Management (all at Klasmann-Deilmann Service GmbH);
- representatives of Klasmann-Deilmann Europe GmbH, the largest sales company; and
- representatives of Klasmann-Deilmann Benelux B.V., which is concerned with significant material flows.

Relevant activities are consolidated within Sustainability Management, a division which monitors, evaluates, moves further forward and, if necessary, corrects our development with regard to material topics and associated internal and external impacts.

It is this close cooperation on a daily basis that has resulted in joint definition of topics, including topic boundaries, for each report. The boundaries of reporting have, in the process, been continuously extended since the Sustainability Report 2011, and today relate to the entire Klasmann-Deilmann Group including its lead company and the service company, as well as all sales companies and production companies. At the same time, reporting in accordance with GRI Standards has led to additional information being brought together and to new data being collected on various aspects, which in turn helped us to further enhance the efficiency of our internal reporting system as well. In this way, our Sustainability Reports ensure that a comprehensive picture is provided of all topics identified as material, and of sustainable development within our organisation.

## 102-46 | *Development of material topics*

Those topics that are material to our company were, for the first time, explored and defined at two workshops facilitated by the sustainability agency ‘triple innova’ in 2011. The materiality process carried out in this context led to the identification of sustainability aspects material to Klasmann-Deilmann which we have, since then, been developing further both strategically and operationally. In this connection, we also benefit from the outcome of ongoing and multifaceted engagement with our internal and external stakeholders, new ideas from work with professional associations and feedback from readers of our publications.

In 2018, our material topics were reviewed as part of a Master’s thesis. Interviews conducted, and comparisons carried out within our sector, confirmed the materiality of most of the existing topics; others were expanded and discussed.

Going forward, our sustainability strategy will continue to focus on those issues that relate to our core business and on which all of our stakeholders expect us to make appreciable progress in our development. We will continue to address aspects that go beyond the above, but we will not include these in the set of our material topics.

## 102-44, 102-47, 102-49 | *List of material topics*

**Our material sustainability issues are as follows:**

- The debate on the advisability of peat in commercial horticulture and calls for a substantial increase in the use of alternative constituents, both of which were initiated in particular by nature conservation organisations and have long also been relevant at the political level;
- Securing the sourcing of the high-quality raw peat materials essential for substrate production;
- Securing resources required to source constituents necessary for substrate production, such as wood fibre, green compost, coir and perlite, which are at risk of shortage in the face of ever-growing demand from multiple sectors;
- Ensuring the highest standards for products in terms of functionality and the impact on health and safety for all those involved along the horticultural value chain, starting with our own employees and extending to the consumer;
- The relevance of peat extraction areas with regard to climate protection and nature conservation, which is being discussed by bodies including nature conservation organisations and the relevant authorities, as well as at political level;
- The reduction of emissions, especially from peat extraction and use, and from transport; this is intended as our contribution to achieving the 13th Sustainable Development Goal and the climate goals adopted at the UN Climate Change Conference ('COP21') in Paris;
- The expansion of activities in the field of renewable energy and resources, by which we are – not least as a means of spreading risk – applying our core competencies to industry sectors that are a good fit for us;
- The 'recruitment and retention of employees by our company', for instance through extensive opportunities for training and professional development, encouragement of junior employees and young talent, and personalised opportunities for personality and competency development.

**In this connection, the years 2019 to 2021 saw us step up our engagement with our internal and external stakeholders and, in particular, political and NGO representatives in Germany and at European level; the measures we carried out during the years under review included the following:**

- The increase in the use of alternative constituents, which has been continuing since the early 1990s, to a proportion of 15% (by volume) of total annual production by the end of 2020, and the setting of a new target of 30% (by volume) by the end of 2025;
- A massive increase in raw-material resources and production capacity for alternative substrate constituents;
- The continuation of numerous research projects aimed at developing new substrate constituents and growing systems, which we are either running ourselves or carrying out in conjunction with institutes and higher-education centres;
- The extensive use of certification schemes under the 'Responsibly Produced Peat' (RPP) initiative, in order that independent verification of our responsible corporate action can be provided for the selection, use and restoration of peat extraction sites;
- The reduction of packaging material by using packaging film that is less thick and through greater use of recyclates in our films;
- Greater involvement within our 'Growing Media Europe' trade association in Brussels, both with regard to public affairs and with a view to developing a model for calculating and assessing Life Cycle Assessments (LCAs) for substrate constituents;
- Expansion of our activities in the renewable-energy sector, which has enabled us to already establish ourselves as a supplier of renewable resources in the Baltic region;
- Implementation of comprehensive and diverse personnel management and development programmes, to the extent that this was possible under the conditions of the coronavirus pandemic.

With regard to material topics and their boundaries, there were no substantial changes compared with previous reporting periods.

*Dr. Jan Köbbing, Sustainability Management at Klasmann-Deilmann*

# 2.3 Organisational structure

## 102-1, 102-3, 102-4, 102-10 | *Companies of the Klasmann-Deilmann Group*

The lead company, with strategic and controlling functions for the entire Group, is Klasmann-Deilmann GmbH based in Geeste, Germany. Klasmann-Deilmann Service GmbH, also located in Geeste, is our internationally focused service company with operative, commercial/administrative and advisory functions in the areas of sales, purchasing, finance, transport and human resources, as well as product development. All other subsidiaries are either production or sales companies.

- In connection with Brexit, sales activities in the UK were transferred to our production company Klasmann-Deilmann Ireland Ltd.
- In 2020 we founded a sales company in Japan, Klasmann-Deilmann Japan Co. Ltd., which is based in Utsunomiya Shi.
- With effect from 1 January 2021, we acquired a 50% stake in two companies: Olde Bolhaar Eco-Service GmbH based in Gildehaus/Bad Bentheim, Germany, and Olde Bolhaar Eco-Service B.V. based in Zelhem, the Netherlands. In this connection, we contributed our composting units in Geeste and Dörpen to the companies of the Olde Bolhaar Group. The intention is that this joint venture will, in the years ahead, become the leading supplier of green compost suitable for substrate use, as well as other substrate constituents.
- In July 2021 we acquired Australian Growing Solutions Pty Ltd (AGS), the largest and best-known supplier of raw materials and substrates in Australia's commercial-horticulture sector. With this transaction, as with others, we expanded our resource base of high-quality raw materials for producing growing media, particularly on the basis of renewable resources.

Furthermore, we have, in selected markets, begun commissioning independent production partners with the production of growing media to our own specifications. As at 31 July 2021, these were:

- Meditourbe SAS, Port-Saint-Louis-du-Rhône, **France**
- Shandong Xinxile Biotech, Shandong, **China**
- Kabushikaisha Ogaki Engei, Kanuma City, **Japan**

Additionally, in 2020 we acquired the operational business of Netherlands-based company Shakti Cocos B.V., including the exclusive international distribution rights, the existing customer base and the 'Shakti Cocos' brand, as well as the patent on the buffered coir product 'Shakti Amla®'. Shakti Cocos will maintain its independence as a company.

As at 31 July 2021, the Klasmann-Deilmann Group is organised into a lead company, a service company, production companies and sales companies.

**Klasmann-Deilmann GmbH Lead company**

### Production

| | |
|---|---|
| Klasmann-Deilmann Produktionsgesellschaft Nord mbH | DE |
| Klasmann-Deilmann Produktionsgesellschaft Süd mbH | DE |
| Schwegermoor GmbH | DE |
| UAB Klasmann-Deilmann Silute | LT |
| UAB Klasmann-Deilmann Laukesa | LT |
| UAB Klasmann-Deilmann Ezerelis | LT |
| Klasmann-Deilmann Latvia SIA | LV |
| Klasmann-Deilmann Ireland Ltd. | IE |
| Klasmann-Deilmann Potgrondcentrum B. V. | NL |
| Klasmann-Deilmann Brugge N. V. | BE |
| UAB Klasmann-Deilmann Bioenergy | LT |
| Bol Peat GmbH | DE |
| Australian Growing Solutions Pty. Ltd. | AU |
| Olde Bolhaar Eco-Service GmbH (Share 50 %) | DE |
| Olde Bolhaar Eco-Service B. V. (Share 50 %) | NL |

### Service

| | |
|---|---|
| Klasmann-Deilmann Service GmbH | DE |

### Sales

| | |
|---|---|
| Klasmann-Deilmann Europe GmbH | DE |
| Klasmann-Deilmann Asia Pacific Pte. Ltd. | SG |
| Klasmann-Deilmann Americas Inc. | US |
| Klasmann-Deilmann France S. A. R. L. | FR |
| Klasmann-Deilmann Benelux B. V. | NL |
| Klasmann-Deilmann Belgium N. V. | BE |
| Klasmann-Deilmann Austria GmbH | AT |
| Klasmann-Deilmann Italia S. R. L. | IT |
| Klasmann-Deilmann Polska sp. z o.o. | PL |
| Klasmann-Deilmann China Ltd. | CN |
| Klasmann-Deilmann Japan Co. Ltd. | JP |
| Klasmann-Deilmann Bioenergy SIA | LV |

## 102-5, 102-7, 102-18 | *Shareholders, management, governance bodies*

Klasmann-Deilmann GmbH's shareholders are Deilmann-Montan GmbH based in Bad Bentheim, with a stakeholding of 57.5 %, and Klasmann Anlage- und Verwaltungs GmbH & Co. KG based in Meppen, which has a 42.5 % interest. The shareholders appoint members to the Administrative Board of Klasmann-Deilmann GmbH, of which Carl-Gerrit Deilmann has been the chair since 2007.

Moritz Böcking and Bernd Wehming have headed the management team at Klasmann-Deilmann GmbH since 2018. Moritz Böcking joined our company as Co-Managing Director in 2011, with Bernd Wehming having held the post of Commercial Executive Authorised Officer at Klasmann-Deilmann from 1995 until his appointment as Co-Managing Director.

The Managing Directors of Klasmann-Deilmann GmbH consult with the Administrative Board on key business developments, primarily with regard to their strategic, economic, environmental or social impact. Since 2021, the Board of Managing Directors has been augmented by an Executive Committee consisting of Ted Vollebregt (Managing Director of Klasmann-Deilmann Benelux) and Jan Astrup (Chief Operating Officer), which contributes additional competencies from central corporate divisions. A further key decision-making body is the Management Board, which forms the interface between the strategic and operational levels and is made up of the two senior Managing Directors and the Executive Committee of Klasmann-Deilmann GmbH, as well as divisional directors and local-level managing directors of Klasmann-Deilmann Group subsidiaries.

# 2.4 Financial results for 2019-2020

102-7, 102-45

Klasmann-Deilmann GmbH's financial results for 2019 and 2020 include all of our corporate group's subsidiaries. These statements were audited by KMPG Wirtschaftsprüfungsgesellschaft AG, Düsseldorf.

In the 2020 financial year, the Klasmann-Deilmann Group posted sales revenue of EUR 226.8 million EUR; the figure for 2019 was EUR 219.8 million. The business success enjoyed at all high-revenue subsidiaries resulted in a positive earnings performance.

The Klasmann-Deilmann Group's financial situation remained on an extremely sound footing – this continued to be the case in 2021. Our company has adequate financing possibilities for future corporate developments. Liabilities to credit institutions are mainly long term in nature.

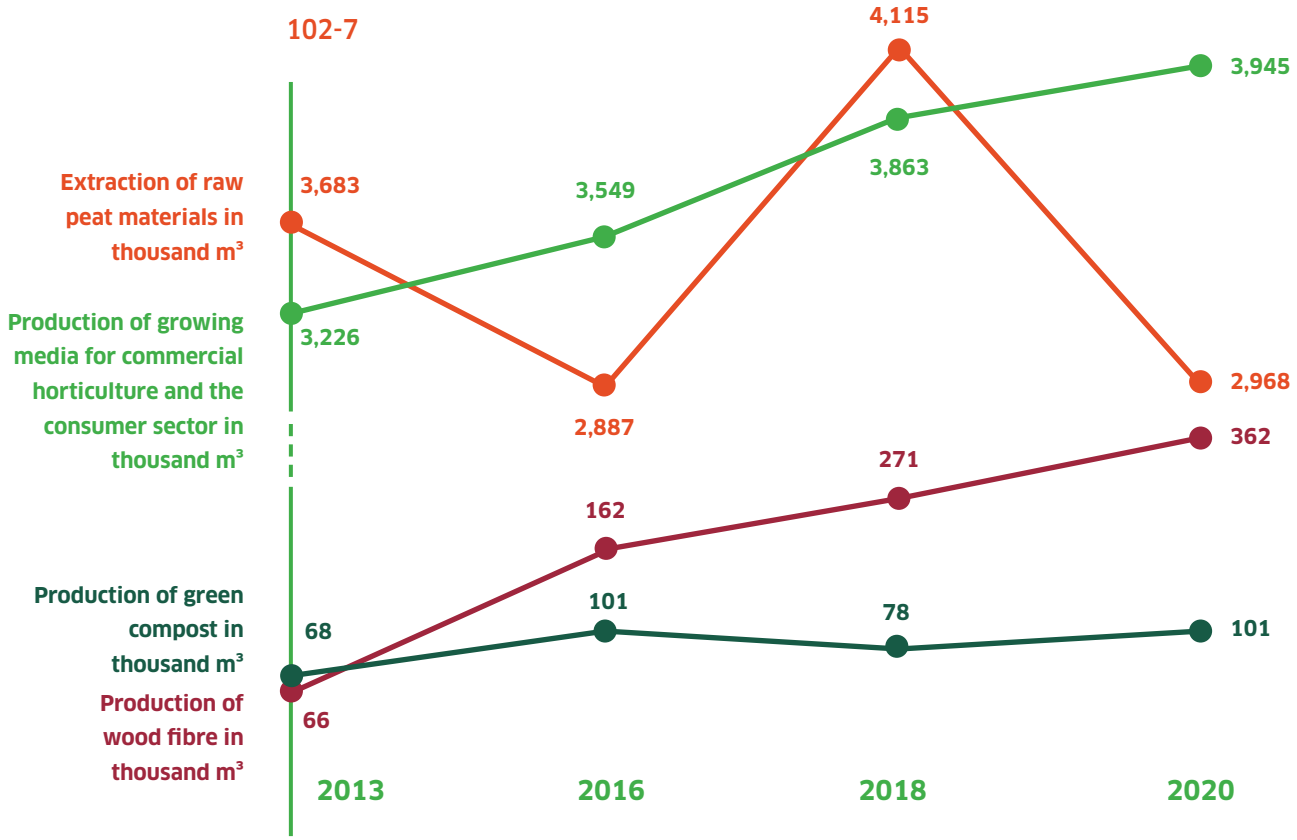
The end-of-year balance sheet total for 2020 was EUR 208.7 million; the figure for 2019 was EUR 203.4. Equity capital amounted to EUR 112.8 million in 2020, having totalled EUR 102.9 million in 2019.

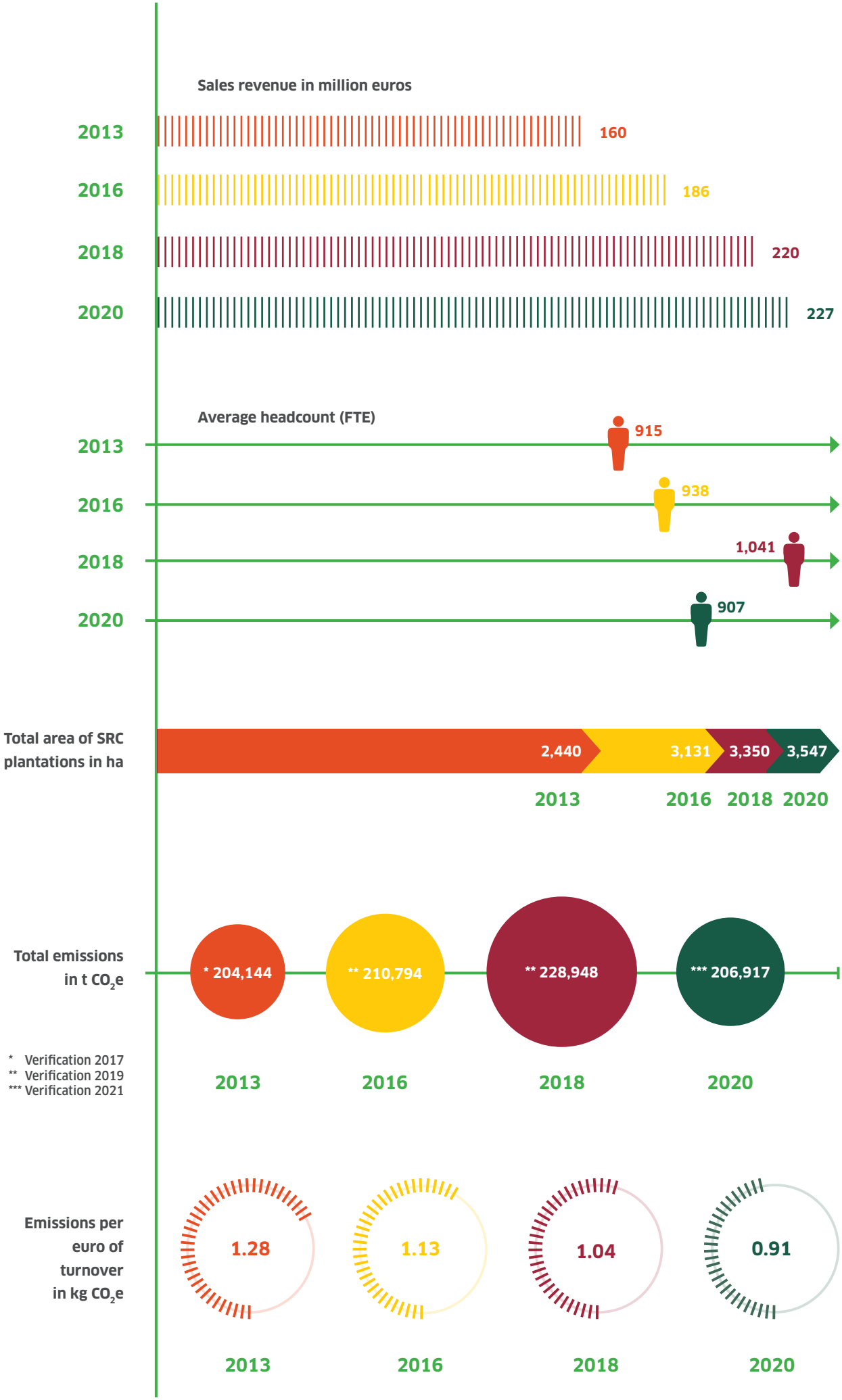
In 2020, the average number of staff employed within the Klasmann-Deilmann Group stood at 907; the figure for 2019 was 1,027.

Business figures for Klasmann-Deilmann GmbH are regularly published on the website of the German Federal Gazette.

# 2.5 Key performance indicators for 2016-2020

102-7

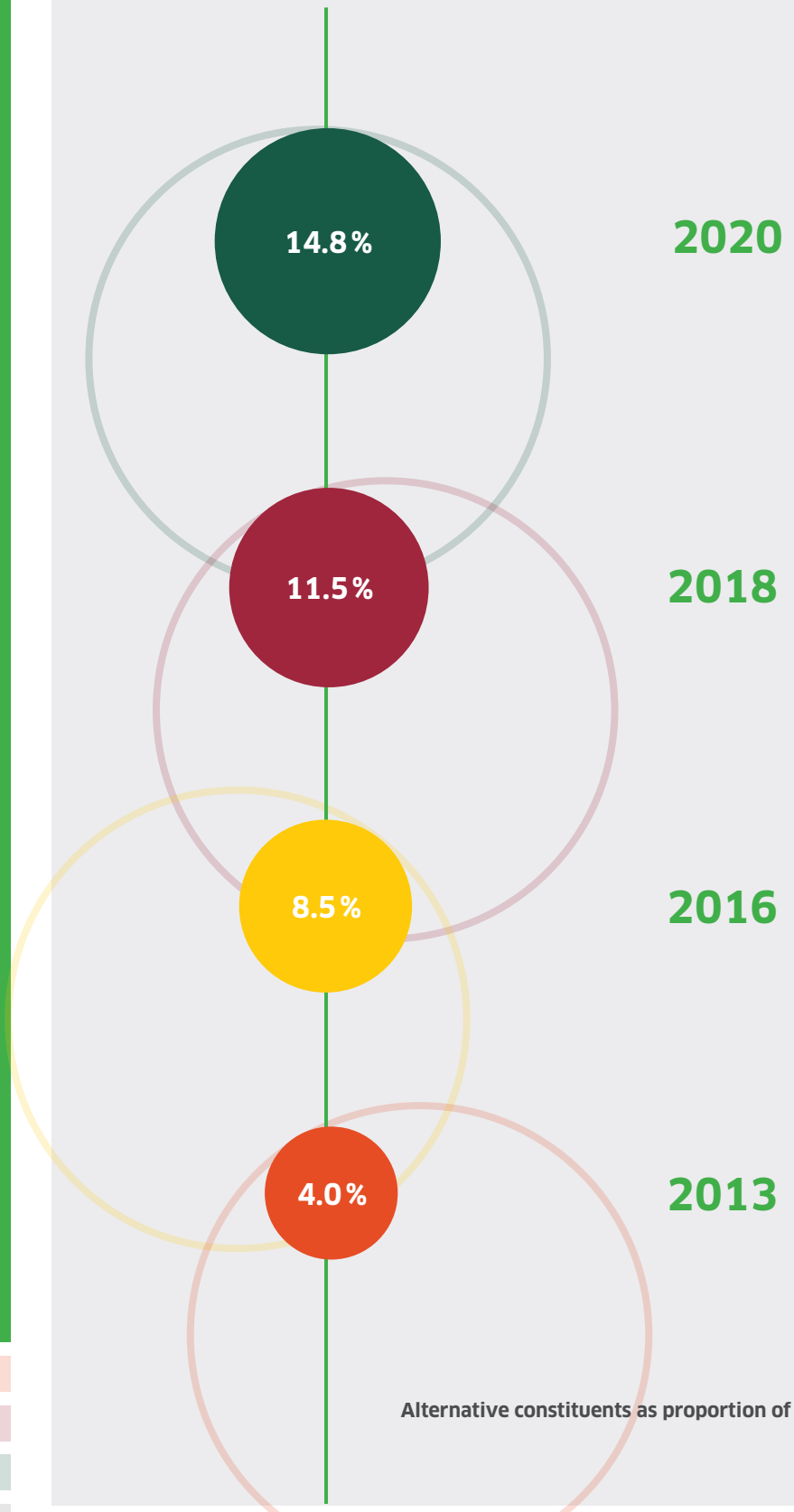





* Verification 2017
** Verification 2019
*** Verification 2021

### *Alternative constituents*

By the end of 2025, we aim to increase the proportion of alternative constituents to 30 % (by volume) of our total annual production. This KPI reflects the used volumes (in $m^3$) of our wood fibre product 'GreenFibre', our green compost 'TerrAktiv', and all other alternative bulking constituents such as coir and perlite in relation to the total quantity of our growing media (in $m^3$).

