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.



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1.0 CLIMATE-FRIENDLY VALUE CREATION



Statement by the Managing Directors

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

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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 m³ 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. 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.

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.

Geeste, September 2021 Managing Directors

2.0 Facts & Figures





The Klasmann-Deilmann Group

This short version of our Sustainability Report covers the financial years 1 January 2019 – 31 December 2020 and includes an overview of major developments during the first half of 2021. The complete Sustainability Report according to GRI Standards 2016 can be downloaded from our website.

Our brands





As of July 31, 2021, the Klasmann-Deilmann Group is organized into a management company, a service company, and production and sales companies:

		Lead company Klasmann-Deilmann GmbH							
Г	Production	Г	Service		Г	Sales			
-	Klasmann-Deilmann Produktionsgesellschaft Nord mbH	DE -	Klasmann-Deilmann Service GmbH	DE	_	Klasmann-Deilmann Europe GmbH	DE		
┝	Klasmann-Deilmann Produktionsgesellschaft Süd mbH	DE			-	Klasmann-Deilmann Asia Pacific Pte. Ltd.	SG		
┝	Schwegermoor GmbH	DE			-	Klasmann-Deilmann Americas Inc.	US		
-	UAB Klasmann-Deilmann Silute	LT			-	Klasmann-Deilmann France S. A. R. L.	FR		
┝	UAB Klasmann-Deilmann Laukesa	LT			-	Klasmann-Deilmann Benelux B. V.	NL		
-	UAB Klasmann-Deilmann Ezerelis	LT			-	Klasmann-Deilmann Belgium N. V.	BE		
-	Klasmann-Deilmann Latvia SIA	LV			-	Klasmann-Deilmann Austria GmbH	AT		
-	Klasmann-Deilmann Ireland Ltd.	IE			-	Klasmann-Deilmann Italia S. R. L.	ІТ		
-	Klasmann-Deilmann Potgrondcentrum B. V.	NL			-	Klasmann-Deilmann Polska sp. z o.o.	PL		
-	Klasmann-Deilmann Brugge N. V.	BE			-	Klasmann-Deilmann China Ltd.	CN		
-	UAB Klasmann-Deilmann Bioenergy	LT			-	Klasmann-Deilmann Japan Co. Ltd.	JP		
-	Bol Peat GmbH	DE			-	Klasmann-Deilmann Bioenergy SIA	LV		
-	Australian Growing Solutions Pty. Ltd.	AU			1				
-	Olde Bolhaar Eco-Service GmbH (Anteil 50 %)	DE							
L	Olde Bolhaar Eco-Service B. V. (Anteil 50 %)	NL							



Companies of the Klasmann-Deilmann Group

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

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 SASU, 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.

Key performance indicators for 2016-2020

As a benchmark for our sustainable development, we employ key performance indicators (KPIs) that are tailored to specific aspects of our organisation and reflect our performance. Our goal is continuous improvement.





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 m³) 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 m³).



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 m³ 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

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 m³).



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.



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

Stakeholders

Stakeholder groups involved

Our key stakeholders involved 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.



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 f
 ür 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 group
- 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 f
 ür 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)

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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.

Raw materials and other resources

Over the last few decades, peat sourced from raised bogs has been the most important raw material used in producing 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 CO₂ 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-àvis 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.



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



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.

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 plantavailable 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







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.

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



Production

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.

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.

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.

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.

Innovation

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.



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 horticul-ture 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 FEWER EMISSIONS

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Nature conservation and climate change mitigation

Land use

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 CO₂ 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 CO₂e, 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.



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.

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 CO_2 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.



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.



Emissions from peat extraction

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.

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.

Footprints based on 24 months of direct greenhouse gas measurements

The mean emission levels determined for the black-peat extraction area used for monitoring in Germany were 3.13 t CO_2e ha⁻¹ a⁻¹. On the white-peat extraction site in Lithuania, monitoring revealed average emissions of 8.05 t CO_2e ha⁻¹ a⁻¹.

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



Carbon footprint for 2020

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.

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. 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.

Emission sources	*** 2020 in t CO ₂ e	%	**2018 in t CO ₂ e	**2016 in t CO ₂ e	*2013 in t CO ₂ e
Extraction areas	47,554	23.00	70,471	60,682	75,474
Energy consumption	19,377	9.37	23,084	21,357	19,692
Transport	79,828	38.63	83,412	85,599	65,759
Alternative constituents, purchased peat, additives, fertilisers and substrates produced by partners, packaging material, incl. transport	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 ₂ e)	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

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.





Emission sources in t CO₂e

'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.



Use and generation of renewable energy and of forest resources in t CO₂e

Recipe

Name

Туре

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.



70413 Basissubstrat

Basissubstrat Potgrond P White-peat substrate Black-peat substrate

70002



70062

ProLine Traysubstrat Black-peat / white-peat blend



70080

Seedlingsubstrat Black-peat / white-peat blend



BP Substrat

Black-peat / white-peat blend with wood fibre

			with green compost	with coir pith	with wood fibre		
Emissions "cra	dle 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 "cra	dle to grave"						
2016	162.5	241.9	154.2	145.8	145.9	Figures in	
2018	216.2	245.1	195.7	184.7	168.0	kg CO ₂ e/m ³	
2020	237.1	240.5	201.2	195.7	167.8		

Logistics

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.

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.

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 CO₂e – 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, 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.

5.0 MODERN WORKING IN A MODERN WORKPLACE





Employees

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.

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 openplan 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.

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.



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.

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.

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.



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.

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).

	2020			2018			2016			2013		
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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

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 onsite 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.



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 checkups 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.

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