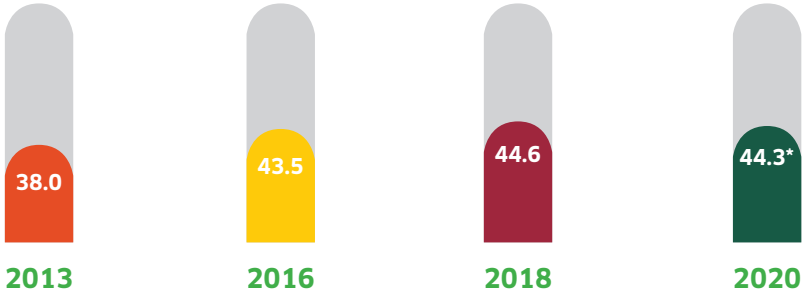



**Alternative constituents as proportion of total production (by volume)**

## *Food sector*

We wish, in future years, to step up our supplies to the fruit- and vegetable-growing sector. To document our progress here, we relate sales figures achieved for this area to total sales of growing media (in $m^3$ in both cases).

**Sales to food sector as proportion of total sales (by volume)**



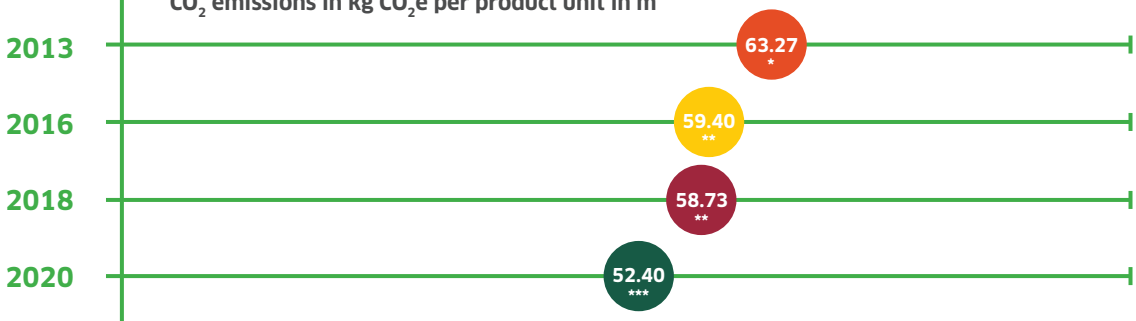

* Against the background of the coronavirus pandemic, 2020 saw demand for growing media soar in the ornamental, tree nursery and consumer segments. This caused a decrease in the percentage of growing-media sales accounted for by the food sector.

## *Emissions*

* Verification 2017
** Verification 2019
*** Verification 2021

As well as reducing our overall emissions, we are especially keen to reduce emission levels per product unit. In this KPI, therefore, we calculate the ratio between our corporate group's total emissions (in t $CO_2e$) and our total production volume (in $m^3$).

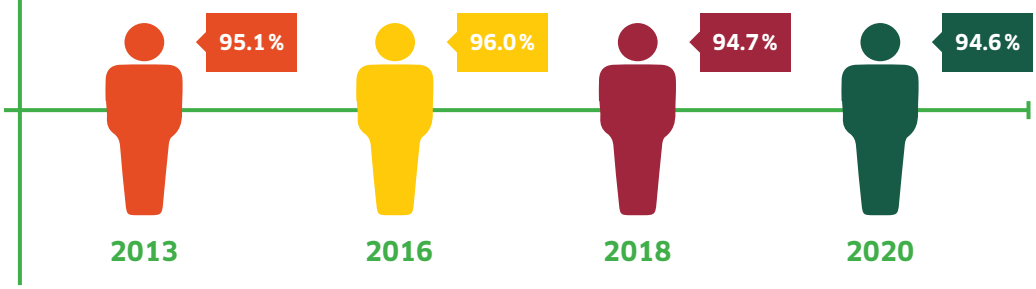
**$CO_2$ emissions in kg $CO_2e$ per product unit in $m^3$**




## *Employee health*

The following KPI of employee health gives the ratio between the total number of contractually agreed working days for our international workforce and the number of days off sick. Our goal is to keep the health rate as high as possible.

**Employee health rate**



# 2.6 Stakeholder integration

## 102-40, 102-42, 102-43 | *Stakeholder groups involved*

**Our key stakeholders are as follows:**

- Customers and sales partners in commercial horticulture, the most important target group for our sales activities;
- Customers and business partners in the renewable-energy and renewable-resources sectors, an increasingly important target group for our sales activities;
- Suppliers and other business partners of our corporate group;
- Employees of all companies within our corporate group;
- The Klasmann-Deilmann Group's shareholders;
- Lobby groups, especially at European and international level;
- Environmental organisations as our dialogue partners with regard to the use of peat as well as the management and rehabilitation of extraction sites;
- Public authorities and governments as approval bodies for projects which often are of great importance to our company, and as our dialogue partners with regard to peat use as well as the management and rehabilitation of extraction sites.

In the context of our sustainable development, we seek and cultivate direct dialogue with our stakeholders.

- For example, the Managing Directors of the Klasmann-Deilmann Group are engaged in ongoing discussions with our shareholders. Meetings are held with the shareholder-appointed Administrative Board several times a year.
- Our employees are kept informed in as full and timely a manner as possible, and included in a multifaceted process of dialogue. For this purpose we have, since 2018, been using an in-house smartphone app via which news and communications from the company are published, enabling employees without a workstation to access this information. We also use well-established means of communication such as regular performance appraisals, departmental meetings, noticeboards, circular e-mails and our Intranet presence; since 2020 we have also made increased use of user-friendly options for video conference calls with large numbers of participants.
- Relevant personnel at all hierarchical levels maintain close contact with our sales partners, customers, suppliers and other business partners, as well as with authorities and environmental organisations. We favour face-to-face conversations, but also use other common channels.
- Cases of particular importance as, for instance, in dialogue with representatives at government level are dealt with by the Managing Directors of the Klasmann-Deilmann Group, with the relevant experts also involved. Since 2020, we have increasingly been seeking dialogue with representatives of government ministries and political parties.
- Where matters and plans of overarching importance are involved, part of the communication takes place at professional-association level. During the reporting period this applied, for example, to the ongoing dialogue between the European lobby group 'Growing Media Europe AISBL' and representatives of the EU Parliament and the EU Commission in Brussels. In 2020 we substantially intensified our efforts in this regard; we are now a highly active player in this association, with one managing director and three specialists serving in central bodies focusing on public affairs, sustainability and growing media.

## 102-43 | *Customer satisfaction*

So that we can assess how satisfied sales partners and commercial growers – our most important customers – are with our substrates, services and employees, we set great store by direct dialogue on a worldwide scale. As our experts are regularly on-site, we continuously receive feedback from our international markets and directly from the nurseries. We evaluate it and take any necessary steps. In this way, we receive criticism and praise very soon after the event and can pass it on to the relevant teams. Problems can be solved and things put right without delay. This results in a continuous process of improvement that benefits our customers.

At less frequent intervals, we complement this non-systematic feedback with a specific customer satisfaction survey targeting professional growers. At the beginning of 2020 we established a digital newsletter that comes out several times a year and is aimed particularly at our sales partners and customers. In future we will use this communication channel once a year to conduct a web-based survey on customer satisfaction.

## 102-12, 102-13, 102-43 | *External initiatives and professional associations*

Through membership of leading international, European and domestic associations, societies and other organisations, we are strengthening political and scientific dialogue. This communication may, in turn, influence political decisions that affect both our economic sector and society at large. The focus is on:

- the future of peat extraction and use for horticultural purposes;
- the (further) development of substrate constituents in public research projects;
- securing the resource base, especially in terms of renewable raw materials;
- the harmonisation and enhancement of quality standards;
- legislation, especially at European level;
- image-promoting and informative measures within the European and international peat and growing-media industry.

As a founding member we are actively involved in Growing Media Europe AISBL, which is the Brussels-based lobby group of the peat and substrate industry at European level. Klasmann-Deilmann is represented on this organisation's Board by one managing director and other specialists from our company, and also in bodies focusing on public affairs, sustainability and growing media. On behalf of member companies, Growing Media Europe:

- holds increasingly close dialogue with representatives of the European Parliament and the EU Commission;
- represents its members' shared interests in the drafting and revision of European regulations relating to the peat and substrate sector and to the commercial horticulture sector;
- pursues a Sustainability Agenda and the creation of a tool for calculating Life Cycle Assessments (LCAs) for raw materials and substrates;
- commissions studies to address specific research questions relating to peatlands, peat, growing media and commercial horticulture.

responsibly produced peat

Klasmann-Deilmann supports 'Responsibly Produced Peat' (RPP), a European NGO whose goal is the responsible use of peat extraction sites and the protection of natural peatland. To this end, RPP has established a certification system which verifies that the selection, use and rehabilitation of extraction areas comply with strict requirements. Most of our commercial peatlands have RPP certification.

As our company's internationalisation continues, one of our focuses is on work with professional associations at a global level. It is clear to us that the International Peatland Society (IPS) is of particular importance here. Looking ahead, we expect professional associations such as the IPS to play an increasingly important role. They will ensure objective and value-neutral dialogue with international conventions exploring the balancing act between peatland protection and peatland use at global level.

## *External initiatives and professional associations*

**Through membership of leading international, European and domestic associations, societies and other organisations, we are strengthening political and scientific dialogue. This communication may, in turn, influence political decisions that affect both our economic sector and society at large.**

**Among other organisations, Klasmann Deilmann is a member of the following:**

- Growing Media Europe AISBL (GME)
- International Peatland Society (IPS)
- Deutsche Gesellschaft für Moor- und Torfkunde (DGMT; German Peat Society)
- Regeling Handels Potgronden (RHP)
- Responsibly Produced Peat (RPP)
- Zentralverband Gartenbau (ZVG; Germany's national horticultural association)
- Bundesgütegemeinschaft Kompost e. V. (German Federal Compost Quality Assurance Association)
- Gütegemeinschaft Substrate für Pflanzenbau
  (GGS; Quality Assurance Association Growing Media for Plant Cultivation)
- Gemüsebauberatungsring Papenburg e. V.
  (Papenburg Consulting Group for the Vegetable-Growing Industry)
- Ökoring e. V. (Lower Saxony's advisory organisation for ecological growers)
- Bundesverband BioEnergie e. V. (BBE; German BioEnergy Association)
- Emsländische Stiftung Beruf und Familie
  (the Emsland region's 'Work and Family' foundation)
- Global Reporting Initiative (GRI)
- Niedersächsische Allianz für Nachhaltigkeit
  (Lower Saxony's Alliance for Sustainability)
- 3N Kompetenzzentrum e.V.
  (Lower Saxony's central information point for
  renewable resources and bioenergy)
- German Restoration Network (GRN)

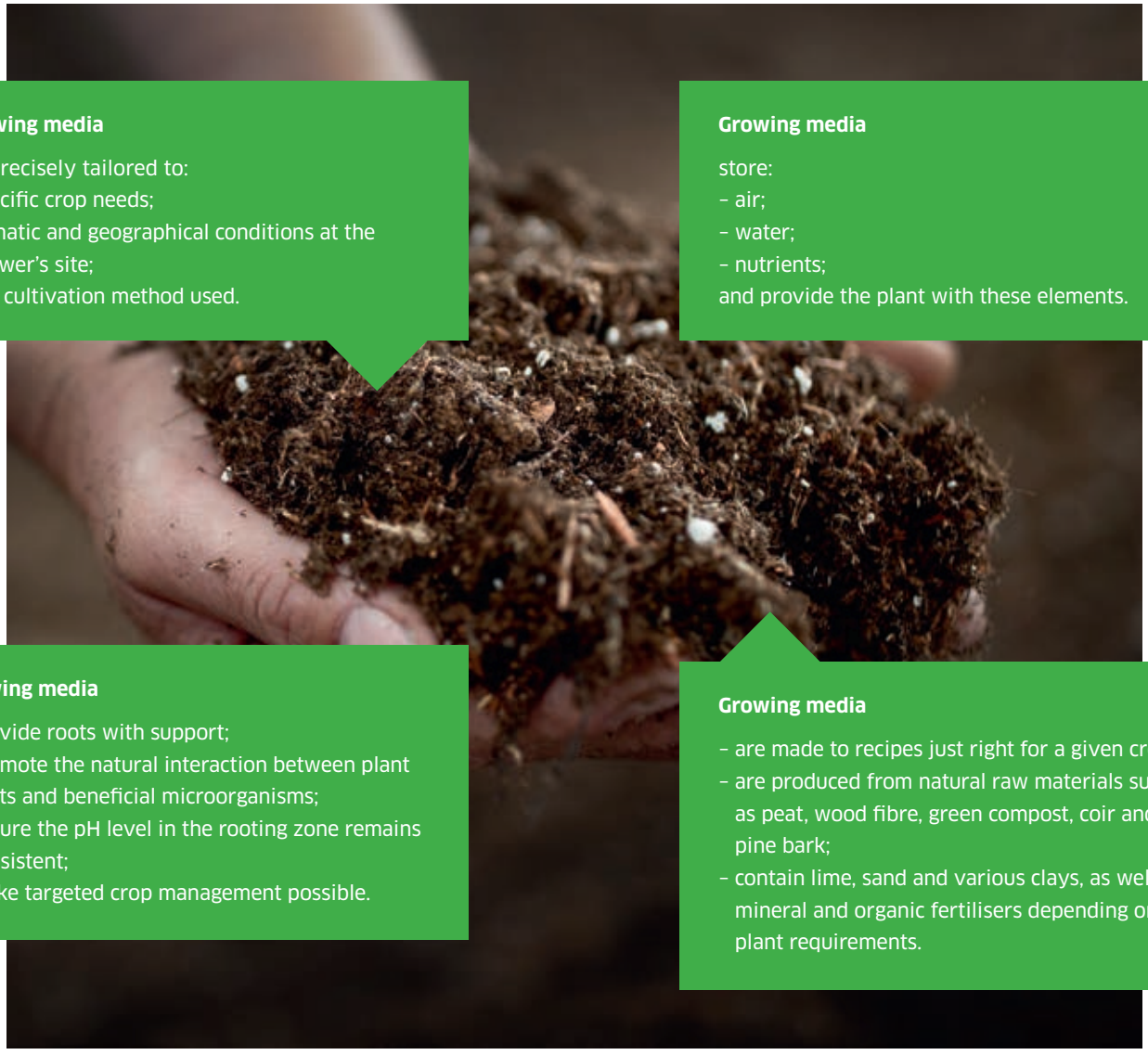
# 3.0 MORE ALTERNATIVES

# Growing media

Cultivated plants are an integral part of everyday life. Because more and more people are keen to eat a balanced diet, the importance of vegetables, fruit, herbs and edible mushrooms is increasing continuously. Ornamental plants, shrubs and trees create oases of green space in private gardens and public spaces alike, contributing to the well-being of many people. Tree nursery crops play a key role in afforestation projects and are also highly valuable from the climate protection perspective. Horticultural businesses throughout the world ensure that ornamental and tree nursery plants grow reliably and help secure the supply of healthy food.

Rising demand for cultivated plants is going hand in hand with global population growth. In the future, it will be more crucial than ever that nurseries produce crops in greater numbers and with higher yields. A vital contribution to reliable growth and efficient crop management is played by growing media which, like seed and fertiliser, are among the essential inputs in commercial horticulture.

### *Why growing media?*



**Growing media**

are precisely tailored to:
- specific crop needs;
- climatic and geographical conditions at the grower's site;
- the cultivation method used.

**Growing media**

store:
- air;
- water;
- nutrients;

and provide the plant with these elements.

**Growing media**

- provide roots with support;
- promote the natural interaction between plant roots and beneficial microorganisms;
- ensure the pH level in the rooting zone remains consistent;
- make targeted crop management possible.

**Growing media**

- are made to recipes just right for a given crop;
- are produced from natural raw materials such as peat, wood fibre, green compost, coir and pine bark;
- contain lime, sand and various clays, as well as mineral and organic fertilisers depending on plant requirements.

### 102-11, 102-12 | *Certification*

Product quality is controlled in a supply chain control process by the Dutch foundation 'Regeling Handels Potgronden' (RHP). The assessment criteria applied here are among the most stringent worldwide. RHP's quality-assurance process includes all the raw peat materials that we use, as well as our 'TerrAktiv' green compost and our 'GreenFibre' wood fibre product. The production sites in Germany, Ireland, Lithuania and the Netherlands are also RHP-certified; a large part of the marketed substrates originating from these manufacturing facilities is subject to monitoring for compliance with RHP standards.

Klasmann-Deilmann GmbH has been certified to the ISO 9001 standard since 1998 and to ISO 14001 since 2008. Both certificates have, since then, been confirmed at each regular audit. Currently, our quality-management system and our environmental-management system satisfy the ISO 9001:2015 and ISO 14001:2015 standards. Our carbon footprint is verified to ISO 14064.

The bulk of our peat extraction areas are managed in accordance with the guidelines of the NGO 'Responsibly Produced Peat' (RPP).

# 3.1 Raw materials and other resources

### 102-11, 301:103-1, 301:103-2, 301:103-3

Over the last few decades, peat sourced from raised bogs has been the most important raw material used in producing growing media.

To make peat extraction possible, peatlands were drained extensively, especially in the 20th century. Since Lower Saxony's peatland protection law came into force in 1981, pristine bogs have enjoyed conservation status. And, from that time onwards, the only sites used by Klasmann-Deilmann in Germany had been prepared for peat extraction before this law took effect. Our aim of producing peat solely from already degraded sites is one we are also pursuing at our plants in the Baltic region and in Ireland. Subsequent to raw-materials extraction, we subject these sites to restoration measures in accordance with official requirements.

Because peat moss grows at the slow rate of about one millimetre in height per annum, peat is considered to be a fossil resource; its decomposition in contact with oxygen releases $CO_2$.

For reasons of conservation and climate protection, there is now political and NGO pressure with a view to completely eliminating peat in growing media.

A forward-looking alternative in substrate production is the use of renewable resources such as wood fibre, green compost, coir and bark, since their provision involves less in the way of interventions in nature and they cause fewer $CO_2$ emissions. We will increase the proportion of alternative constituents to 30% (by volume) of our total annual production by 2025. Increasing this share still further within this timeframe is unrealistic for several reasons:

Peat is the only substrate constituent that has the complete range of physical, chemical and biological properties needed by plant producers, and which has been fully proven as a growth medium in modern commercial horticulture – indeed, for just over 60 years. The use of substrates with greater proportions of alternative constituents requires that growers make cautious adjustments to their crop management to minimise the risks of crop failure. In general, crops will require more intense irrigation and fertilisation. This process of transition takes time, during which horticulturalist and substrate producer must work together closely.

- Whereas growers in the ornamental and tree nursery segment can, in some cases, use substrates containing 50 % (by volume) of alternatives, proportions are expected to be lower than this in the food sector and to remain so in the longer term. This is due to specific requirements for substrate constituents in crops such as young vegetable plants. Reliability in terms of crop cultivation carries more weight here in terms of ensuring a reliable supply of healthy food.

- Many nurseries want to continue being supplied solely with purely peat-based growing media. Nature-conservation and climate-protection considerations are of secondary importance to them. One way in which we are responding to this is by launching a product line called 'Advanced', in which substrates with alternative constituents are declared as our core product range. At the same time, we are also strengthening our sales efforts, as commercial growers in many countries still require in-depth advice regarding the properties and additional benefits of alternative constituents.

- Safeguarding raw-material resources and converting production lines involves considerable inputs, including financial and human-resources investments. By means of acquisitions and partnerships, we are increasing the available quantities of alternative constituents each year. Restructuring our organisation at an even faster pace is not conceivable at present.

- It is uncertain whether sufficient alternative raw materials are available to make this switch possible for the entire substrate industry. Even completely eliminating peat from potting soil for the consumer segment would lead to a substantial rise in demand for alternatives, which would in turn delay advances in commercial horticulture. Furthermore, the competitive situation vis-à-vis other industries remains, especially in respect of the renewable-energy sector, which is also reliant on wood and green residues.

We will continue to press ahead with the use of alternative raw materials without prematurely embracing overly ambitious exit scenarios regarding peat. Our priority remains to reliably supply our customers with high-quality substrates that are as low in peat and high in alternatives as possible.

### 102-11 | *Quality assurance of our substrate constituents*

Both for our customers and ourselves, it is crucial that we secure the constituents we need to produce our substrates – including peat, wood fibre, green compost, coir and perlite – while ensuring the highest product standards in terms of functionality and the impact on health and safety. We therefore continuously test proven and new components as to their suitability for use in substrates. We assess their physical, chemical and biological properties and subject them to growing trials. The same also applies to in-house solutions relating to fertiliser formulations, wetting agents and other additives. To absolutely ensure their highest quality, we commission testing of our raw materials – and, if appropriate, the suppliers – to the requirements of the Dutch organisation 'Regeling Handels Potgronden' (RHP).

Complaints relating to the production or use of peat and alternative constituents are dealt with under our sophisticated complaint management system, one of the requirements for our certification to the ISO 9001 and ISO 14001 standards.

## *Peat*

Raised-bog peat has been the most important component in growing-media manufacturing for decades now. Commercial horticulture is tailored to its multiple advantages that lead to optimum growth and high yields in industrial-scale plant production. Peat-based substrates deliver unique reliability in crop cultivation. They can be continuously produced and supplied to a consistently high quality. After processing, the different types of peat have physical, chemical and biological properties that make them ideal for horticulture and which, overall, are unmatched by any other raw material.

Securing the sourcing of raw materials is, therefore, a high priority. We have sites in Germany devoted to the extraction of frozen black peat, although this will not last beyond the 2020s. In Lithuania, high-quality grades of more fully decomposed peat are available, which will replace German black peat to an increasing extent. We use our extensive resources in Lithuania, Latvia and Ireland for sod-cut or milled white-peat extraction – with which supplies to our production facilities are ensured for many years to come. The techniques involved in raw-materials extraction and processing are subject to an ongoing process of improvement.

## Why peat?

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

**Chemical properties**
- Ideal pH value
- Optimum nutrient levels
- Good nutrient buffering
- Free from harmful substances

**Biological properties**
- Largely free from weed seeds
- Free from pathogens

**Economic properties**
- Long-term availability
- Uniform characteristics
- Quality that meets the horticultural requirements of a wide range of plants

### *Green compost*

Since 1991, we have run our own composting facilities in Groß Hesepe and Bohmte – with another plant operating in Dörpen since 2006 – at which green residues are processed into 'TerrAktiv', a compost for growing media. Our units are the only ones in Germany subject to RHP quality assurance. TerrAktiv green compost carries the RAL quality-assurance mark and, for use in substrates for organic production, complies with EU Regulation (EC) No. 834/2007 and Annex I to Implementing Regulation (EC) No. 889/2008.

TerrAktiv green compost and the wood fibre/compost blend TerrAktiv FT play a very important role as the chief components of substrates for ecologically run businesses. By manufacturing them at our own facilities, we ensure the raw material is of consistently high quality. Both green residues and collection points undergo regular inspection. The same applies to the rotting process, which is continually checked by means of chemical analyses, and during which the compost is enriched by adding biodynamic preparations, ensuring that microbial activity is stimulated. Colonisation by predatory mites effectively aids biological control of sciarids in the greenhouse, as do innovative fertilising solutions that we have developed in cooperation with a German university. Biological parameters, too, are constantly monitored; this includes conducting growth trials on sensitive plant species. In addition, inspections are conducted several times a year by an independent, external certification organisation.

## Why green compost?

**TerrAktiv® green compost**

- is biologically active
- suppresses root diseases
- ensures potted herbs live longer
- is quality-assured
- acts as a slow-release nutrient source
- has a high buffering capacity
- improves re-wettability
- promotes the conversion of organic fertiliser into plant-available nutrients

**TerrAktiv® FT wood fibre/compost blend**

- is nitrogen-stable
- increases air capacity in press pots
- optimises germination and plant development
- allows peat substitution of up to 50 % (by volume) in combination with other constituents
- lowers the risk of excessive supply of ammonium to seedlings

## *Wood fibre*

We have been using wood fibre as a bulking ingredient in our substrates since the 1990s. Following a developmental phase lasting several years, in 2010 we put into operation the first facility for manufacturing our own wood fibre product branded 'GreenFibre' in Germany. As at 31 July 2021, we had a total of eight production lines in Germany, Ireland, Lithuania, Australia and the Netherlands.

Production of GreenFibre involves subjecting softwood chips to special heat and physical treatment which separates the fibres. The process generates temperatures of over 90°C, ensuring that unwanted substances escape from the woodchips as gas, sterilising the GreenFibre. This process also allows the structure – and hence the physical properties – of wood fibre to be precisely defined, giving rise to a consistently high-quality component produced from renewable resources.

The woodchips used to produce GreenFibre are sourced entirely from responsibly managed woodland. Whenever possible, we favour raw materials from local sources that meet sustainability criteria, and opt for PEFC- and/or FSC-certified raw wood materials from which to produce our wood fibre. GreenFibre also bears the RHP quality label, which is a long-term endorsement of its suitability for use in commercial horticulture. To ensure its consistently high quality, GreenFibre production units are – like our other facilities – certified to the strict RHP standards.

# Why wood fibre?

**GreenFibre®**

- **supports healthy, rapid root development;**
- **ensures optimum drainage;**
- **increases air capacity and ensures long-term structural stability;**
- **ensures straightforward supplementary fertilisation of crops due to the stable nitrogen cycle;**
- **reduces transport costs due to substrate's low overall weight;**
- **for use in substrates for organic production, complies with EU Regulation (EC) No. 834/2007 and Annex I to Implementing Regulation (EC) No. 889/2008.**

### *Coir*

Among the proven alternatives to peat are coir products, which are the main component of growing media in certain cultivation segments such as soft-fruit crops. Thanks to our partnership with raw-materials supplier Shakti Cocos, premium-quality coir fibre and coir pith has been available to us in far higher quantities since 2020. We are aware that coir products have to be washed, buffered and shipped to Europe before they can be used in substrate production. In view of this, Shakti Cocos and Klasmann-Deilmann ensure that water is used in the smallest quantities possible and in an environmentally sound manner. The intention is, in the future, to make greater use of this raw material directly in Asia in order to reduce transport distances.

## Why coir?

**Coir fibre**
- **boosts water uptake in substrate blends made of different raw materials**
- **Coir fibre optimises water transport in the rooting zone and increases a substrate's structural stability and air capacity**

**Coir fibre**
- **is considered to be a direct substitute for peat up to a certain proportion in a blend**
- **and coir fibre can be used in organic cultivation, provided these materials are organically produced themselves**

### *Perlite*

Since 2021, we have had our own perlite production line in Lithuania. A mineral component of substrates, it is derived from expanded volcanic rock and has a bulking function; it is very lightweight and thus helps to make transport more climate friendly. Although its production is a relatively high-energy process, in our case this is offset by reduced delivery distances and by the fact that transport is by water.

## Why perlite?

**Perlite**
**– aids a substrate's structural stability;**
**– optimises air capacity and drainage;**
**– is chemically neutral and does not influence crop fertilisation;**
**– has proven ideal in substrates designed for seeding and propagating cuttings;**
**– reduces substrate weight and thus helps optimise transport.**

### *Raw-material-related locations*

The following production companies extract and produce our raw materials.

| | Country | Peat extraction | Green residues composting | Wood fibre production | Raw-materials processing |
|---|---|---|---|---|---|
| Klasmann-Deilmann Produktionsgesellschaft Nord mbH | DE | • | | • | |
| Klasmann-Deilmann Produktionsgesellschaft Süd mbH | DE | • | • | • | |
| Schwegermoor GmbH | DE | • | • | • | |
| UAB Klasmann-Deilmann Silute | LT | • | | • | |
| UAB Klasmann-Deilmann Laukesa | LT | • | | | |
| UAB Klasmann-Deilmann Ezerelis | LT | • | | | |
| UAB Klasmann-Deilmann Latvia SIA | LT | • | | | |
| Klasmann-Deilmann Ireland Ltd. | IE | • | | • | |
| Klasmann-Deilmann Potgrondcentrum B.V. | NL | | | • | • |
| Bol Peat GmbH | DE | | | | • |
| Australian Growing Solutions Pty. Ltd. (from 2021) | AU | | | • | • |
| Olde Bolhaar Eco-Service GmbH (from 2021, 50% stake) | DE | | • | | • |
| Olde Bolhaar Eco-Service B. V. (from 2021, 50% stake) | NL | | • | • | • |

In addition, Netherlands-based company Shakti Cocos B.V. manufactures various coir products on our behalf for use as growing-media constituents. These include the buffered coir fibre product branded 'Shakti Amla®'.

### 301-1, 301-2 | *Materials used*

In connection with the manufacture of growing media, we used the following quantities of key substrate base materials and additives, fertiliser, packaging film and pallets:

| | 2020 | 2018 | 2016 | 2013 |
|---|---|---|---|---|
| Raw peat materials in thousand $m^3$ | 2,981 | 3,623 | 3,299 | 3,075 |
| GreenFibre wood fibre product in thousand $m^3$ | 362 | 247 | 169 | 81 |
| TerrAktiv green compost in thousand $m^3$ | 101 | 93 | 59 | 32 |
| Lime in t | 18,777 | 18,775 | 19,543 | 17,392 |
| Clay in thousand L | 15,914 | 15,891 | 19,248 | 7,609 |
| Sand in thousand L | 2,882 | 2,725 | 2,465 | 2,152 |
| Mineral fertiliser in t * | 4,664 | 4,646 | 4,496 | 2,525 |
| Organic fertiliser in t | 972 | 828 | 806 | 537 |
| Packaging film in t | 2,103 | 2,263 | 2,185 | 1,493 |
| Pallets (units) | 690,611 | 609,527 | 575,513 | 549,780 |

* Figures for 2013 without substrate production from Belgium, as of 2014 including Belgium

Where the above trends do not follow a clear pattern, this is caused largely by differences in the degree of compaction of raw materials prior to processing, the varying proportions of sod-cut peat that has yet to be fractionated, the different amounts of loose goods as a proportion of total goods produced, and the order-related potential for capacity utilisation of pallets.

Green compost is the only recycled material that we use on an appreciable scale. With total production at 3,945 $tm^3$ of growing media in 2020, including 101 $tm^3$ of green compost, recycled materials accounted for 2.56 % of the total for that year. The figures for 2019 were 2.40 % of total production (92 $tm^3$ of green compost as against 3,831 $tm^3$ of growing media produced); the proportion for 2018 was 2.00 %.

## 102-9, 102-16 | *Procurement practices*

Our 'Sustainability guidelines for suppliers', in force since 2012, augment our selection criteria for our suppliers so that they contain requirements for human rights, for employees' working conditions and for environmental standards, as well as a business ethics code.

The guidelines are used as a means for our suppliers to make a voluntary commitment on these issues. Adoption of the standards this document defines is a prerequisite for all supply agreements with Klasmann-Deilmann. In accepting a contract or order, our supplier undertakes to ensure that all their processes conform to the provisions of our guidelines. At irregular intervals, conversations with our suppliers take place during which we address the topic of our sustainability guidelines and play an active part in achieving a common understanding of social, ethical and ecological standards.

**The key points of our sustainability guidelines are:**

- prohibition of child labour on the part of our business partners or their suppliers;
- prohibition of forced or compulsory labour;
- prohibition of any form of discrimination;
- freedom of association and the right to conduct collective bargaining;
- minimum wage and overtime pay in line with statutory benefits for staff;
- encouraging ongoing improvements and refinements to occupational health and safety arrangements in compliance with national regulations;
- prohibition of bribery, extortion and embezzlement;
- evaluation of suppliers on the basis of their optimisation measures regarding the management of resources, minimisation of ecological damage, adoption of a precautionary principle, and the promotion of environmental responsibility and environmental technologies.

To date, we have not identified any human rights issues relating to our direct suppliers. With regard to our indirect suppliers, we did not receive any indications during the period under review that would necessitate following up with a risk analysis. As to the additional requirements arising from the German Supply Chain Act *(Lieferkettengesetz)*, we will rapidly adjust our comprehensive risk management processes in line with this legislation.

# 3.2 Production

## 102-2, 301:103-2

Making a growing medium involves enrichment of our substrate base materials – peat, green compost, wood fibre, coir and perlite – with lime, fertilisers and additives such as sand or clay. Organic and mineral fertilising solutions ensure that plants are specifically provided with all the nutrients and trace elements they need. The addition of lime regulates the substrate's pH level.

We manufacture our growing media at our own production facilities, which are equipped with modern machinery and technical installations. A range of around 150 different raw peat materials, alternative constituents, admixing agents, fertilisers and additives are available. We have a total of more than 7,000 substrate recipes, tailored to specific crops and cultivation methods and geared to associated geographical and climatic conditions. This results in a complex situation with regard to production processes – complexity to which we have, since 2020, been responding by means of digital management of our recipes. This is aimed at reducing the number of substrate blends, provided this is possible without detriment to nurseries.

### *Product lines*

**The 'Easy Growing' and 'Select' product lines launched in 2008 are being replaced by the following lines from 2021:**

- '**Advanced**' will, from now on, comprise the new international core range; it will consist solely of substrate blends with a high proportion of alternative constituents;
- '**ProLine**' is a product line which began to be introduced at the start of 2021 as our new brand for organic-horticulture substrates. This is because of an EU regulation applicable from 2022 under which criteria for use of designations such as 'organic' and 'eco-' as well as their German-language equivalents Bio and Öko will be more stringent. However, no changes to our products will be involved, and they will continue to satisfy the guidelines and requirements of growers' associations in Germany, Austria and Switzerland. ProLine substrates will be tested and certified by Ecocert®, an international certification organisation, in accordance with the EU's regulation on organic production.
- '**Basic**' comprises the majority of our substrate recipes that are not included in our 'Advanced' core range and are for products based chiefly on peat.
- In the consumer segment, we sell potting soils under the '**Florabella**' brand. For reasons of both quality and availability, peat will also remain essential in consumer products into the foreseeable future, although the use of alternative constituents for substrates is continuously increasing. We also produce appreciable quantities of high-quality growing media for the retail consumer segment. Overall, at our manufacturing facility that specialises in potting soils, alternative constituents account for some 40% (by volume) of products made.

## 102-4, 102-7 | *Our production sites*

The following production companies process our raw materials into substrates:

| | Country | Production of growing media for commercial horticulture | Production of growing media for the consumer segment |
|---|---|---|---|
| Klasmann-Deilmann Produktionsgesellschaft Nord mbH | DE | • | |
| Klasmann-Deilmann Produktionsgesellschaft Süd mbH | DE | • | |
| Schwegermoor GmbH | DE | | • |
| UAB Klasmann-Deilmann Silute | LT | • | |
| Klasmann-Deilmann Ireland Ltd. | IE | • | |
| Klasmann-Deilmann Potgrondcentrum B.V. | NL | • | |
| Klasmann-Deilmann Brugge N.V. | BE | • | |
| Australian Growing Solutions Pty. Ltd. (from 2021) | AU | • | |

We also commission independent production partners to manufacture growing media to our own specifications:

- Meditourbe SAS, Port-Saint-Louis-du-Rhône, **France**
- Shandong Xinxile Biotech, Shandong, **China**
- Kabushikaisha Ogaki Engei, Kanuma City, **Japan**

## 102-2, 102-11 | *Product stewardship*

All of our products are made to the highest industry-specific standards. One hundred per cent of our products and services undergo customary inspections with regard to their impact on health and safety, in order to determine additional potential for improvement. As well as using our own raw materials, we buy in components and additives for substrates, choosing only products that comply with RHP standards.

The labelling of our products and the raw materials we utilise on packaging, and their designation on delivery notes, consistently complies with the requirements of the recipient countries.

Because of their components' properties, substrates tend to be of high weight. Therefore, we also offer smaller, and hence lighter, packaging sizes, particularly in the consumer segment. In the form of our 210-litre bales we have also developed a packaging unit for commercial horticulture that is much more lightweight than other standard packaging units. Many of these bales are exported to countries in which they are still manually transported and handled.

We determine the content quantities of our substrate packaging units, and the quantities of loose substrate supplied, on the basis of the relevant statutory requirements with calibrated instruments and using the procedure described in EN 12580. At regular intervals, the relevant office of the Weights and Measures authority in Lower Saxony (MEN) conducts neutral checks of content quantities at the German production sites. Furthermore, Klasmann-Deilmann has committed to voluntary self-regulation with regard to content quantities resulting from a joint initiative between the horticultural-industry association Industrieverband Gartenbau (IVG e. V.) and German substrate producers.

### *Packaging*

The packaging for our growing media is made chiefly from petroleum-based granules. Film produced from this material has to be both puncture and tear resistant, support rapid and stable shrinkwrap seams, and pass through machinery and along conveyor belts without any friction, while also enabling high-quality printing. Sometimes, further development of these source materials on the part of our suppliers provides scope for cutting down on packaging material without compromising on quality. Since the summer of 2018, we have used film with a thickness of 80µ instead of 90µ as previously for the packaging of our 70-litre bags. With other packaging sizes we have, since 2020, been able to use film that contains 30% recyclates.

We are assessing innovative materials currently in development, some of which based on renewable resources, in terms not only of their intrinsic suitability but also their economic, environmental and social impact. However, at present we are not aware of any alternative raw material that satisfies our packaging needs.

### 306:103-2, 306-1, 306-2, 306-3, 306-4 | *Waste disposal*

No working policy for recycling is in place for our products and packaging. In many cases, crops are planted out in a field or garden together with our growing media; here, the plant continues to grow and the substrate's contribution to soil improvement is ongoing. Other substrates are disposed of when the crop's life cycle comes to an end. In the best-case scenario, both are then composted as green or organic waste. On an international scale, however, the more likely situation is that both plant and substrate are disposed of with general residual waste. Our packaging is disposed of in accordance with applicable local requirements.

A system whereby leftover packaging and substrate are returned to us or sent for proper recycling would be disproportionately effort- and cost-intensive, and associated with additional transport-related emissions. We appreciate that this state of affairs presents an ongoing challenge, and are therefore pursuing the following remedies:

- Reduction of film thickness for our packaging;
- Larger units that require less packaging material than smaller ones;
- Delivery of non-packaged goods, this chiefly being an option for customers located within the region of our production facilities.

Hazardous waste, harmful substances and appreciable quantities of waste water as defined by GRI Standard 306 (2016) are not caused by Klasmann-Deilmann.

### 304:103-2, 306-5 | *Water management*

The manufacture of growing media does not require unusually large quantities of water: its consumption in the context of production is of relatively minor importance in terms of our sustainability-related activities. Nevertheless, our water management practices adhere to locally applicable legal provisions and are geared towards consuming resources as sparingly as possible and towards environmentally sound use.

However, there is appreciable disturbance of the hydrological balance of an intact peatland. The peat moss that forms the main body of a bog can absorb many times its own weight in water. Stored water is lost during drainage in preparation for peat extraction. Klasmann-Deilmann obtains raw peat materials solely from sites drained decades beforehand, and such interventions have been consigned to history. During land use too, however, stored water is drained into a complex of special ditches and ultimately enters rivers, canals or natural water bodies. In this, we strictly adhere to the applicable rules and regulations and work closely together with the relevant approval bodies. During the course of peatland restoration, most of the now-depleted areas are re-wetted; in this way, they progressively recover their water storage function.

# 3.3 Customers and sales

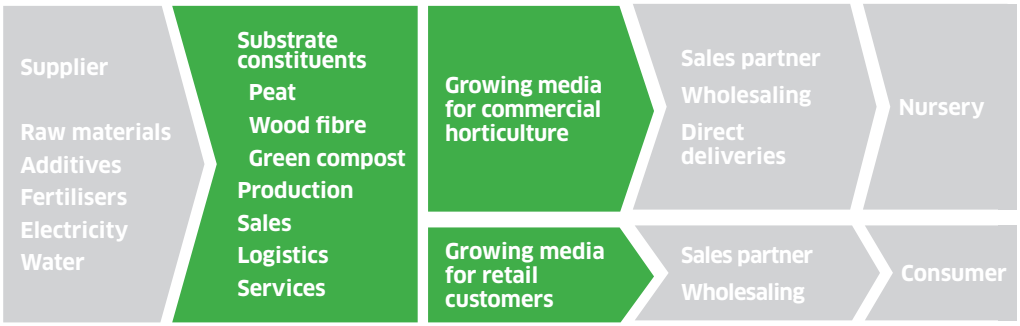
### 102-6, 102-9 | *Our customers in commercial horticulture and the consumer segment*

The wide spectrum of our substrates originated in the diversity of the horticultural companies we supply. They range from small speciality businesses for exotic crops, and ecologically-minded businesses producing potted herbs, to tree nurseries, golf course landscapers and large-scale producers, as well as those who specialize in propagating young plants. In many places, commercial horticulture has reached a high level of industrialisation in many countries. Computer-controlled irrigation and fertilisation regimes, automated potting machines, transplanting robots, air-conditioned greenhouses and just-in-time production dominate the production process in modern nurseries.

Our substrates are just as crucial as the seed, cuttings or young plants used as well as the technical set-up and the cultivation method employed. They ensure that the various production resources interact effectively and that crops develop optimally.

### *Our activities along the growing-media value chain*

Our most important market segment is commercial horticulture, which we supply with ready-to-use growing media, the end customers being nurseries throughout the world. Some 10 % of our total annual production volume of substrates are intended for the consumer segment. As a supplier, we form an integral part of the materials value chain in commercial horticulture. This incorporates our consulting and other services, as well as our innovation management practices.




Activities of Klasmann-Deilmann / Activities of third parties

### *International sales structure*

Our sales of growing media extended to around 100 countries worldwide in the reporting period. In most of these markets, we supply independent sales partners with which we have long-term agreements and which are exclusively responsible for local distribution. Within the central sales markets, our own subsidiaries are in charge of distribution and providing support to sales partners.

Country-specific sales companies:

- Klasmann-Deilmann Benelux B. V.
- Klasmann-Deilmann France S.A.R.L.
- Klasmann-Deilmann Belgium N. V.
- Klasmann-Deilmann Austria GesmbH
- Klasmann-Deilmann Italia S.R.L.
- Klasmann-Deilmann Polska sp. z o.o.
- Klasmann-Deilmann China Co. Ltd.
- Klasmann-Deilmann Japan Co. Ltd.

Transnational sales companies:

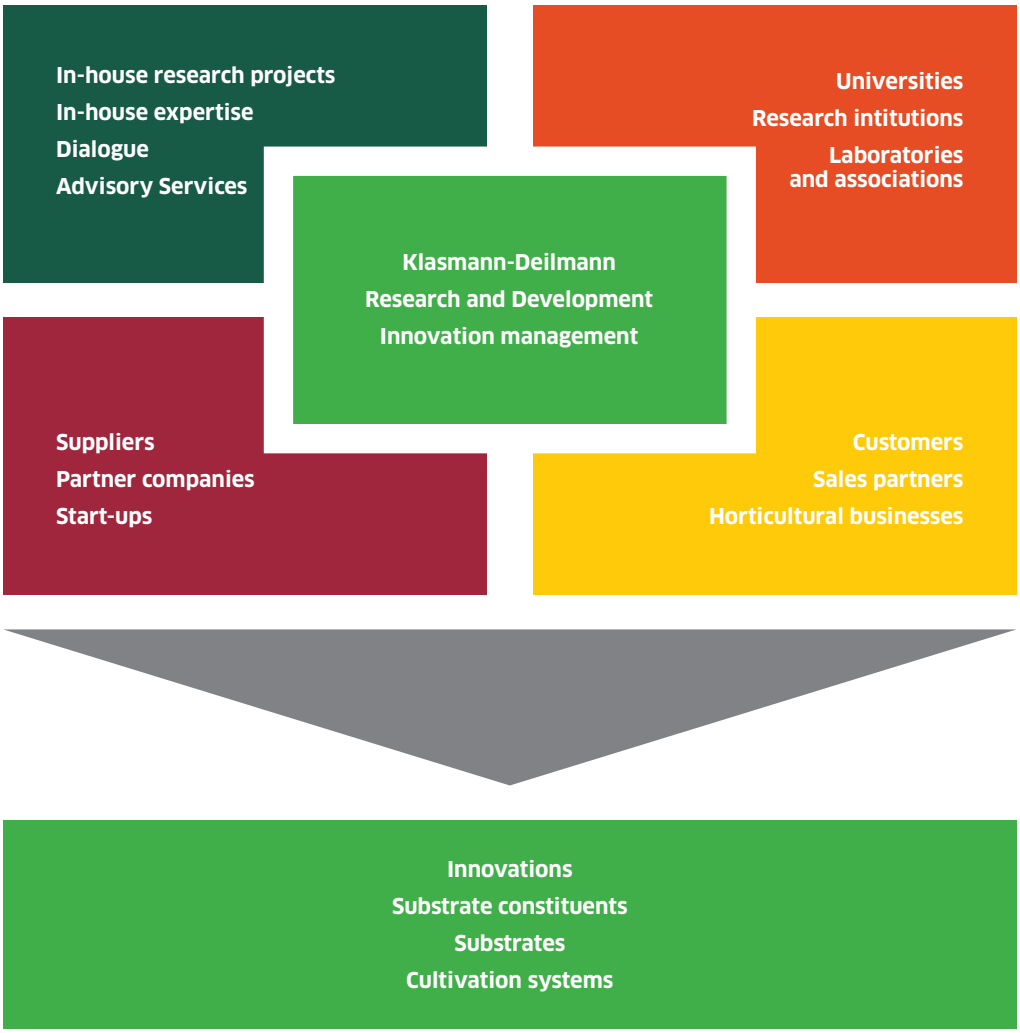
- Western and Eastern Europe: Klasmann-Deilmann Europe GmbH
- North and South Africa: Klasmann-Deilmann France S.A.R.L.
- Asia, Oceania, Middle East: Klasmann-Deilmann Asia Pacific Pte. Ltd.
- North, Central and South America: Klasmann-Deilmann Americas Inc.

# 3.4 Innovation

### 301:103-2 | *Systematic product development and innovation management*

Of crucial importance to our organisation's long-term success is systematic, cross-functional innovation management. To this end, we have formed teams in Product Development and in an 'incubator', which work closely and conduct joint research projects with higher-education centres, training and research institutes, as well as with suppliers. We aim to develop growing media and cultivation systems which, meeting the proven horticultural standards, take into account sustainable criteria and achieve wide acceptance by policymakers, NGOs and the public at large. Additionally, by means of sales support solutions and the Log & Solve platform, we are moving forward with digitisation intended to further optimise horticultural processes. The foundation for these projects is application-targeted engagement with professional growers. We take on board our customers' ideas and needs, and turn them into product solutions that are geared towards long-term gain and bring plant producers tangible advantages.

## *Research & development and innovation management in context*




## *Joint projects with innovative companies*

We have, since 2016, been distributing an innovative cultivation system called Growcoon, developed by Dutch company Maan BioBased Products B.V. This product has since been finding a continuously expanding customer base in various horticultural segments worldwide.

Growcoon is a biodegradable plug with a flexible and open mesh structure. When used in propagation systems, it holds the propagation substrate together and, in this combination, forms a stable root ball. It is made from food-safe components and features the 'OK Compost' label certifying it to the EN 13432 standard. This means, among other things, that the Growcoon does not entail any pollution risk with respect to farmland, people or the environment, and leaves no harmful residues. This propagation system is proving especially effective in the rooting of cuttings, in the growing-on of young plants from in vitro propagation systems, and in the use of hydroponic cultivation. The main benefits of using Growcoon for propagating young plants are shorter growing cycles, robust plant health, greater root ball stability and – especially with delicate seedlings – lower failure rates.

Furthermore, partnerships have been established in the Netherlands with the Vertical Farming Association, a start-up studio called Aimforthemoon, and StartLife, a start-up incubator based at the University of Wageningen. This positioning, closely aligned with highly innovative networks, gives Klasmann-Deilmann direct access to those projects in research and industry as well as from start-ups that are geared towards new technologies and solutions for commercial horticulture and the food sector.

'Smart Growing Systems', an incubator launched by Klasmann-Deilmann, has tested more than 60 potential new substrate constituents in recent years. Recurrent difficulties with possible substitute materials are their lower biological stability and reliability compared with peat, as well as their poor water uptake and storage capacity. There are at present no prospects of a breakthrough involving an ingredient that can largely replace peat.

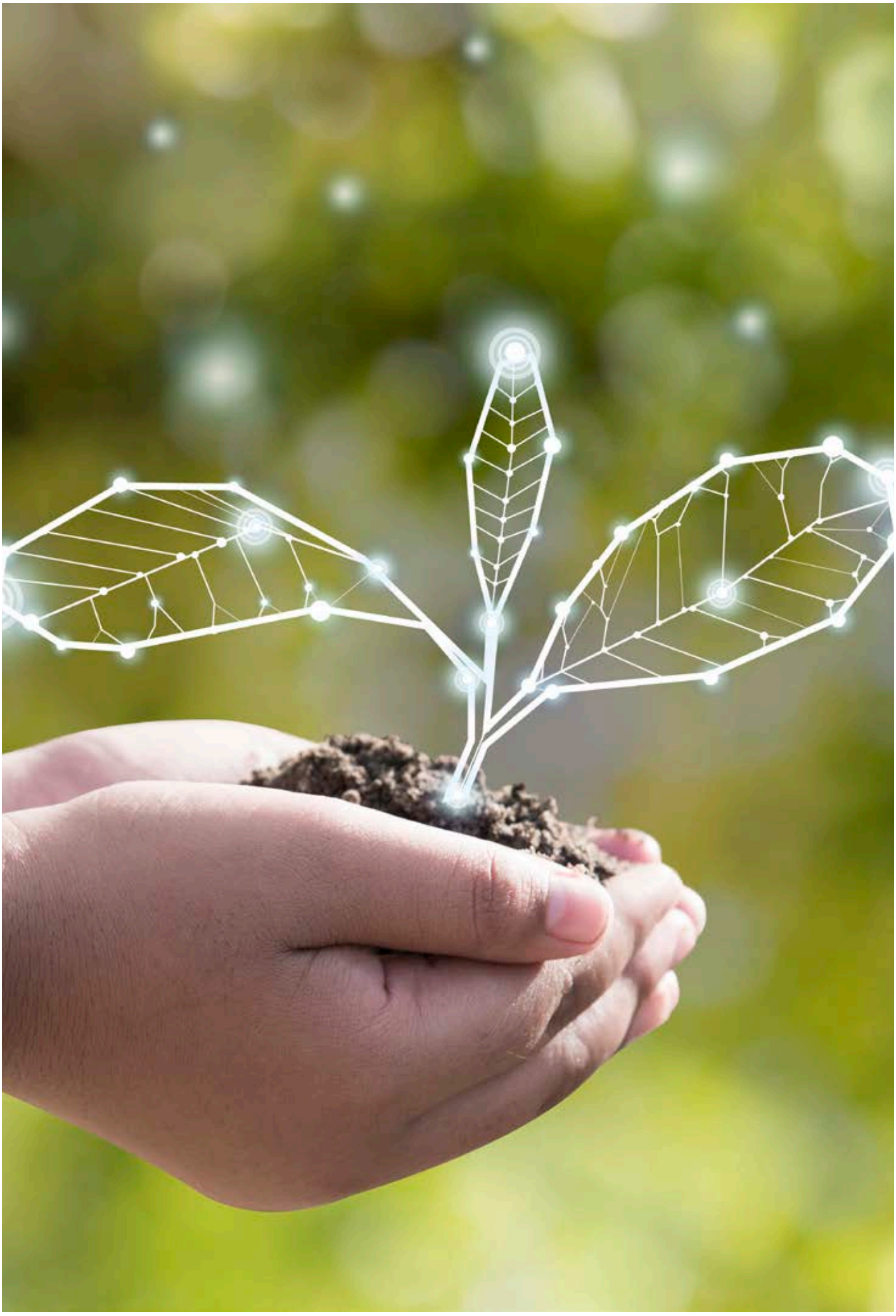
### *Digitisation*

We are using our self-developed IT solutions to move forward digitisation in commercial horticulture. These applications provide genuine added value to our global network of subsidiaries, sales partners and customers, as they are precisely geared to our business model and enable dialogue to take place that is intuitive and marked by confidence and authenticity. Our solutions include:

- a **webshop** for ordering growing media online. Each nursery has a personalised customer account containing details of its order history, making re-orders a matter of just a few clicks;

- a **tracking tool** that shows the status of current orders and tells the user when deliveries can be expected;

- the **online platform Log & Solve** (www.logandsolve.com), which allows monitoring of cultivation parameters and optimisation of day-to-day crop management. Log & Solve helps to enhance the efficiency of cultivation methods used, and to reduce failure rates. Therefore, parameters such as nutrient levels and substrate moisture content are tracked, and automated status updates for a given crop are generated. On the basis of data obtained, undesirable developments can be prevented, and any deficiencies, etc. that do occur can be identified and consequences averted. Additionally, further-reaching inferences can be made with a view to improving operational processes. In everyday operations, upcoming crops can be planned in detail using Log & Solve. Digital cultivation logbooks visualise measured data and, by combining these with other data, allow a broad overview to be gained of ongoing processes, and comparisons to be made with earlier or parallel crop batches. If values become critical, sensors generate email or text message alerts. And, in the future, Klasmann-Deilmann's experts will be increasingly available to provide guidance online.



# 4.0 NEW ENERGY

# Renewable resources

## 301:103-1, 301:103-2, 301:103-3, 302:103-1, 302:103-2, 302:103-3 | *Wood as an environmentally sound energy source*

Alternative energy sources are increasingly contributing to a balanced and reliable overall mix of different energies. The objective is to supply both power and heat in an environmentally friendly manner. Renewable resources such as wood are firmly established in this context.

Unlike the fossil fuels – petroleum, natural gas and coal – which are finite resources, renewable resources are repeatedly available as they continuously regenerate themselves in specific cycles. Their good climate performance in energy production results:

- from the extent to which they replace fossil fuels;
- from the essentially climate-neutral cycle involving release of CO2 when used as a source of energy, and the capture of carbon through photosynthesis during growth; and
- from the use of state-of-the-art and energy-efficient technology, as for example in cogeneration plants.

Among the renewable resources especially in demand is forestry and timber industry waste, which is in the form of woodchips utilised as biogenic solid fuel in biomass cogeneration plants.

Short-rotation coppice (SRC) plantations are also playing an increasingly important role in this context. This involves planting cuttings of fast-growing tree species such as willows or poplars: their wood growth is harvested after three to four years and the biomass then goes for energy production. Over a period of at least 20 years, growth and harvest cycles repeat on the same site at intervals of three to four years. Compared with other energy crops such as maize, the relationship between inputs and yield is especially positive.

## 102-6, 102-7, 302:103-1, 302:103-2, 302:103-3, 301-1 | *Biomass production in the Baltic region*

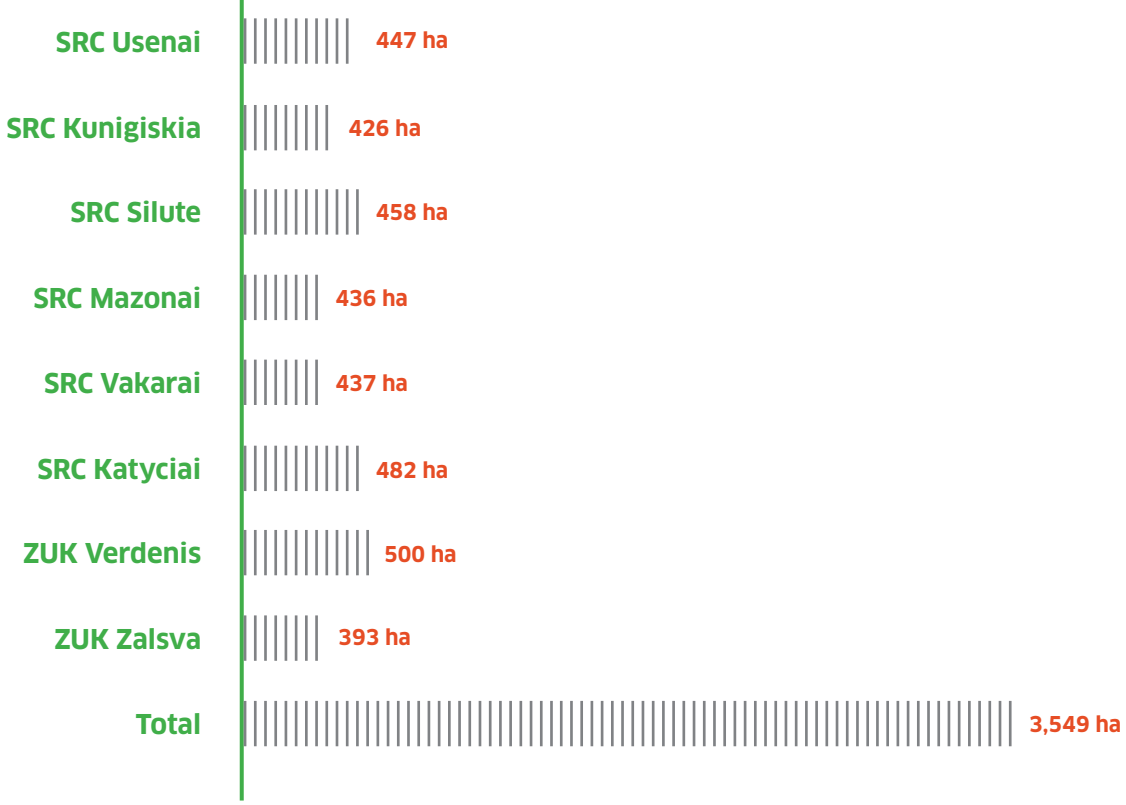
We have been carrying out extensive SRC projects in the Baltic region since 2010. The situation is especially good here in terms of production and sales of renewable resources: demand for biomass for energy use is increasing in the Baltic states, where the economic environment is far more favourable towards sustainable energy solutions than in Germany.

Subject to consolidation of already existing areas, we acquired additional agricultural land in Lithuania for planting with SRC. The total area increased from 3,350 hectares in 2018 to 3,493 hectares in 2019 and 3,547 hectares as at the end of 2020. In addition, further SRC sites were planted with cuttings, making a total of 3,163 hectares of actively cultivated land by the end of 2020 (2019: 3,000 hectares). Yield from corporate SRC sites in the same year amounted to 99,800 $m^3$ of woodchips (2019: 40,800 $m^3$).

We also provide woodland owners with close-to-nature forest management services. Timber felled in this connection is processed and marketed. To ensure that the strong demand for wood especially in cold winter periods is met in terms of raw materials sourcing, agreements covering the supply of substantial resources are in place with external suppliers. Alongside woodchips, fuel peat continues to play a part in the Baltic region's energy mix.

In Lithuania, woodchips produced in-house and bought in are marketed through UAB Klasmann-Deilmann Bioenergy, as are biomass blends of woodchips and fuel peat. Since 2017 we also have, in the form of Klasmann-Deilmann Bioenergy SIA, a sales company distributing biomass for energy and heat generation. The total volume sold in 2020 was 709,000 $m^3$ (2019: 972,000 $m^3$). This decline is due to the comparatively mild winter season, which resulted in lower demand.

***Our companies that own land used for SRC***




## 102-11 | *Land use*

Cultivating crops as renewable resources exploited for energy purposes is a form of land use that essentially competes with infrastructural and housing development, as well as agricultural food production. This is why, for this purpose, we primarily use fallow land of only limited potential for the food sector, and ensure that these sites are used as effectively as possible.

Another challenge consists in harmonising land use with environmental protection and biodiversity. However, we have identified promising opportunities here to take advantage of synergies. For example, mitigation and compensatory measures can be beneficially combined with the generation of wood biomass so that, for agricultural land with intensive demands placed on it, extensification is encouraged while the need for materials and energy is satisfied.

By contrast to arable land, which is generally tilled twice a year, SRC sites are harvested and otherwise worked only every three years. And, throughout their overall cycle lasting 21 years, these sites are treated with herbicides only once. Moreover, land previously farmed using conventional methods undergoes considerable ecological upgrading when planted with SRC. For example, as the soil is not cultivated, this means:

– that soil humus levels build up;
– that erosion is reduced due to permanent ground cover;
– there is a permanent root mat which leads to improvement in both infiltration and the soil's ability to store water.

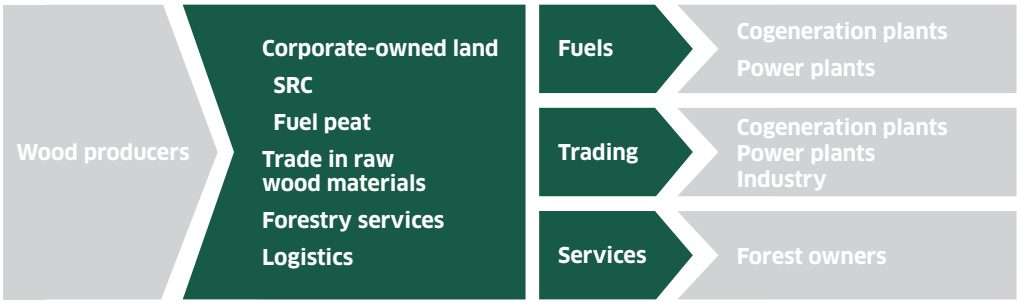
Overall, we value and make use of these plantations as a modern, responsible form of land management and means of producing energy sources. Running counter to this, however, is the material risk constituted by increasingly mild winters, which are driving down demand for woodchips. We are monitoring this trend very closely and, as part of our ongoing risk management activities, are evaluating the extent to which our business model is developing in a sustainable manner.

## 102-6, 102-7, 301:103-2 | *Extraction, production and sales of biomass*

The following subsidiaries produce, process and/or sell woodchips and fuel peat:

| | Country | Fuel peat extraction | Biomass from SRC | Sales of biomass as an energy source |
|---|---|---|---|---|
| UAB Klasmann-Deilmann Silute | LT | | • | |
| UAB Klasmann-Deilmann Ezerelis | LT | • | | |
| UAB Klasmann-Deilmann Bioenergy | LT | | | • |
| Klasmann-Deilmann Bioenergy SIA | LV | | | • |

### *Our activities along the renewable-energy value chain*




Activities of Klasmann-Deilmann / Activities of third parties

# 5.0 FEWER EMISSIONS

# Nature conservation and climate change mitigation

## 5.1 Land use

**102-2, 304:103-1, 304:103-2**

Peatland drainage and subsequent peat extraction was expressly desired politically, and socially accepted, during the early decades of the 20th century. The aim was, for example, to make agriculture and housing development possible on a large scale in north-western Germany. 1981 saw peatland production legislation come into force in Lower Saxony. In accordance with its provisions, the only peatlands our company has used for extracting raw peat materials since then are already degraded; this has included land either owned or leased. After peat extraction has ceased, we initiate rehabilitation measures at our extraction sites in line with official requirements. We also apply this principle with our activities in the Baltic region and Ireland. However, as we continue to extract and process peat, our organisation is, to this day, endeavouring to strike a balance between peatland protection and responsible usage of this raw material in commercial horticulture. It is claimed:

- that the first step in peat extraction necessarily involves drainage of peatlands. This is, however, incorrect, since pristine bogs have been designated protection areas and are left untouched by us;

- that peatlands emit $CO_2$ in large quantities. It is true that peat decomposes on exposure to air, thus releasing greenhouse gases. It must, however, be taken into account that – to take land use in Germany as an example – more than 80% of peatlands are used for agriculture and around 4% for peat extraction. Calculations based on the 2020 German inventory report by the country's Federal Ministry of Food and Agriculture (BMEL) indicate that peat extraction and use contribute a total of 0.2% to the Federal Republic of Germany's total emissions. However, the above report's data on land area and quantities of peat extracted is out of date. Reference to more recent figures yields a contribution of 1.13 million t $CO_2e$, equivalent to 0.13% of all Germany's emissions. As peat extraction in Germany is expected to be phased out by 2040, and these sites will be subject to restoration measures, emissions will show a considerable further decrease.

- that peat extraction is associated with major intervention in the natural environment, leading to the loss of a particular landscape type and of biodiversity. This statement was true up until 1981. However, measures successfully carried out since then to rehabilitate former extraction sites show that this process is not irreversible. Especially in re-wetted areas, the original flora and fauna are gradually returning. It must also be remembered in this connection that the peat and substrate industry is the only sector which not only is required to take restorative measures but also in fact rigorously implements them. Commercial peat fields subjected to restoration measures are available in perpetuity as biotopes for nature conservation and climate protection.

- that it may take decades until re-wetted areas show appreciable growth of peat moss and other typical vegetation. In fact, the rate at which restoration measures yield success differs. At most of our sites, this happens within the first 10 years. And, going forward, a new method we have developed to specifically distribute peat moss over former extraction sites may considerably accelerate the intended effect.

We are fully aware of our responsibility towards nature and the climate, are assessing our impact on both as precisely as possible, and are largely striking a reasonable balance between business and conservation needs within the framework of our sustainable development.

## 102-11, 102-12, 304:103-2, 304:103-3 | *RPP-certified extraction areas*

The European certification system 'Responsibly Produced Peat' (RPP) was established in 2013 with the following aims:

- Leaving natural peatlands of high conservation value untouched, and preserving them over the long term;
- Permitting controlled peat production solely on sites already drained and/or previously used for agriculture;
- Ensuring the long-term availability of peat as a valuable growing-media constituent;
- Increasing the rate of peat production from degraded peatlands so that restoration measures can be started as early as possible.

A European non-governmental organisation, RPP brings together relevant lobby groups across the peat and substrate industry, including renowned scientists, environmental associations and many companies in the sector.

RPP aspires to consistently achieve a workable balance between the interests of the substrate industry and those of nature conservation and climate protection. The aim is to establish the RPP label as a prestigious, comprehensive and recognised environmental standard similar to PEFC and FSC. To this end, RPP has established a reliable and transparent certification system for responsible peat production. Member companies and their extraction areas are examined by an independent auditor on behalf of certification organisation ECAS.

Against this background, we have applied for RPP certification for most of our extraction sites in recent years. As at 31 July 2021, this had already been obtained for 83 % of our total extraction area. This means that 85 % of the peat we produced was from RPP-certified sites.

## 102-11, 102-12, 102-16, 304:103-2 | *Voluntary commitment to the Code of Practice*

In its management of peatlands, Klasmann-Deilmann has since 2009 – voluntarily – adhered to the applicable Code of Practice of the former European Peat and Growing Media Association (EPAGMA), whose successor organisation as of 2016 is the European lobby group Growing Media Europe. This code of practice specifies rules governing choice of extraction areas, method of extraction, and peatland restoration once these activities have ceased. The voluntary commitments include:

- complying with locally applicable legislation;
- exclusive use of already drained or degraded peatland;
- minimising emissions of dust and noise;
- avoiding soil contamination, and environmentally sound disposal of waste;
- regulating self-heating in storage stacks;
- including the local population in the overall process, and giving stakeholders a means of providing feedback;
- preserving biological diversity and ecosystem functions during after-use once raw-material extraction ceases;
- responsibly managing extraction sites, including management systems with risk assessment relating to accidents, emissions and health aspects, as well as training on safe workin practices.

It is expected that the Code of Practice currently in force will be replaced by a new Growing Media Europe document that gives a comprehensive picture of the present discourse on private-sector sustainable development and applies it to the peat and growing-media industry. Klasmann-Deilmann will be involved in implementing this project and will contribute its own experience of sustainability issues.

At international level, our land management and our raw-material extraction comply with Responsible Peatland Management guidelines laid down by the International Peatland Society.

## 304-3 | *Measures following cessation of peat extraction*

Depending on the method used, peat production on a given site may continue for several decades. After raw-material extraction has ceased, sites remain covered with residual peat to at least the legally required depth. There are essentially four options for their subsequent usage, and which of these is implemented in a given case is stipulated by the relevant authorities in permit documents issued prior to commencement of extraction activities.

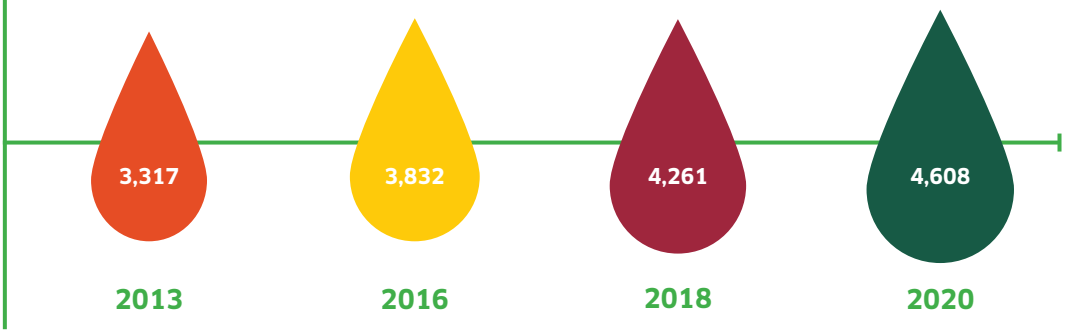
The most important form of after-use in Germany is re-wetting. Its aim is to establish peat moss (Sphagnum) and other typical peatland plants, such as cotton grass. In re-wetted areas, the presence of standing water will lead to the former hydrological conditions being restored, resulting in bog-like vegetation (i.e. rehabilitation) or even typical bogland vegetation (i.e. regeneration), and these sites can become CO2 sinks when the peat body begins to grow again. In this way, a re-wetted area can contribute to the biodiversity typical of peatland – in this case, to the variety of ecosystems present – and again become a characteristic feature of the landscape. By the end of 2020, we had rewetted a total of 4,608 ha.

Because local geological and hydrological situations differ, not all sites can be returned to nature in this way once peat extraction comes to an end. Instead, some former production areas are afforested or prepared for agricultural after-use. In some cases, buffer zones are also established between differently utilised areas and left to the process of natural succession.

Responsibility for implementing these measures generally rests with Klasmann-Deilmann. Over a several-year period, the effectiveness of measures carried out is monitored by the relevant authorities and – in line with its voluntary commitment to the code of practice – by Klasmann-Deilmann itself.

In certain cases, our after-use projects go beyond the official requirements, a major reason for this being to apply new knowledge of how to restore peatlands. Groundbreaking findings have been made in this connection by our Sphagnum-farming project.

**Re-wetting, Cumulative figures in ha**




## 102-12, 304:103-2, 304:103-3 | *Peatland restoration measures in Ireland and the Baltic states*

Projects aimed at rehabilitating former extraction sites are also in preparation at other locations in the Baltic region and Ireland. Here, we are seeking to put into practice innovative approaches to peatland restoration that provide additional environmental and climate benefits, such as our method for achieving accelerated peatland restoration by using cultivated peat moss. In all such cases, we are tailoring our practice to local conditions and adhering to applicable local laws. Klasmann-Deilmann's locally responsible subsidiaries are liaising closely with the relevant authorities on this matter.

## 304:103-2 | *Sphagnum-farming project*

In collaboration with the University of Hanover and the Thünen Institute in Braunschweig, we carried out a Sphagnum-farming project between 2015 and 2018. A total of 10 hectares of former extraction areas were prepared for the cultivation of peat moss on black peat. The special moss required for the project – namely, moss obtained from peat hummocks – was removed from semi-natural peatland and then distributed over already re-wetted sites or sites earmarked for re-wetting. The aim was to achieve Sphagnum growth that is reproducible under specific conditions, producing material that could then be used as a substrate constituent and in creating further such sites, especially for re-wetting projects.

During this period, various in-house and external studies confirmed the very high suitability of peat moss for substrate production. However, we also found that the economic viability of its use cannot be demonstrated as long as Sphagnum farming takes place on near-natural sites. We therefore separated the horticultural aspects of this project from the site-related aims. Since then we have been vigorously pursuing the goal of conducting promising, real-world and non-site specific trials with a view to developing a raw material for substrate production from peat moss – one that is renewable and, in the broad sense of the term, sustainable.

Moreover, we have taken the process used with a view to rehabilitating degraded peatlands in the original project, and, in view of the excellent successes achieved, developed it to the extent that is can be offered as a service for site restoration projects. In contrast to the spontaneous colonisation that results from standard re-wetting measures, we can accelerate the transformation of degraded raised bogs into living, growing bogland by means of active hydrological management and specific introduction of vegetation typical of raised bogs. The typical vegetation forms up to 20 years earlier and results in a greatly improved carbon footprint and, in the medium-term future, to carbon storage.

# 5.2 Emissions from peat extraction

## 305:103-1

The discussion on emissions from the extraction and usage of peat overlaps the conservation-related debate that has been continuing since the 1970s on the preservation of peatland. Until a few years ago, however, scientific knowledge on the climate impact of peat extraction and use existed only to a small extent.

## 305:103-1 | *In-house measurements*

In view of this, we initiated a study and, between February 2015 and February 2017, conducted greenhouse gas measurements on our white-peat and black-peat extraction areas. The aim was to close the existing gap in the scientific data and to provide reliable information about emissions from the extraction and use of peat. We were ably assisted, in both the monitoring campaigns and in drawing up the footprint, by the Cologne-based Meo Carbon Solutions GmbH. On completion of the first 12 months, and after the entire project had been concluded and evaluated, we discussed our approach and results with experts from Meo, the Müncheberg-based Leibniz Centre for Agricultural Landscape Research (ZALF), the regional State Agency for Mining, Energy and Geology (LBEG) in Hanover, the German Research Centre for Geosciences (GFZ) in Potsdam, and the Kiel Institute for the World Economy (IfW). It was confirmed that measurements and footprinting activities in the first year had yielded valid outcomes and that, since a second year of monitoring had been completed, these also meet scientific criteria.

### *Measurement set-up*

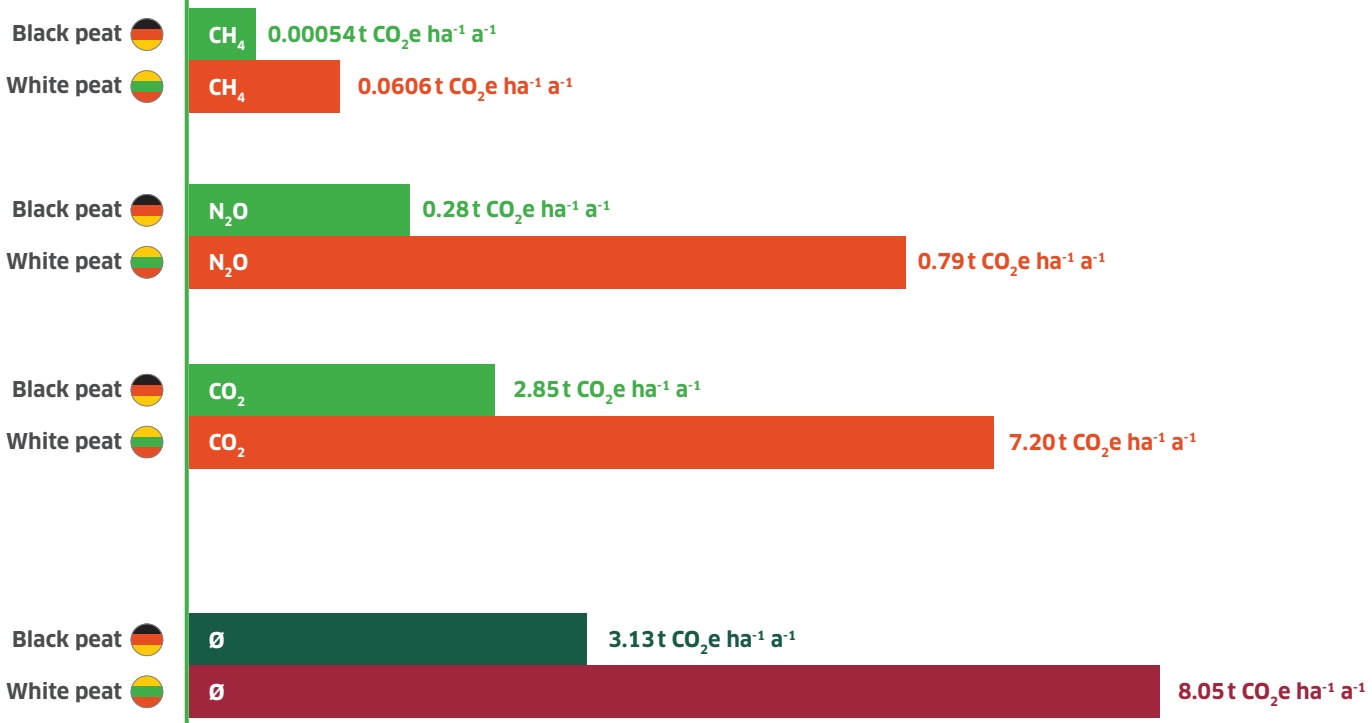
To carry out cumulative global-warming impact assessments for the trace gases carbon dioxide ($CO_2$), methane ($CH_4$) and nitrous oxide ($N_2O$), we used the chamber-based measuring technique that had already been employed between 2006 and 2010 in a study initiated by Germany's Federal Ministry of Education and Research (BMBF) on the subject of 'Klimaschutz durch Moorschutz' ('Combating Climate Change by Protecting Peatlands') and was also used in other scientific studies and greenhouse gas measurements. Monitoring using two manual sampling units took place on a black-peat extraction site in Germany and a white-peat extraction area in Lithuania. These sites were chosen such that the results reflect the corporate situation as representatively as possible in terms of peat grade, climatic conditions, etc. Greenhouse gas measurements were, for the most part, carried out on a 14-day cycle using repeat determinations from five spatially separate plots. For each site, a set of chambers consisting of one opaque and one translucent chamber was available for $CO_2$ monitoring. The measurements were carried out on site using an LI-820 infrared gas analyser manufactured by LI-COR. $CH_4$ and $N_20$ samples were taken and analysed in the lab using gas chromatography. The outcome, incorporated into a cumulative footprinting model, then formed the basis for calculating average emission levels from peat extraction.

### *Outcome*

The mean emission levels determined for the black-peat extraction area used for monitoring in Germany were 3.13 t $CO_2$e $ha^{-1}$ $a^{-1}$. On the white-peat extraction site in Lithuania, monitoring revealed average emissions of 8.05 t $CO_2$e $ha^{-1}$ $a^{-1}$.

### *Footprints based on 24 months of direct greenhouse gas measurements*

**Mean emission levels**
**Black peat from Sedelsberg, Germany and white peat from Silute, Lithuania**




$CH_4$: Methane / $N_2O$: Nitrous Oxide / $CO_2$: Carbon Dioxide

# 5.3 Carbon footprint for 2020

## 305:103-1, 305:103-2, 102-48, 102-49

In our Sustainability Report 2013 we published the world's first carbon footprint for a company from the peat and substrate industry. This put us in the picture regarding the level of emissions for which Klasmann-Deilmann is responsible. It also made a major contribution towards greater transparency in dialogue with our stakeholders. Since then, we have had enhanced the calculation model in each successive year, especially in order to be able to precisely convey complex issues relating to land management and the use of raw materials in subsequent carbon footprints. The results of our study on emissions from peat extraction are also important in these footprints' preparation. Additionally, we have refined still further our company's essential underlying data as part of various digitisation projects. The various parts of the company are involved in the data collection process, thus encouraging each division to examine its own climate impact.

Our corporate and product carbon footprints were calculated by Cologne-based Meo Carbon Solutions GmbH. The carbon footprint was audited and verified by SGS Institut Fresenius GmbH (Berlin, Germany), with regard to its assumptions, function and internal coherence, in accordance with the ISO 14064-1 standard and at a limited level of assurance. The subject matter of the internal and external audits conducted in this context included quality-management aspects associated with the data collection process.

Taking into account all climate-related factors along the value chain 'from raw-material extraction to the factory gate, including transport', our corporate carbon footprint for 2020 reveals emissions of 206,112 t $CO_2$ equivalents ($CO_2e$).

## 305:103-1 | *System boundary for the 2020 carbon footprint*

The ‘base year’ for calculating our carbon footprint is 2016. Our corporate carbon footprints for 2013, 2016, 2018 and 2020 include all emissions arising within the system boundary ‘cradle to gate, plus transport to customers’. We are incorporating the Logistics division as it is a major factor in our turnover. The end-of-life phase is not factored into the carbon footprint. This means that a distinction is made between emissions attributed to our company and those attributed to downstream users such as nurseries or retail consumers. We are aware that this means a considerable proportion of greenhouse gases are not included in the carbon footprint. The rationale behind this decision is that, in the same way that an oil producer is not responsible for a car driver’s petrol consumption, a substrate producer cannot be held to account for the way a product is used by a customer. At product level, however, both footprints – with and without end use – are disclosed in order to provide, for instance, a nursery with reliable information on how to calculate its own carbon footprint.

## 102-48 | *A robust carbon footprint*

In order to further enhance the robustness of our carbon footprint, a small number of individual corrections, improvements and additions are being made to the calculating tool. In 2017 and 2018, the calculating tool was fundamentally redesigned in order to simplify data maintenance and make this more precise.

**Factors affecting the calculated carbon footprint for 2020**

- In Germany again sites at which extraction had ceased were returned to their previous owners, whereas an area of 39 ha went into production for the first time.
- Due to the politically imposed hiatus in all extraction activities in Ireland, emissions there relating to raw materials, diesel and electricity decreased.
- Our plant in Bohmte saw higher energy consumption due to the operation of a new wood fibre facility.
- Emissions from internal transport rose slightly because of the need to increase movements of alternative constituents between sites. Among the components affected are the coir products of our partner Shakti Cocos.
- Growing media produced by our new production partners are factored in using a defined average value, as we have no detailed figures on energy consumption.
- Figures for emissions from combined land/water transport are now even more accurate because each of these transport types is accorded its own emission factor.
- Preferential use of 'eco-compatible' rail logistics enabled emissions to be reduced by a certified quantity of 1,785 t $CO_2$ on transport of our substrates to Italy.

**Comments on changes over time (2018 vs. 2020) in the carbon footprint**

- In the 2020 financial year we reduced our carbon footprint by 22,835 t $CO_2$e compared with 2018.
- Reduction in area means that emissions from peat extraction sites are decreasing. During the period under review this was chiefly the case in Germany, where less black peat was produced and land was returned to the original owners. As a result, the footprint decreased by approximately 20,730 t $CO_2$e.
- Energy-related emissions fell by 4,313 t $CO_2$e.
- Emissions from internal transport were at about the same level as in 2018 – they were, in fact, 272 t $CO_2$e lower.
- Increased purchases of peat led to a 5,756 t $CO_2$e rise in related emissions.
- Emissions related to alternative constituents rose by 2,223 t $CO_2$e owing to further increases in the quantities involved.
- The increase – associated with greater quantities being traded – in emissions from transport to customers was 3,313 t $CO_2$e.

## 305-4 | *Carbon footprint*

| Emission sources | 2020 in t $CO_2e$ | % | **2018 in t $CO_2e$ | **2016 in t $CO_2e$ | *2013 in t $CO_2e$ |
|---|---|---|---|---|---|
| **Extraction sites** | | | | | |
| 1. Reference scenarios | - 83,679 | | - 89,874 | - 109,887 | - 135,574 |
| 2. Peat extraction, interim storage | 123,540 | | 146,569 | 154,754 | 157,171 |
| 3. After-use scenarios | 14,996 | | 18,816 | 25,230 | 45,156 |
| 4. End use 1/100 | 5,035 | | 7,222 | 6,220 | 8,346 |
| 5. Forest, SRC | - 12,338 | | - 12,262 | - 15,635 | 375 |
| **Emissions from extraction areas** | 47,554 | 23.00 | 70,471 | 60,682 | 75,474 |
| **Energy consumption** | | | | | |
| 6. Extraction sites | 15,470 | | 18,149 | 18,664 | 18,160 |
| 7. Other sites | 3,907 | | 4,935 | 2,693 | 1,532 |
| **Emissions from energy consumption** | 19,377 | 9.37 | 23,084 | 21,357 | 19,692 |
| **Transport** | | | | | |
| 8. Raw materials, internal | 9,923 | | 10,196 | 13,797 | 16,704 |
| 9. Deliveries to customers | 69,905 | | 73,216 | 71,802 | 49,055 |
| **Emissions from transport** | 79,828 | 38.63 | 83,412 | 85,599 | 65,759 |
| **External suppliers** | | | | | |
| 10. Peat incl. transport | 30,380 | | 24,623 | 18,892 | 11,753 |
| 11. Alternative constituents, additives, fertilisers and substrates produced by partners, incl. transport | 21,256 | | 21,083 | 18,693 | 26,808 |
| 12. Packaging material incl. transport | 8,325 | | 6,275 | 5,572 | 4,657 |
| **Emissions from external suppliers** | 59,961 | 29.00 | 51,981 | 43,157 | 43,218 |
| Corporate carbon footprint | 206,719 | 100.00 | 228,948 | 210,795 | 204,143 |
| Total quantity of substrates / raw materials incl. trading ($tm^3$) | 3,945 | | 3,898 | 3,549 | 3,226 |
| Product carbon footprint per $m^3$ of substrate (kg $CO_2e$) | 52.40 | | 58.73 | 59.40 | 63.28 |

* Verified figures from the Sustainability Report for 2016
** Verified figures from the Sustainability Report for 2017/2018
*** Verification 2021

## *Explanatory notes on the structure of our carbon footprint*

**Extraction areas**

1. **Reference scenarios:** Before raw-material extraction began, drained bogs were already emitting trace gases (in the form of $CO_2$, $N_2O$ or $CH_4$) that affect the climate. Even without peat extraction, the sites would – depending on land use – have continued to emit these gases. Following this line of reasoning, the emissions pertaining to this time-based reference scenario have been factored out of the company's carbon footprint.
2. **Peat extraction, interim storage:** Emissions from our extraction and usage of peat, examples being actively worked peat extraction sites, peat storage in stacks and the peat used in growing media.
3. **After-use scenarios:** Emissions that arise after peat harvesting ceases – in relation to peatland restoration, for instance – before an area stores greenhouse gases once more.
4. **End use 1/100:** Emissions from degradation of peat as a raw material or in substrates, converted into $CO_2$ equivalents with a global-warming potential for the next 100 years. In our corporate carbon footprint, a resulting aggregate mean value for the reporting year is adopted, equivalent to 1% of the GWP100. Emissions arising during the products' usage or end-of-life stage are disclosed solely in the product carbon footprint (PCF).
5. **Forest, SRC:** Emissions from establishment and maintenance of forests and SRC sites. Over and above this, no $CO_2$ sinks or reservoirs exist that would need to be included in the carbon footprint; neither do we operate any of the same.

**Energy consumption**

6. **Extraction sites:** Emissions primarily from consumption of diesel, heating oil, electricity, natural gas and woodchips by our lead company and by our subsidiaries that have peat extraction operations.
7. **Other sites:** Emissions from our production and sales companies, primarily from consumption of heating oil, electricity, natural gas and woodchips in the administrative buildings.

**Transport**

8. **Raw materials, internal:** Emissions from transport of raw materials within the Klasmann-Deilmann Group.
9. **Deliveries to customers:** Emissions from corporate transport to customers worldwide. A detailed breakdown was provided for transport by road, container, water and rail.

**External suppliers**

10. **Peat inclusive of transport:** Emissions from the extraction and transport of bought-in peat. As it is us who use these raw materials, the emissions are attributed to us.
11. **Alternative constituents, additives, fertilisers and substrates produced by partners, incl. transport:** Emissions from production of alternative substrate constituents, such as green compost and wood fibre, as well as emissions generated by our production partners and suppliers through production and transport of substrates or additives such as fertiliser and lime. As it is us who use these products, these emissions are attributed to us.
12. **Packaging materials inclusive of transport:** Emissions resulting from usage of packaging film, paper, cardboard and pallets.

## 305-1, 305-2, 305-3 | *Classification of emissions into scopes*

The greenhouse gas calculating tool classifies emissions into three categories called 'scopes' in conformity with ISO 14064 and the requirements of the Kyoto Protocol.

- **Scope 1** includes all emissions directly generated, for example, from combustion processes in the company's own facilities and the decomposition of raw peat materials.
- **Scope 2** covers emissions relating to either purchased energy such as electricity or heat energy sources such as woodchips.
- **Scope 3** refers to emissions from third-party services and purchased preliminary services.

The base year is 2016. Global-warming potential is calculated over a 100-year interval. The basis of calculations for the Scope 2 energy mix is as follows: the electricity mixes AT, BE, CN, DE, FR, IR, IT, LT, LV, MY, PL, SG and US, district heating and green electricity (certified as being from hydropower in Norway or from wind power in Ireland, EcoInvent 3.5).

**Emission sources in t $CO_2e$**

| | SCOPE 1 | SCOPE 2 | SCOPE 3 |
|---|---|---|---|
| 2013 | 81,890 | 4,319 | 117,935 |
| 2016 | 85,191 | 3,570 | 137,669 |
| 2018 | 89,642 | 4,018 | 147,549 |
| 2020 | 67,644 | 2,682 | 148,730 |

Emission factors and other factors not derived from calculations based on corporate data were, as before, extracted from the 'ecoinvent.org' or 'searates.com' databases, or from the 'Quantis study' published by the then EPAGMA in 2011. Our calculation of emissions from the extraction and use of peat was on the basis of the results of our study on this topic.

The following greenhouse gas emissions are not included in the corporate carbon footprint and are disclosed here in accordance with Chapter 4 of the Greenhouse Gas Protocol:

Not factored into **Scope 1** are:

- intentional or unintentional release of fugitive emissions such as CFCs from refrigerators;
- empty return journeys (both internal and customer-related transport); instead, only the outward journey is included, but is counted as 2/3 of the overall journey.

**Scope 2** is fully included.

Emissions under **Scope 3** are only partially included. Emissions from the following are not reported:

- Internal and customer-related empty runs, as hauliers and transport providers whose services are enlisted are – in accordance with relevant joint agreements – responsible for providing onward and return transport. This arrangement has an impact on prices per transport kilometer;
- Transport of purchased fuel and of waste;
- Car, bus/coach and train journeys or flights associated with work-related travel and/or journeys to or from the place of work, excluding journeys in company cars;
- Leased assets, franchises and outsourced activities;
- Waste-related emissions (Sec. 7 (1) of the 36th German Federal Regulation for the Implementation of the Federal Emissions Control Act (BImSchV)), as these are already included in the emission factors for purchased packaging and are not generated by Klasmann-Deilmann itself. Waste from administration is negligible and thus not disclosed.

Certain of the bulking constituents that we use in substrate production are deemed to be waste and residuals under Sec. 7(1) BImSchV and it would be possible to factor this into the carbon footprint with a value of zero. However, the arrangement is dependent on the raw material's origin and processing. With certain substrate blends, especially those for organic production, there is scope for optimising the product carbon footprint in this way. We decided against this approach, as it compromises a nuanced consideration of our climate impact.

### *Product carbon footprint*

The product carbon footprint (PCF) we publish differs from the corporate carbon footprint (CCF) in that the former includes the 'cradle to grave' system boundary, i.e. one that incorporates both the use phase and the 'end of life' of our substrates. Based on this breakdown, the bulk of the emissions are generated outside our system boundaries. We regard this as affirmation of our responsibility to enhance our range of substrates so as to produce fewer greenhouse gases at every link of the value and consumption chains. This is the foundation of measures that are an integral part of our strategy, such as increasing the proportion of alternative constituents in our substrate blends to 30% (by volume) by 2025.

With reference to a recipe database, the data for the corporate carbon footprint can be converted for individual products, creating PCFs. By way of example, the table below gives the carbon footprints of selected growing media for the years 2016 to 2018 within the 'cradle to gate' and 'cradle to grave' system boundaries.





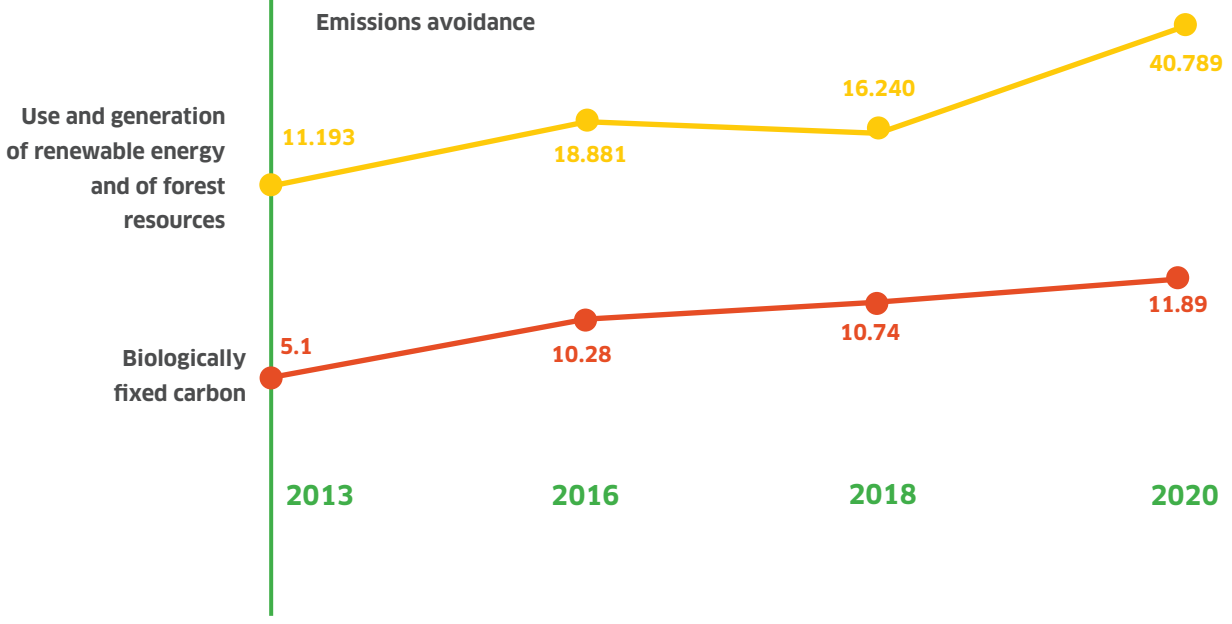
| | | | | | |
|---|---|---|---|---|---|
| Recipe | 70413 | 70002 | 70062 | 70080 | 70698 |
| Name | Base Substrate | Potgrond P | ProLine Tray Substrate | Seedling Substrate | BP Substrate |
| Type | White-peat substrate | Black-peat substrate | Black-peat / white-peat blend with green compost | Black-peat / white-peat blend with coir pith | Black-peat / white-peat blend with wood fibre |
| Emissions „cradle to gate“ | | | | | |
| 2016 | 48.3 | 14.2 | 28.8 | 31.7 | 20.5 |
| 2018 | 36.5 | 24.2 | 39.6 | 32.7 | 25.7 |
| 2020 | 50.7 | 18.4 | 42.4 | 40.6 | 23.6 |
| Emissions "cradle to grave" | | | | | |
| 2016 | 162.5 | 241.9 | 154.2 | 145.8 | 145.9 |
| 2018 | 216.2 | 245.1 | 195.7 | 184.7 | 168.0 |
| 2020 | 237.1 | 240.5 | 201.2 | 195.7 | 167.8 |

Figures in kg $CO_2e/m^3$

## 302-1, 302-2 | *‘Positive’ footprint for 2020*

We provide renewable resources for producing regenerative energy, and these contribute to emissions avoidance. Under the requirements of the ISO 14064 standard, however, these positive effects are disclosed separately from the carbon footprint. The chief reason for this is that the bulk of the energy generated in this way will not be consumed by Klasmann-Deilmann itself, but fed into the grid and sold. In addition to our carbon footprint, a ‘positive’ carbon footprint has therefore also been drawn up (i.e. a footprint that takes only carbon-positive measures into account). It discloses how many emissions from fossil energy sources such as coal, oil and natural gas are avoided by usage of renewable energy from short-rotation coppice (SRC) and photovoltaic installations. The following factors are also taken into account:

- Under our cooperative arrangement with the organisation Plant for the Planet, 73,951 trees were donated. The resulting amount of carbon stored per tree is put by Plant for the Planet at 10 kg $CO_2$ $a^{-1}$ over an average life of 10 years.
- Biomass produced by third parties that is subsequently used as an energy source is disclosed separately as ‘biologically fixed carbon’. In our case, this is chiefly in the form of woodchips.



# 5.4 Energy management

## 305:103-1, 305:103-2, 302-1

Among our measures aimed at lowering emissions are steps to reduce our energy needs. To identify potential here, energy consumption is recorded and evaluated. Furthermore, to increase the energy efficiency of our facilities and machinery, we take advantage of technical developments whenever it is possible and expedient to do so. Our German sites obtain electricity from hydropower and our Irish production company uses wind power-derived electricity, the Bruges site purchased only green electricity in 2020 and, in Lithuania, electricity produced from regenerative energy sources has been used since the second half of 2020. Additional savings are achieved by optimising lighting and compressed-air generation.

| Energy consumption by use | 2020 | +/- in % | 2018 | 2016 | 2013 |
|---|---|---|---|---|---|
| For extraction sites (diesel) | 18,719 | 3.1 | 18,149 | 18,664 | 18,160 |
| Internal peat transport (diesel) | 9,486 | - 7.0 | 10,196 | 13,797 | 16,704 |
| For buildings (electricity, gas, woodchips) | 809 | - 83.6 | 4,935 | 2,693 | 1,532 |
| Packaging material (film) | 8,325 | 37.6 | 6,048 | 5,401 | 4,657 |

Figures in t $CO_2e$ for the Group as a whole

| Energy consumption by energy source | 2020 | +/- in % | 2018 | 2016 | 2013 |
|---|---|---|---|---|---|
| Electricity | 45,845.7 | 6.3 | 43,136.5 | 38,397.2 | 31,040.0 |
| Heat | 18,764,4 | 26.6 | 14,824.9 | 16,061.4 | 19,569.6 |
| Diesel | 177,171.6 | - 19.5 | 220,111.3 | 172,281.4 | 160,506.1 |

Figures in t $CO_2e$ for the Group as a whole

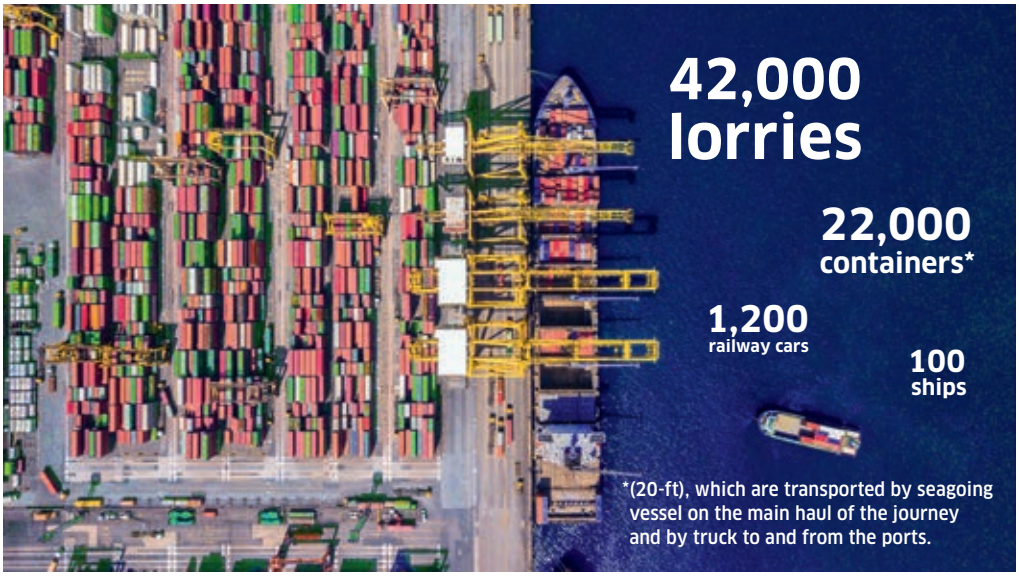
| Energy consumption (conventional and renewable) | 2020 | +/- in % | 2018 | 2016 | 2013 |
|---|---|---|---|---|---|
| Total energy consumption | 241,780.7 | - 13.1 | 278.072.7 | 226,740.0 | 211,115.6 |
| Of which from renewable energy | 48,916 | 114.2 | 22,837 | 16,742 | 3,521 |

Figures in t $CO_2e$ for the Group as a whole

# 5.5 Logistics

## 305:103-1, 305:103-2, 305:103-3

Thanks to long-standing relations with dependable national and international haulage companies and transport service providers, Klasmann-Deilmann can guarantee that all orders are processed reliably and quickly. We utilise rail and shipping wherever these are feasible and efficient options. In 2020, Klasmann-Deilmann used:




Our growing media and raw materials are relatively bulky and heavy. The consignees are primarily horticultural businesses in around 100 countries on five continents. Resulting transport-related emissions of greenhouse gases add up to just under 40 % of all those caused by Klasmann-Deilmann, so our Logistics operations play a highly responsible role in terms of sustainability. At the same time, however, and in this area in particular, we repeatedly come up against the limits of what is feasible and commercially viable.

For example, rail transport still often proves uneconomical compared with road haulage, a major factor being high transhipment costs. Moreover, many customers want their orders delivered as quickly as possible, within a few days. This is often not feasible by rail. With regard to movement of goods between Western and Eastern Europe, another problem is that of rail gauge incompatibility as this means there are no direct rail links. Nevertheless, as production company Klasmann-Deilmann Produktionsgesellschaft Nord mbH has its own rail connection to the Deutsche Bahn rail network, we use this for as many shipments as possible.

Within Western Europe, we also make use of the opportunities provided by domestic waterway shipping. Water routes needed for a comparable volume of trade in goods with Eastern Europe are lacking, so that chartering seagoing vessels is the only realistic alternative. Whereas sea transport is a good solution for raw materials and loose materials, the loss ratio associated with loading pallets onto such vessels is excessively high. For deliveries overseas, we make exclusive use of container transport.

Overall, road transport is essential to us, whether for direct deliveries to our customers in Europe or as a component of combined (road/water/road) transport. Moreover, many customer orders involve short delivery times, which can only be met using road haulage. Due to the growing shortage of truck drivers, however, freight space in Germany, Europe and in some overseas markets is becoming increasingly scarce overall. This weakens the customer's position vis-à-vis the contractor in terms of promoting sustainable development in road haulage.

Nevertheless, we strive to keep the environmental impact of our logistics operations as low as possible:

- We reduce internal transport between our various production sites;
- Setting up intermediate storage facilities enabled us, in selected European target regions, to switch to rail for a significant proportion of the annual volume transported;
- The weight of our growing media is another starting point: the drier – and hence lighter – these materials, the greater the volumes that can be carried per transport unit;
- We expect a positive impact from increasingly decentralised production, which will shorten transport distances to our customers and enable far larger quantities of raw materials to be transported in a more climate-friendly way, namely by water.

Apart from the above, we do not at present see any means of appreciable reducing logistics-related emissions. Significant progress requires a collective effort by the industry as a whole.

# 5.6 Emissions reduction measures

## 305:103-1, 305:103-2, 305:103-3

To reduce emissions, we are pursuing various approaches; some of these are strategically integrated or stem from our carbon footprint.

- Set-aside of land used for peat extraction is planned, especially in Germany, but also in the Baltic region.
- Drier – and hence more lightweight – substrates allow greater volumes of freight per transport unit.
- Increasingly decentralised production closer to our customers will, even in the medium term, help avoid transport-related emissions, as raw materials are delivered by water, which is more climate-friendly than the alternatives, and include regionally available constituents.
- Raising the proportion of alternative constituents such as wood fibre, green compost, coir and perlite to a total of 30% (by volume) of annual production by 2025, will further decrease the carbon footprint of our products within the 'cradle to grave' approach. We are highly proactive in encouraging this development, one example being the launch of our 'Advanced' product line.
- Carbon is actively removed from the air, and stored in the form of woody biomass, both through creation of short-rotation coppice (SRC) plantations and by woodland managed by Klasmann-Deilmann. We see additional potential here from our activities in the renewable energy and resources sector.
- At company level, our business growth has thus far run counter to even greater reductions in the absolute emissions figures in our carbon footprint than were achieved during the period under review. Nevertheless, the ambitious climate targets adopted by Germany and the European Union do apply to us. We are, therefore, looking into substantial yet promising investments that could take our organisation to climate neutrality within a few years.

# Green Services

### *Carbon footprint for substrates supplied*

As of 2018, our customers can now have the carbon footprint disclosed for the growing medium we supply them with. Upon request, the level of emissions – expressed in $CO_2e$ – will be individually calculated and a product carbon footprint (PCF) sent by e-mail to the horticultural business in question. We are extremely keen to start a conversation between our experts and customers with a view to switching to substrates that impact the climate less.

### *Optimised substrate blends lead to lower $CO_2$ levels*

Additionally, our customers are able to request a calculation of which substrate blends they can use to achieve improved $CO_2$ levels. A calculating tool available to our company's specialists precisely reveals how the selection of substrate components impacts the product carbon footprint (PCF). Called the PCF Compass, it shows changes in a PCF as soon as the substrate blend is manually adjusted. A direct comparison with the actually used substrate demonstrates how, for example, the use of different grades of peat – or proportions of the GreenFibre wood fibre product – affect the carbon footprint.

### *Carbon footprint for a nursery or crop*

Growers can also request that we prepare a carbon footprint for their own business. For this purpose, a calculating tool was developed, based on the same program as that used to calculate our own carbon footprint. Nurseries provide the necessary key data on, for example, energy consumption (e.g. electricity, natural gas, petroleum) and operational inputs used (such as seed, fertiliser and pesticides, packaging, growing containers). The use of growing media, including transport to the grower, is also precisely factored in. Based on this, the tool computes the carbon footprint for the business as a whole (corporate carbon footprint, CCF); it can also provide a data breakdown for an individual crop, resulting in a product carbon footprint (PCF).

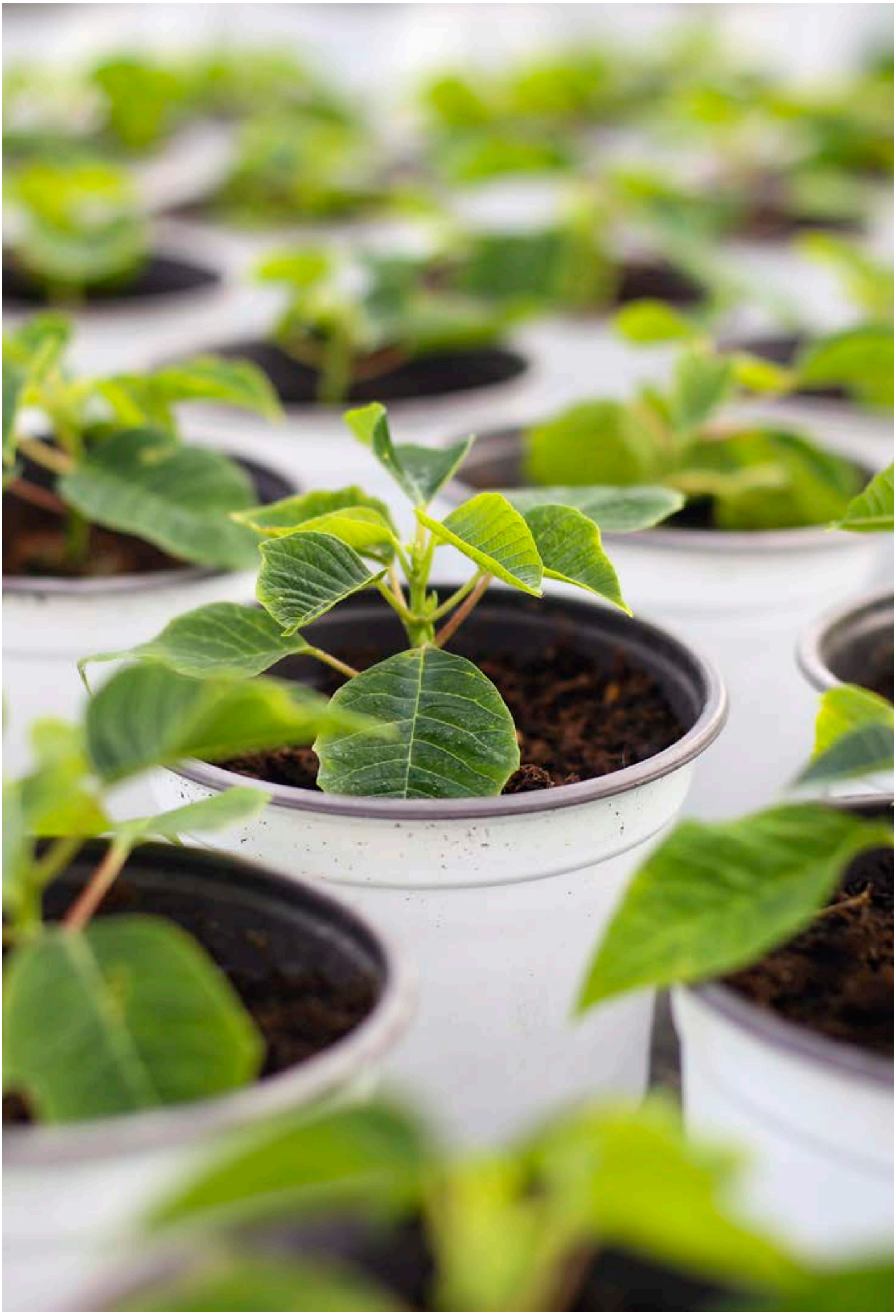
The CCF subsequently determined by the calculating tool enables a given horticultural business to develop its own strategy for reducing emissions and to assess this over several years. Potential parameters here may include the business's heating strategy or the use of substrates with a higher proportion of alternative constituents.

All major emissions factors are included in the following corporate carbon footprint for a grower. The carbon footprint shown here for a seedling nursery indicates that energy consumption accounts for by far the greatest proportion of emissions.

| Source of emissions | Emissions in kg $CO_2e$ | Emissions in (%) |
|---|---|---|
| Fertiliser | 41 | 0.0025 |
| Pesticide | 70 | 0.0043 |
| Packaging and growing containers | 31,201 | 1.9156 |
| Energy (total emissions) | 1,488,800 | 91.4049 |
| Seed & young plants | 50 | 0.0031 |
| Substrates | 108,634 | 6.6696 |
| Total emissions (all sources) | 1,628,796 | 100.0000 |

The table below compares emissions for 1,000 young cabbage plants grown in 4-cm press pots (cultivated from March) with emissions for 1,000 miniature poinsettias (cultivated from August). Because the crop is grown in a heated greenhouse, energy consumption accounts for the greater part of emissions arising from poinsettia production. For young cabbage plants grown in press pots, substrate-related emissions amount to 50% of the total.

| | Cabbage | | Poinsettia | |
|---|---|---|---|---|
| Source of emissions | Emissions in g $CO_2e$ | Emissions in % | Emissions in g $CO_2e$ | Emissions in % |
| Fertiliser | 0.24 | 0.0032 | 431.07 | 0.6341 |
| Pesticides | 0.40 | 0.0054 | 1.55 | 0.0023 |
| Packaging & growing containers | 0.00 | 0.0000 | 2,218.53 | 3.2635 |
| Energy | 3,634.00 | 49.1241 | 58,317.00 | 85.7853 |
| Seed & young plants | 0.95 | 0.0128 | 1,557.00 | 2.2904 |
| Substrates, of which: | 3,762.00 | 50.8544 | 5,455.00 | 8.0244 |
| – Substrate production (cradle to gate) | (2,200.00) | (29.7394) | (4,032.00) | (5.9311) |
| – Substrate transport to the grower | (1,562.00) | (21.1150) | (1,423.00) | (2.0933) |
| Emissions per 1,000 plants | 7,397.59 | 100.0000 | 67,980.15 | 100.00 |



# 6.0
# MODERN WORKING IN A MODERN WORKPLACE

# Employees

## 404:103-1, 404:103-2, 404:103-3 | *Creating a positive perspective*

Our organisation's success depends on our employees' commitment, motivation and expertise. It is, therefore, crucial that we have a forward-looking work environment that enables dialogue and transparency; one that creates an atmosphere conducive to innovation. These aspects are an integral part of our sustainable development.

We want our employees to enjoy working in our company. Our low staff turnover shows that a lot of them do, as does the fact that many of our workforce have been with us for several decades. We want this to remain the case. Which is why we are intensifying and being innovative with ways to keep us attractive as an employer.

In the years ahead, a generational shift is coming for a number of positions – and this includes key posts within Klasmann-Deilmann. In succession planning, our policy is to focus on our own young employees. Our business growth means that, particularly for highly specialised business units and employee roles, we need additional expertise that we wish to develop internally and, as required, enrich with new recruits from outside.

In the light of these developments we have, at an early stage, established a strategic personnel management function that is integrated within Klasmann-Deilmann GmbH, the lead company. It is guided centrally and implemented with assistance from our subsidiaries. Various instruments, measures and processes are continuously reviewed as to their effectiveness. To this end, Human Resources and management consult closely with each other and the relevant subsidiaries, teams and employees. This allows a quick response if it is decided that revisions must be made, additional aspects considered or certain things dispensed with.

## 404:103-2 | *A modern work environment*

2018 saw the Klasmann-Deilmann Group's head office functions move into the 'Innovation Center'. The reason for this investment is our continuous growth. This new building provides additional PC workstations and open-plan areas for more than 40 employees. It also houses an Academy and a multimedia exhibition area, thus providing a suitable setting for events. It is from this new facility that the Group is now managed, and strategic and international cooperation strengthened. And large parts of our 'Business Center' (the former administrative building) have been extensively refurbished and modernised. A modern experimental greenhouse called the 'Research Center' has been purpose-built for research projects on innovative growing media, growing systems and raw materials for substrates. The functionally related 'Technikum' is a facility equipped with the ultramodern systems typical of nurseries today; in particular, it enables practical trials to be conducted for research-and-development purposes. The entire location is thus geared towards research, development and innovation.

### *Digitisation*

Digitisation of administrative processes, as well as processes in sales, production and logistics, is among our organisation's priority objectives. With the IT solutions we apply, we are operating at the state of the art and are ahead of the curve when it comes to developments in the international commercial-horticulture sector. What is key is that the applications we use are forward-looking and enable dialogue to take place that is intuitive and marked by confidence and authenticity within our global network of subsidiaries, sales partners and customers. This is why we are investing on a large scale in IT solutions from leading providers, and developing our own programs that are precisely geared to our business model and deliver genuine added value to our customers. What is crucial here is that our employees can make sense of this digitisation process at all times, continue to identify with their respective roles and are well able to fulfil them. Part of our change management strategy, therefore, is provision of in-house coaches from the various divisions. We are meeting the greater need for professional-development activities by means of both internal and external opportunities.

### 404-2 | *Strengthening competencies, encouraging talent*

As part of our long-term personnel development strategy, we have established several programmes aimed at improving our employees' competencies, integrating them more fully in our business development, and encouraging their stronger identification with our organisation.

**go on®** — International talent programme to help promising junior employees develop their personal skills

**go ahead®** — International competency programme for staff who are key post-holders, aimed at strengthening established competencies and developing areas where they are less strong

**go lean®** — Programme involving implementation of lean-management methods in both production and administration, with the aim of ongoing improvement

**go forward®** — International programme to strengthen capacity for innovation, including workshops offering new approaches to idea generation, to creativity methods, to contributing suggestions for improvement, and to sharing best practice

**go together®** — Programme for all levels of the workforce and all subsidiaries aimed at enhancing dialogue, especially with management

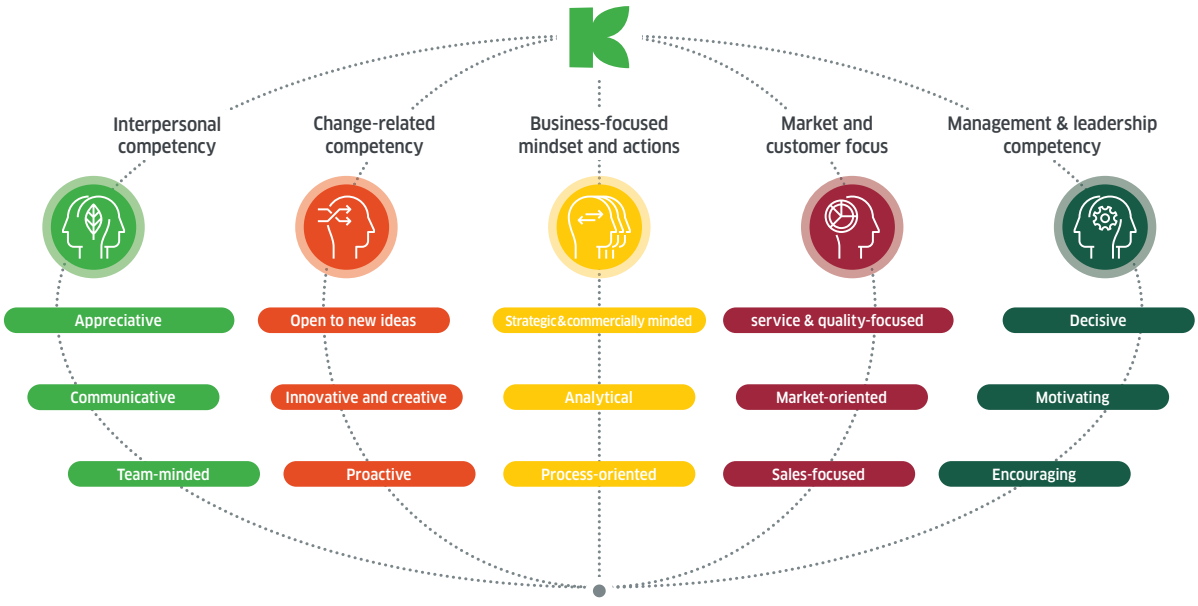
**go start®** — In-house programme for vocational trainees and those on combined vocational/degree courses, covering the following: easing into working life, professional development, deeper exploration of speciality-related issues, and strengthening personal and social skills

**Among the outcomes of the continual ‘go’ programmes in 2019 and 2020 were:.**

- numerous shop floor sessions for both Production and Administration teams as a result of the launch of ‘go lean’;
- a series of meetings involving the workforce and top management, chiefly at European locations, as part of ‘go together’;
- 155 new ideas that streamline our processes and take the company forward in various respects;
- thirty-two promising junior employees from China, Germany, Ireland, Latvia, Lithuania, the Netherlands and Singapore who have been strengthened in their personal and professional development since 2017 by participating in intensive two-year programmes.

## 404:103-2 | *Competency management model*

Our in-house model of competency management is proving useful in this context. This has, since 2017, been the key approach for many tools used in systematic personnel development. Its very specific requirements make targeted support measures possible.



## 404-2 | *Vocational training, on-the-job trainees and scholarships*

Each year we offer a number of vocational training places, especially for administrative and IT-related job profiles. Combined vocational training und degree programmes, part-time courses of study for those in employment, and job-integrated study programmes are playing an increasingly important role in this regard. At the end of 2016, the Chamber of Commerce and Industry (IHK) for Osnabrück, Emsland and Bentheim County awarded us 'IHK Top Training Workplace' status, which was recertified in 2021. Internships combined with work or studies, and opportunities to produce Bachelor's and Master's theses, are also increasingly made use of. Our measures also include awarding further 'Deutschlandstipendium' scholarships and locally based scholarships for the Emsland region ('Emslandstipendium'), as well as funding under the 'EmslandTalents' scheme.

In order to attract especially promising candidates, particularly international ones, we are increasing opportunities that enable recruits to join us as on-the-job trainees. For some years now, we have continuously had International Trainees on our team. The focus here is on future opportunities in market development, production and digital business models. Against this background, we are expanding our contacts with higher-education institutions – including Osnabrück University of Applied Sciences, and Wageningen University & Research in the Netherlands – that specialise in professional fields of particular relevance to us.

We ensure that, in all cases, close guidance is provided within the relevant departments. It is not only high-quality training in the subject matter itself that is important to us, but also personality development. Many of the young people who complete their vocational training journey with us are subsequently taken on as new employees.

## 102-16, 404:103-2 | *Our leadership standards*

Our company leaders are asked to perform a balancing act, reconciling diverse interests. Considerable demands are placed on them – both by their staff and by their own line managers. And a lot is required of them in dealings with customers and suppliers as well. Our executives also greatly influence the way the firm does business, what the working atmosphere is like and where a given department stands in relation to the organisation as an integrated whole. In view of this, Leadership Standards are in place, which constitute a binding framework for action on the part of each and every executive.

**We, the executives of Klasmann-Deilmann, shall …**

- exemplify the Leadership Standards and willingly invest the time needed to perform our leadership role;
- consistently act and make decisions in the interests of sustainable business success on the part of the Klasmann-Deilmann Group;
- agree on achievable goals with our employees, keeping in mind the wider strategic corporate objectives;
- appreciate good performance and communicate this appreciation;
- help our employees to develop professionally and personally in line with needs;
- give and receive constructive feedback promptly and on a regular basis;
- provide information in a timely manner, and communicate understandably and appreciatively;
- honour appointments, commitments and agreements made, and implement any decisions taken both reliably and wholeheartedly;
- address problems, conflicts and mistakes objectively and remedy them as soon as possible;
- be open to new ideas and continuously improve operational processes.

### *Female executives*

Across the Group, we currently employ 11 female executives, eight of them at our international locations. These account for 14% of our worldwide total of 110 executives.

## 102-16, 404:103-2 | *Compliance requirements for the entire workforce*

The point of departure for our rigorously implemented compliance policy was training provided to Klasmann-Deilmann GmbH's executives in 2009. Since then, management staff have been familiarised with these principles as part of their induction training, and have committed to observing them.

Additionally, an agreement with the Management Board and the General Works Council came into effect in November 2013 that requires all employees of the Klasmann-Deilmann Group in Germany to comply with, among other things, competition and monopolies law, a prohibition on the offering and granting of benefits, and the prohibition of money laundering.

The managing directors and the financial executives from our international subsidiaries undergo training on Group-wide compliance requirements, most recently in the autumn of 2018. They were also put in charge of implementing relevant arrangements in their particular company.

## 404-2 | *The working-life span lengthens*

In the future, our staff will remain in employment for longer than it would have been the case a few years ago. We are encouraging this trend by creating attractive conditions with regard to working hours, provision of the right equipment and resources and, in particular, health promotion. The mechanisation of work processes in our technical/industrial operations has reached a high level at all locations, as has the equipping of office workplaces, so that physically demanding work is required only in exceptional cases. In Germany, our workforce also benefits from the option of partial retirement.

## *Health and safety management strengthened*

Klasmann-Deilmann maintains a health and safety management system whose goal is the total prevention of accidents. Its aim is to identify potential workplace hazards in good time and, as far as possible, to remove or remedy them. Among the measures to achieve this are regular on-site inspections by in-house and external safety experts, company medical officers and safety officers, as well as meetings of the health and safety committees. Additionally, incidents are automatically documented at organisational level. Near misses, too, are thoroughly documented and assessed within the health and safety committee. Employees periodically receive training on this topic. To involve them closely in the implementation of health and safety measures, special rewards are available for ideas to enhance workplace safety proposed under the employee suggestion scheme.

Nevertheless, we recorded a total of 25 work-related accidents in 2020, of which 15 were notifiable. In 2019, three of the 18 work-related accidents were notifiable.

### 404-2 | *Promoting health*

We run a proactive health management programme which is an integral part of all operating processes, its aim being to maintain, improve or restore the health and well-being of our employees. A body consisting of executives, works council members and our company medical officer advises at regular intervals on measures to promote health.

Central elements are regular preventive health check-ups as well as promoting various measures aimed at improving employees' general health, including free flu vaccinations. In addition, we provide a monthly allowance to financially support employees throughout Germany who take up sporting activities in gyms and swimming pools. Small teams, the makeup of which changes, are also increasingly participating in regional sporting events. There are of course health benefits, but the focus here is also – and primarily – on the shared experience this provides.

Measures to prevent psychological stress are also in place. In conjunction with the employee representation body and health and safety committees, a risk assessment approach was developed in which psychological stress for different work areas was listed and weighted, with procedural instructions for line managers drawn up on this basis.

The proportion of time employees are at work and not absent due to illness (Gesundheitsquote,'health rate') for all employees of the Klasmann-Deilmann Group – including time off sick greater than six weeks' duration – increased to 94.6 % in 2020, having stood at 93.9 % in 2019 and 94.7 % in 2018. The number of paid sick days per employee rose slightly to 14.7 days in 2020, having stood at 14.5 days in 2019 and 13.4 days in 2018.

## *Community commitment*

In this globalised world, our company is part of a diverse network involving people, professional associations and other organisations, and the worlds of politics, culture and sport, as well as very different interest and needs. We take our social responsibility (which extends beyond our business objectives) seriously. That's why we do what we can to get involved: financially, in the realm of ideas, on a voluntary basis and always with great dedication.

Klasmann-Deilmann GmbH supports local sports clubs, for example – especially in communities that are home to our employees. It also sponsors specific charitable and cultural projects. Every year during the Advent season, a major fundraising effort takes place, with selected clubs, associations and projects in the social sphere receiving financial assistance.

### *Coronavirus crisis management*

We responded to the coronavirus pandemic as it unfolded in early 2020 by appointing a central Crisis Management Team for our corporate group, which was assisted at each of our international subsidiaries by the local top management and another member of staff. The objective of this emergency response was to prevent our workforce, individuals in partner companies, and customers from contracting COVID-19, and to maintain full delivery capacity for Klasmann-Deilmann. Successfully implemented measures included:

- introduction of hygiene and distancing policies;
- distribution of protective masks;
- implementation of a comprehensive working-from-home policy;
- provision of administrative staff with notebook computers, monitors and other equipment required for remote working;
- implementation of a raft of measures aimed at protecting workers in extraction, production and dispatch operations, who are unable to work from home and some of whom do shift work;
- carrying out of rapid tests several times per week in conjunction with company medical officers;
- provision of self-testing kits, especially for international locations;
- carrying out of an extensive vaccination campaign in Germany which had, by 31 July 2021, resulted in an 82% vaccination rate;
- provision of guidance in individual cases, and tracing of contact chains in cases involving risk or quarantining measures;
- fully and regularly informing the workforce on all important developments, and open meetings (via video conference) of the Crisis Management Team.

### 404:103-2 | *A family-friendly company*

Klasmann-Deilmann is among the founding members of the Emsland region's 'Work and Family' foundation (www.familienstiftung-emsland.de), whose aim is to help local people combine family and career. The foundation first certified us as a family-friendly company in 2012. Its November 2018 audit resulted in our family-friendliness being confirmed for the third time and this quality label being renewed up to the end of 2021. This involved not only reviewing what had already been achieved but also, and primarily, identifying forward-looking approaches and opportunities. Since each stage of life leads to different aspirations concerning career and family, employers should gear themselves to greater workplace flexibility as soon as possible so they can keep their long-term appeal for good employees.

## 102-7, 102-8, 102-41 | *Slight decline in headcount*

Since 2020, the number of our employees has been groupwide reported uniformly in full time equivalents (fte). A direct comparison with the previous year's figures is therefore only possible to a limited extent. Overall, we have recorded a slight decrease in the number of employees. Out of 907 employees in 2020, a total of 394 men and women were in administrative roles in 2020, with 513 in technical/industrial jobs. The proportion of those employed outside Germany stood at 66.8% in 2020 (having been 60.6% in 2019 and 66.9% in 2018).

Of personnel employed in Germany, 52% have employment contracts directly covered by collective-bargaining agreements. Usually, the essence of these agreements is transferred to other parts of the workforce in Germany. Outside Germany, there are no such agreements that cover employees in our subsidiaries.

The majority of our activities are carried out by our permanent employees. Additionally, the Klasmann-Deilmann Group employs workers of subcontracted employers at its production sites, especially during the summer months; these may total between 100 and 200 individuals at any given time.

In order that production can cope with the strong, seasonal build-up of delivery orders, we use intermediate storage facilities in France, Germany, Austria, Switzerland, Hungary, China and Australia; these are not run by employees of the Klasmann-Deilmann Group.

| | 2020 | | | 2018 | | | 2016 | | | 2013 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Σ | ♂ | ♀ | Σ | ♂ | ♀ | Σ | ♂ | ♀ | Σ | ♂ | ♀ |
| Germany | 301 | 246 | 55 | 344 | 276 | 68 | 356 | 283 | 73 | 371 | 302 | 69 |
| Lithuania | 324 | 265 | 59 | 392 | 335 | 57 | 306 | 257 | 49 | 295 | 259 | 36 |
| Latvia | 96 | 77 | 19 | 110 | 86 | 24 | 106 | 81 | 25 | 88 | 59 | 29 |
| Ireland | 52 | 49 | 3 | 71 | 68 | 3 | 62 | 58 | 4 | 69 | 66 | 3 |
| Netherlands | 55 | 50 | 5 | 47 | 44 | 3 | 37 | 34 | 3 | 34 | 32 | 2 |
| France | 21 | 12 | 9 | 20 | 11 | 9 | 21 | 12 | 8 | 19 | 11 | 8 |
| Belgium | 13 | 11 | 2 | 14 | 10 | 4 | 10 | 8 | 2 | 9 | 7 | 2 |
| Singapore | 11 | 3 | 8 | 11 | 3 | 8 | 10 | 2 | 8 | 9 | 2 | 7 |
| China | 15 | 7 | 8 | 14 | 8 | 6 | 10 | 7 | 3 | 0 | 0 | 0 |
| Poland | 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 |
| USA | 2 | 2 | 0 | 2 | 2 | 0 | 3 | 2 | 31 | 4 | 1 | 3 |
| Austria | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 |
| Japan | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 907 | 733 | 174 | 1041 | 853 | 188 | 938 | 755 | 183 | 915 | 750 | 165 |

Figures from 2020 onwards are full-time equivalents (fte)

| | | | |
|---|---|---|---|
| Permanent contracts: | 797 | Männer: | 652 |
| | | Frauen: | 145 |
| Fixed-term contracts: | 110 | Männer: | 82 |
| | | Frauen: | 28 |

Figures are full-time equivalents (fte)

| Mode of employment | | | 2020 | 2019 | 2018 | 2017 | 2016 | 2013 |
|---|---|---|---|---|---|---|---|---|
| Total headcount | | | 907 | 1.027 | 1.041 | 1.010 | 938 | 915 |
| Full-time | | | 868 | 975 | 1008 | 981 | 896 | 868 |
| Permanent contracts: | Administrators | Men: | 244 | 248 | 231 | 208 | 234 | 208 |
| | | Women: | 94 | 111 | 112 | 100 | 109 | 94 |
| | Technical/ Industrial | Men: | 402 | 418 | 442 | 437 | 436 | 449 |
| | | Women: | 21 | 20 | 21 | 30 | 24 | 27 |
| Fixed-term contracts | Administrators | Men: | 9 | 1 | 20 | 34 | 1 | 4 |
| | | Women: | 10 | 5 | 17 | 10 | 2 | 2 |
| | Technical/ Industrial | Men: | 72 | 132 | 156 | 154 | 78 | 83 |
| | | Women: | 16 | 40 | 9 | 8 | 12 | 1 |
| Part-time | | | 39 | 52 | 33 | 29 | 42 | 47 |
| Permanent contracts: | Administrators | Men: | 5 | 9 | 3 | 3 | 5 | 3 |
| | | Women: | 30 | 39 | 26 | 24 | 34 | 39 |
| | Technical/ Industrial | Men: | 1 | 1 | 0 | 0 | 0 | 3 |
| | | Women: | 0 | 1 | 1 | 1 | 1 | 1 |
| Fixed-term contracts: | Administrators | Men: | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Women: | 2 | 1 | 1 | 0 | 2 | 1 |
| | Technical/ Industrial | Men: | 1 | 1 | 1 | 1 | 0 | 0 |
| | | Women: | 0 | 0 | 1 | 0 | 0 | 0 |

Figures from 2020 onwards are full-time equivalents (fte)

# 7.0
# GRI AND ISO

# 7.1 GRI Content Index

## 102-55


For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report.

GRI 101: Foundation 2016

GRI 102: General Disclosures 2016

| GRI Standard | Disclosure | Page | Omission |
|---|---|---|---|
| GRI 102: Organizational profile | 102-1: Name of the organization | 19 | -- |
| | 102-2: Activities, brands, products, and services | 13, 14, 42, 43, 58 | -- |
| | 102-3: Location of headquarters | 19 | -- |
| | 102-4: Location of operations | 19, 43 | -- |
| | 102-5: Ownership and legal form | 21 | -- |
| | 102-6: Markets served | 45, 52, 54 | -- |
| | 102-7: Scale of the organization | 21, 22, 43, 52, 54, 90 | -- |
| | 102-8: Information on employees and other workers | 90 | -- |
| | 102-9: Supply chain | 41, 45 | -- |
| | 102-10: Significant changes to the organization and its supply chain | 19 | -- |
| | 102-11: Precautionary Principle or approach | 8, 33, 34, 43, 53, 60 | -- |
| | 102-12: External Initiatives | 27, 33, 60, 61 | -- |
| | 102-13: Membership of associations | 27 | -- |
| GRI 102: Strategy | 102-14: Statement from senior decision-maker | 8 | -- |
| GRI 102: Ethics and Integrity | 102-16: Values, principles, standards, and norms of behavior | 41, 60, 85, 86 | -- |
| GRI 102: Governance | 102-18: Governance structure | 21 | -- |
| GRI 102: Stakeholder engagement | 102-40: List of stakeholder groups | 26 | -- |
| | 102-41: Collective bargaining agreements | 90 | -- |
| | 102-42: Identifying and selecting stakeholders | 26 | -- |
| | 102-43: Approach to stakeholder engagement | 26, 27 | -- |
| | 102-44: Key topics and concerns raised | 17 | -- |

| GRI 102: General Disclosures 2016 | | | |
|---|---|---|---|
| GRI Standard | Disclosure | Page | Omission |
| GRI 102: Reporting practices | 102-45: Entities included in the consolidated financial statements | 22 | -- |
| | 102-46: Defining report content and topic boundaries | 16 | -- |
| | 102-47: List of material topics | 17 | -- |
| | 102-48: Restatements of information | 65, 66 | -- |
| | 102-49: Changes in reporting | 17, 65 | -- |
| | 102-50: Reporting period | 12 | -- |
| | 102-51: Date of most recent report | 12 | -- |
| | 102-52: Reporting cycle | 12 | -- |
| | 102-53: Contact point for questions regarding the report | 12 | -- |
| | 102-54: Claims of reporting in accordance with the GRI Standards | 12 | -- |
| | 102-55: GRI Content Index | 94 | -- |
| | 102-56: External assurance | 12, 97 | -- |

| Topic-specific disclosures (GRI Standards 2016) | | | |
|---|---|---|---|
| GRI Standard | Disclosure | Page | Omission |
| **Materials** | | | |
| GRI 103: Management approach | 103-1: Explanation of the material topic and its boundary | 33, 52 | -- |
| | 103-2: The management approach and its components | 33, 42, 46, 52, 54 | -- |
| | 103-3: Evaluation of the management approach | 33, 52 | -- |
| GRI 301: Materials | 301-1: Materials used by weight or volume | 40, 52 | -- |
| | 301-2: Recycled input materials used | 40 | -- |
| **Energy** | | | |
| GRI 103: Management approach | 103-1: Explanation of the material topic and its boundary | 52 | -- |
| | 103-2: The management approach and its components | 52 | -- |
| | 103-3: Materials used by weight or volume | 52 | -- |
| GRI 302: Energy | 302-1 | 72, 73 | -- |
| | 302-2 | 72 | -- |
| **Biodiversity** | | | |
| GRI 103: Management approach | 103-1: Explanation of the material topic and its boundary | 58 | -- |
| | 103-2: The management approach and its components | 44, 58, 60, 61, 62 | -- |
| | 103-3: Evaluation of the management approach | 61 | -- |
| GRI 304: Biodiversity | 304-3: Habitats protected or restored | 61 | -- |

| Topic-specific disclosures (GRI Standards 2016) | | | |
|---|---|---|---|
| GRI Standard | Disclosure | Page | Omission |
| Emissions | | | |
| GRI 103: Management approach | 103-1: Explanation of the material topic and its boundary | 63, 65, 74 | -- |
| | 103-2: The management approach and its components | 65, 74 | -- |
| | 103-3: Evaluation of the management approach | 74,76 | -- |
| GRI 305: Emissions | 305-1: Direct GHG emissions (Scope 1) | 66, 70, 73, 97 | -- |
| | 305-2: Indirect energy-related GHG emissions (Scope 2) | 70, 73, 97 | -- |
| | 305-3: Other indirect GHG emissions (Scope 3) | 70, 97 | -- |
| | 305-4: Intensity of GHG emissions | 68 | -- |
| Effluents and waste | | | |
| GRI 103: Management approach | 103-1: Explanation of the material topic and its boundary: The impacts of our company as defined by the GRI standards mainly relate to the topics of materials, emissions and biodiversity. Wastewater and waste are not among our material topics, but are reported here using the topic-specific GRI Standard 306 where applicable. | ./. | Not applicable |
| | 103-2: The management approach and its components | 44 | -- |
| | 103-3: Evaluation of the management approach | ./. | Not applicable |
| GRI 306: Effluents and waste | 306-1: Water discharge by quality and destination | 44 | -- |
| | 306-2: Waste by type and disposal method | 44 | -- |
| | 306-3: Significant spills | 44 | -- |
| | 305-4: Transport of hazardous waste | 44 | -- |
| | 306-5: Water bodies affected by water discharges and/or runoff | 44 | -- |
| Training and Education | | | |
| GRI 103: Management approach | 103-1: Explanation of the material topic and its boundary | 82 | -- |
| | 103-2: The management approach and its components | 82, 84, 85, 86, 89 | -- |
| | 103-3: Evaluation of the management approach | 82 | -- |
| GRI 404: Training and Education | 404-2: Programs for upgrading employee skills and transition assistance programs | 83, 85, 86, 88 | -- |

# 7.2 SGS Verification Statement

102-56, 305-1, 305-2, 305-3

1

SGS

**Greenhouse Gas Verification Statement Number 5683534 - 2020**

The inventory of Greenhouse Gas emissions in the period 01/01/2020 – 31/12/2020 for

**Klasmann-Deilmann GmbH**

Georg-Klasmann-Str. 2-10
49744 Geeste
Germany

has been verified in accordance with ISO 14064-3:2019 as **meeting the requirements of**

**ISO 14064-1:2018**

To represent a total amount of:

**Total emissions: 206.719 $tCO_2e$**

Direct emissions
59.068 tCOe
Indirect emissions:
147.651 tCOe

From combustion of biomass: 11,89 $tCO_2e$ (excluded in above)
$CH_4$ + $N_2O$ emissions from the combustion of biomass: 9,51 $tCO_2e$ (included in above)

**For the following activities**
Substrate production

Lead Assessor: Dina Bauer
Technical Reviewer: Paula Gómez Geras

Authorised by:

i.V. Thomas Smyk
Customer Service
Industries & Environment

i.A. Dina Bauer
Lead Auditor
Industries & Environment

Environment, Health and Safety

SGS Institut Fresenius GmbH

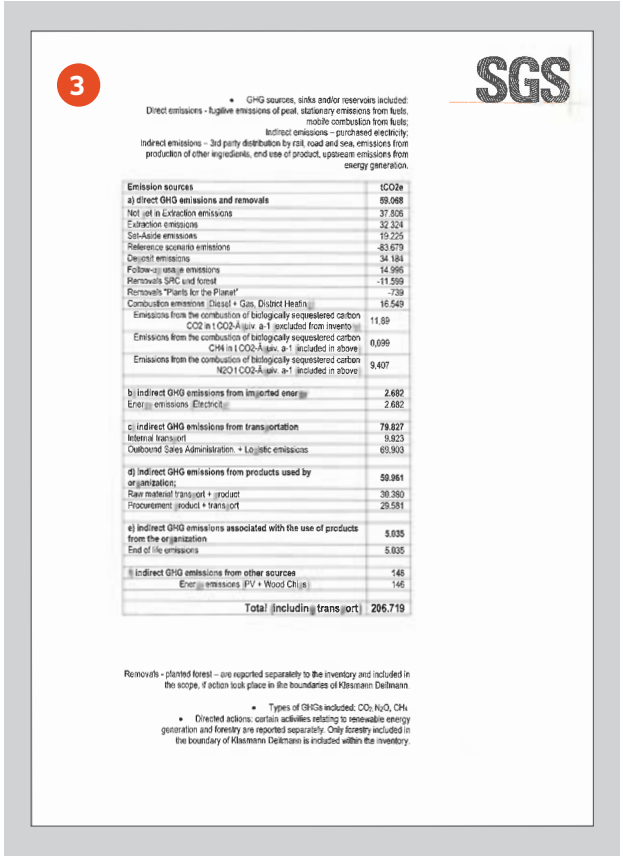
Environment, Health and Safety

SGS Institut Fresenius GmbH
Goetzelstr. 305a
14167 Berlin – Germany

**Verification Statement Date 27th October 2021**

This Statement is not valid without the full verification scope, objectives, criteria and conclusion available on pages 2 to 5 of this Statement.





3

SGS

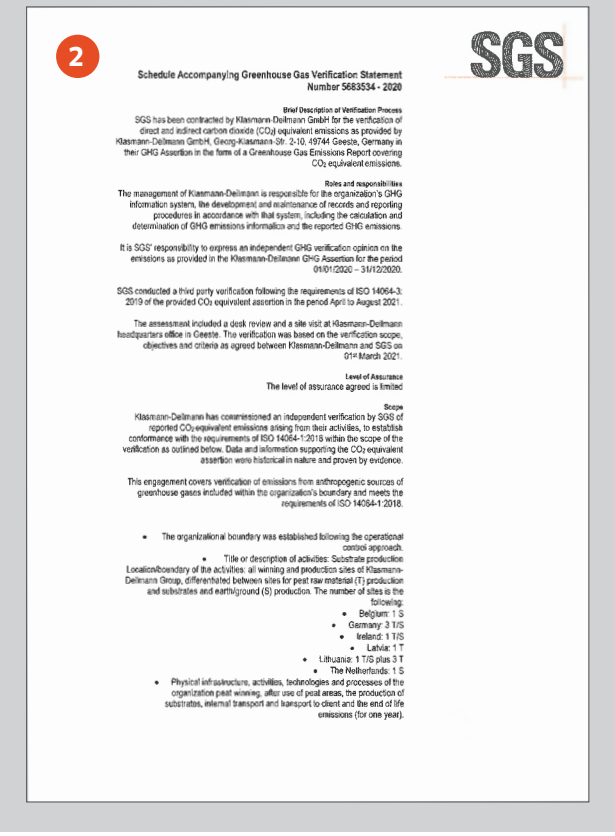
- GHG sources, sinks and/or reservoirs included:

Direct emissions - fugitive emissions of peat, stationary emissions from fuels, mobile combustion from fuels;
Indirect emissions – 3rd party distribution by rail, road and sea, emissions from production of other ingredients, end use of product, upstream emissions from energy generation.

| Emission sources | tCO2e |
|---|---|
| **a) direct GHG emissions and removals** | **59.068** |
| Not yet in Extraction emissions | 37.805 |
| Extraction emissions | 32.324 |
| Set-Aside emissions | 19.225 |
| Reference scenario emissions | -83.679 |
| Drycrust emissions | 34.184 |
| Follow-up usage emissions | 14.996 |
| Removals SRC and forest | -11.599 |
| Removals "Plants for the Planet" | -739 |
| Combustion emissions (Diesel + Gas, District Heating | 16.549 |
| Emissions from the combustion of biologically sequestered carbon CO2 in t CO2-Äquiv. a-1 excluded from invento | 11.89 |
| Emissions from the combustion of biologically sequestered carbon CH4 in t CO2-Äquiv. a-1 included in above | 0,099 |
| Emissions from the combustion of biologically sequestered carbon N2O t CO2-Äquiv. a-1 included in above | 9,407 |
| b) indirect GHG emissions from imported ener | 2.682 |
| Ener emissions (Electricit | 2.682 |
| **c) indirect GHG emissions from transportation** | **79.827** |
| Internal transport | 9.923 |
| Outbound Sales Administration. + Lo istic emissions | 69.903 |
| **d) indirect GHG emissions from products used by organization;** | **59.961** |
| Raw material transport + product | 30.380 |
| Procurement product + transport | 29.581 |
| **e) indirect GHG emissions associated with the use of products from the organization** | **5.035** |
| End of life emissions | 5.035 |
| **f) indirect GHG emissions from other sources** | **146** |
| Ener emissions (PV + Wood Chips | 146 |
| Total (including transport) | 206.719 |

Removals - planted forest – are reported separately to the inventory and included in the scope, if action took place in the boundaries of Klasmann Deilmann.

- Types of GHGs included: $CO_2$, $N_2O$, $CH_4$
- Directed actions: certain activities relating to renewable energy generation and forestry are reported separately. Only forestry included in the boundary of Klasmann Deilmann is included within the inventory.



2

SGS

**Schedule Accompanying Greenhouse Gas Verification Statement Number 5683534 - 2020**

**Brief Description of Verification Process**

SGS has been contracted by Klasmann-Deilmann GmbH for the verification of direct and indirect carbon dioxide ($CO_2$) equivalent emissions as provided by Klasmann-Deilmann GmbH, Georg-Klasmann-Str. 2-10, 49744 Geeste, Germany in their GHG Assertion in the form of a Greenhouse Gas Emissions Report covering $CO_2$ equivalent emissions.

**Roles and responsibilities**

The management of Klasmann-Deilmann is responsible for the organization's GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of GHG emissions information and the reported GHG emissions.

It is SGS' responsibility to express an independent GHG verification opinion on the emissions as provided in the Klasmann-Deilmann GHG Assertion for the period 01/01/2020 – 31/12/2020.

SGS conducted a third party verification following the requirements of ISO 14064-3: 2019 of the provided $CO_2$ equivalent assertion in the period April to August 2021.

The assessment included a desk review and a site visit at Klasmann-Deilmann headquarters office in Geeste. The verification was based on the verification scope, objectives and criteria as agreed between Klasmann-Deilmann and SGS on 01st March 2021.

**Level of Assurance**

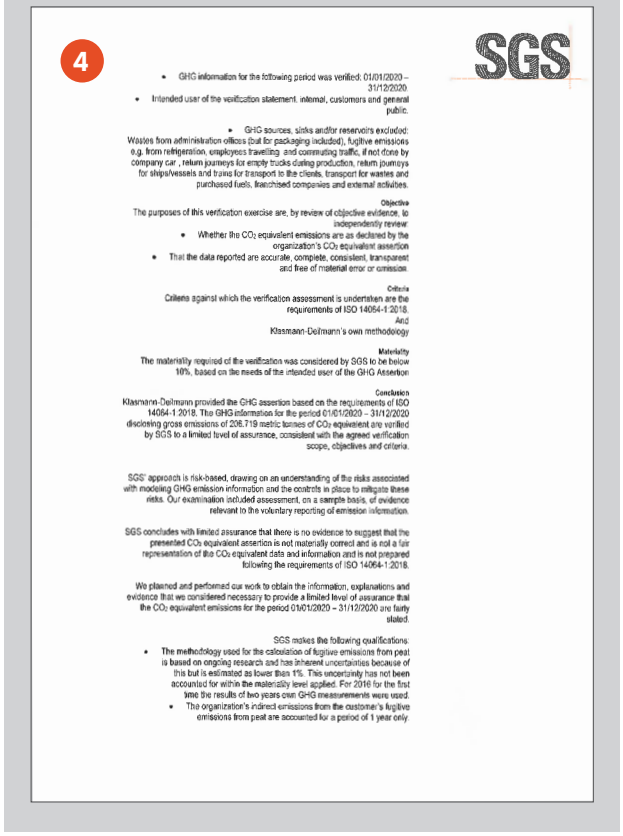
The level of assurance agreed is limited

**Scope**

Klasmann-Deilmann has commissioned an independent verification by SGS of reported $CO_2$ equivalent emissions arising from their activities, to establish conformance with the requirements of ISO 14064-1:2018 within the scope of the verification as outlined below. Data and information supporting the $CO_2$ equivalent assertion were historical in nature and proven by evidence.

This engagement covers verification of emissions from anthropogenic sources of greenhouse gases included within the organization's boundary and meets the requirements of ISO 14064-1:2018.

- The organizational boundary was established following the operational control approach.
- Title or description of activities: Substrate production
- Location/boundary of the activities: all winning and production sites of Klasmann-Deilmann Group, differentiated between sites for peat raw material (T) production and substrates and earth/ground (S) production. The number of sites is the following:
  - Belgium: 1 S
  - Germany: 3 T/S
  - Ireland: 1 T/S
  - Latvia: 1 T
  - Lithuania: 1 T/S plus 3 T
  - The Netherlands: 1 S
- Physical infrastructure, activities, technologies and processes of the organization peat winning, after use of peat areas, the production of substrates, internal transport and transport to client and the end of life emissions (for one year).



4

SGS

- GHG information for the following period was verified: 01/01/2020 – 31/12/2020
- Intended user of the verification statement: internal, customers and general public.
- GHG sources, sinks and/or reservoirs excluded:

Wastes from administration offices (but for packaging included), fugitive emissions e.g. from refrigeration, employees travelling and commuting traffic, if not done by company car , return journeys for empty trucks during production, return journeys for ships/vessels and trains for transport to the clients, transport for wastes and purchased fuels, franchised companies and external activities.

**Objective**

The purposes of this verification exercise are, by review of objective evidence, to independently review:

- Whether the $CO_2$ equivalent emissions are as declared by the organization's $CO_2$ equivalent assertion
- That the data reported are accurate, complete, consistent, transparent and free of material error or omission.

**Criteria**

Criteria against which the verification assessment is undertaken are the requirements of ISO 14064-1:2018.
And
Klasmann-Deilmann's own methodology

**Materiality**

The materiality required of the verification was considered by SGS to be below 10%, based on the needs of the intended user of the GHG Assertion

**Conclusion**

Klasmann-Deilmann provided the GHG assertion based on the requirements of ISO 14064-1:2018. The GHG information for the period 01/01/2020 – 31/12/2020 disclosing gross emissions of 206.719 metric tonnes of $CO_2$ equivalent are verified by SGS to a limited level of assurance, consistent with the agreed verification scope, objectives and criteria.

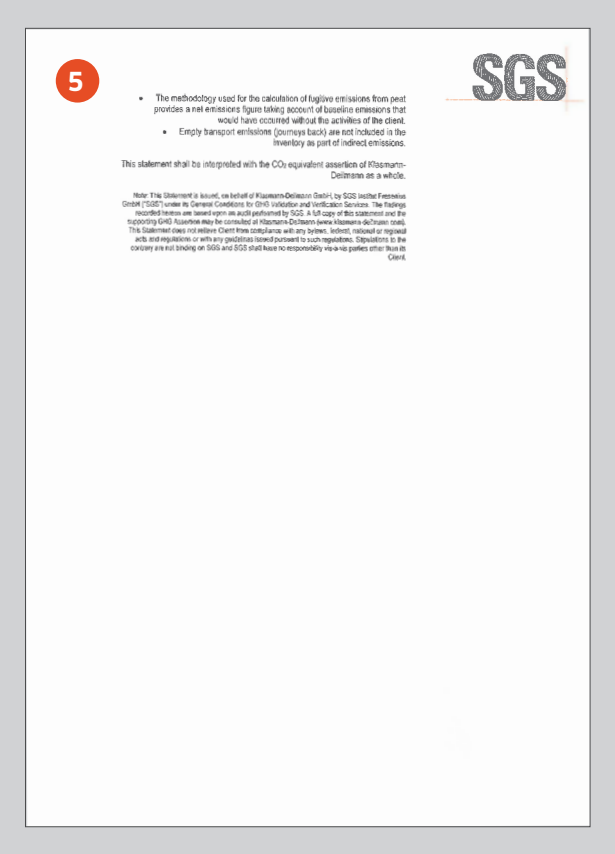
SGS' approach is risk-based, drawing on an understanding of the risks associated with modelling GHG emission information and the controls in place to mitigate these risks. Our examination included assessment, on a sample basis, of evidence relevant to the voluntary reporting of emission information.

SGS concludes with limited assurance that there is no evidence to suggest that the presented $CO_2$ equivalent assertion is not materially correct and is not a fair representation of the $CO_2$ equivalent data and information and is not prepared following the requirements of ISO 14064-1:2018.

We planned and performed our work to obtain the information, explanations and evidence that we considered necessary to provide a limited level of assurance that the $CO_2$ equivalent emissions for the period 01/01/2020 – 31/12/2020 are fairly stated.

SGS makes the following qualifications:

- The methodology used for the calculation of fugitive emissions from peat is based on ongoing research and has inherent uncertainties because of this but is estimated as lower than 1%. This uncertainty has not been accounted for within the materiality level applied. For 2016 for the first time the results of two years own GHG measurements were used.
- The organization's indirect emissions from the customer's fugitive emissions from peat are accounted for a period of 1 year only.



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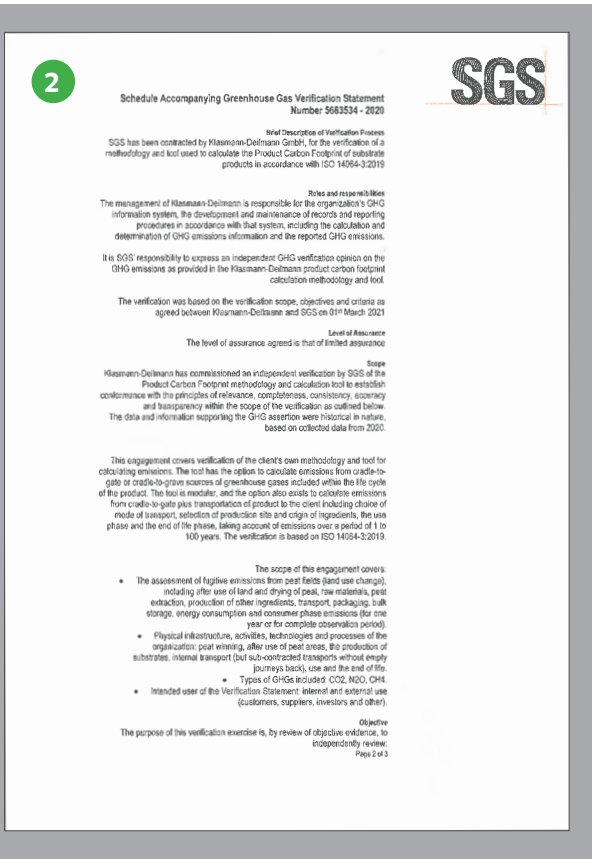
- The methodology used for the calculation of fugitive emissions from peat provides a net emissions figure taking account of baseline emissions that would have occurred without the activities of the client.
- Empty transport emissions (journeys back) are not included in the inventory as part of indirect emissions.

This statement shall be interpreted with the $CO_2$ equivalent assertion of Klasmann-Deilmann as a whole.

Note: This Statement is issued, on behalf of Klasmann-Deilmann GmbH, by SGS Institut Fresenius GmbH ("SGS") under its General Conditions for GHG Validation and Verification Services. The findings recorded hereon are based upon an audit performed by SGS. A full copy of this statement and the supporting GHG Assertion may be consulted at Klasmann-Deilmann (www.klasmann-deilmann.com). This Statement does not relieve Client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.



2

Schedule Accompanying Greenhouse Gas Verification Statement Number 5683534 - 2020

**Brief Description of Verification Process**

SGS has been contracted by Klasmann-Deilmann GmbH, for the verification of a methodology and tool used to calculate the Product Carbon Footprint of substrate products in accordance with ISO 14064-3:2019

**Roles and responsibilities**

The management of Klasmann-Deilmann is responsible for the organization's GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of GHG emissions information and the reported GHG emissions.

It is SGS' responsibility to express an independent GHG verification opinion on the GHG emissions as provided in the Klasmann-Deilmann product carbon footprint calculation methodology and tool.

The verification was based on the verification scope, objectives and criteria as agreed between Klasmann-Deilmann and SGS on 01st March 2021

**Level of Assurance**

The level of assurance agreed is that of limited assurance

**Scope**

Klasmann-Deilmann has commissioned an independent verification by SGS of the Product Carbon Footprint methodology and calculation tool to establish conformance with the principles of relevance, completeness, consistency, accuracy and transparency within the scope of the verification as outlined below. The data and information supporting the GHG assertion were historical in nature, based on collected data from 2020.

This engagement covers verification of the client's own methodology and tool for calculating emissions. The tool has the option to calculate emissions from cradle-to-gate or cradle-to-grave sources of greenhouse gases included within the life cycle of the product. The tool is modular, and the option also exists to calculate emissions from cradle-to-gate plus transportation of product to the client including choice of mode of transport, selection of production site and origin of ingredients, the use phase and the end of life phase, taking account of emissions over a period of 1 to 100 years. The verification is based on ISO 14064-3:2019.

The scope of this engagement covers:

- The assessment of fugitive emissions from peat fields (land use change), including after use of land and drying of peat, raw materials, peat extraction, production of other ingredients, transport, packaging, bulk storage, energy consumption and consumer phase emissions (for one year or for complete observation period).
- Physical infrastructure, activities, technologies and processes of the organization: peat winning, after use of peat areas, the production of substrates, internal transport (but sub-contracted transports without empty journeys back), use and the end of life.
- Types of GHGs included: CO2, N2O, CH4.
- Intended user of the Verification Statement: internal and external use (customers, suppliers, investors and other).

**Objective**

The purpose of this verification exercise is, by review of objective evidence, to independently review:

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1

Greenhouse Gas Verification Statement Number 5683534 - 2020

The Product Carbon Footprint Calculation Tool of
**Klasmann Deilmann GmbH**

Georg-Klasmann-Str. 2-10
49744 Geeste
Germany

has been verified in accordance with ISO 14064-3:2019 as enabling calculation of carbon footprints

For the following calculation tool for substrate products:
56/_KD PEAT Corporate_SQ_2020_SCE2018_210621_final_ list_210928

Lead Assessor: Dina Bauer
Technical Reviewer: Paula Gómez Geras

Authorised by:

| | |
|---|---|
| i.V. Thomas Smyk | i.A. Dina Bauer |
| Customer Service | Lead Auditor |
| Industries & Environment | Industries & Environment |
| Environment, Health and Safety | Environment, Health and Safety |
| SGS Institut Fresenius GmbH | SGS Institut Fresenius GmbH |
| | Goerzallee 306a |

**Verification Statement Date: 18th October 2021**

this Statement is not valid without the full verification scope, objectives, criteria and findings available on pages 2 to 3 of this Statement

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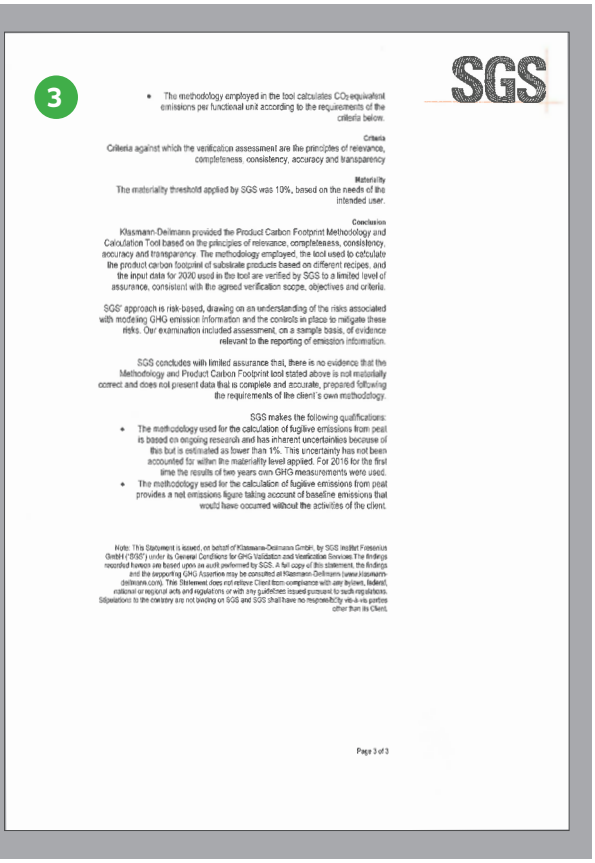

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- The methodology employed in the tool calculates $CO_2$ equivalent emissions per functional unit according to the requirements of the criteria below.

**Criteria**

Criteria against which the verification assessment are the principles of relevance, completeness, consistency, accuracy and transparency

**Materiality**

The materiality threshold applied by SGS was 10%, based on the needs of the intended user.

**Conclusion**

Klasmann-Deilmann provided the Product Carbon Footprint Methodology and Calculation Tool based on the principles of relevance, completeness, consistency, accuracy and transparency. The methodology employed, the tool used to calculate the product carbon footprint of substrate products based on different recipes, and the input data for 2020 used in the tool are verified by SGS to a limited level of assurance, consistent with the agreed verification scope, objectives and criteria.

SGS' approach is risk-based, drawing on an understanding of the risks associated with modeling GHG emission information and the controls in place to mitigate these risks. Our examination included assessment, on a sample basis, of evidence relevant to the reporting of emission information.

SGS concludes with limited assurance that, there is no evidence that the Methodology and Product Carbon Footprint tool stated above is not materially correct and does not present data that is complete and accurate, prepared following the requirements of the client's own methodology.

SGS makes the following qualifications:

- The methodology used for the calculation of fugitive emissions from peat is based on ongoing research and has inherent uncertainties because of this but is estimated as lower than 1%. This uncertainty has not been accounted for within the materiality level applied. For 2016 for the first time the results of two years own GHG measurements were used.
- The methodology used for the calculation of fugitive emissions from peat provides a net emissions figure taking account of baseline emissions that would have occurred without the activities of the client.

Note: This Statement is issued, on behalf of Klasmann-Deilmann GmbH, by SGS Institut Fresenius GmbH ("SGS") under its General Conditions for GHG Validation and Verification Services. The findings recorded hereon are based upon an audit performed by SGS. A full copy of this statement, the findings and the supporting GHG Assertion may be consulted at Klasmann-Deilmann (www.klasmann-deilmann.com). This Statement does not relieve Client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.

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