Jungbunzlauer Corporate Sustainability Report 2017

Jungbunzlauer
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>3</td>
</tr>
<tr>
<td>Jungbunzlauer at a glance</td>
<td>5</td>
</tr>
<tr>
<td>Our value chain</td>
<td>10</td>
</tr>
<tr>
<td>Jungbunzlauer’s contribution to the sustainable development goals</td>
<td>11</td>
</tr>
<tr>
<td>Sustainability at Jungbunzlauer</td>
<td>12</td>
</tr>
<tr>
<td>Overview key data</td>
<td>13</td>
</tr>
<tr>
<td>Our strategy</td>
<td>15</td>
</tr>
<tr>
<td>From Nature to Ingredients® – our sustainability approach</td>
<td>16</td>
</tr>
<tr>
<td>Economic</td>
<td>19</td>
</tr>
<tr>
<td>Introduction</td>
<td>20</td>
</tr>
<tr>
<td>Our business practices</td>
<td>21</td>
</tr>
<tr>
<td>The importance of supply security</td>
<td>22</td>
</tr>
<tr>
<td>How we assure product safety</td>
<td>23</td>
</tr>
<tr>
<td>Environment</td>
<td>24</td>
</tr>
<tr>
<td>Introduction</td>
<td>25</td>
</tr>
<tr>
<td>Tracking and reducing our emissions</td>
<td>26</td>
</tr>
<tr>
<td>Water and waste</td>
<td>29</td>
</tr>
<tr>
<td>Social</td>
<td>30</td>
</tr>
<tr>
<td>Introduction</td>
<td>31</td>
</tr>
<tr>
<td>Our employees</td>
<td>32</td>
</tr>
<tr>
<td>Sustainability in our supply chain</td>
<td>38</td>
</tr>
<tr>
<td>Corporate citizenship</td>
<td>39</td>
</tr>
<tr>
<td>Goals and key figures</td>
<td>41</td>
</tr>
<tr>
<td>GRI content index</td>
<td>42</td>
</tr>
<tr>
<td>Appendix</td>
<td>44</td>
</tr>
<tr>
<td>About this report</td>
<td>45</td>
</tr>
</tbody>
</table>
Preface
GRI [102-14]

It is a deeply rooted belief and value at Jungbunzlauer that we, as a company and as individual stakeholders, have an aspiration and responsibility to “do what is the right thing”. This simple way of articulating the essence of our company values has carried the company from a start-up in Bohemia in 1867 to what we are today – a global leader producing biodegradable ingredients by fermentation using renewable resources. Combining this value-based approach with our vision “From nature to Ingredients®” ties directly into sustainability as an overarching theme for all mankind in 2018.

As progress and growth of the population globally have evolved, we have come to realise that resources in almost all aspects are scarce and that the balance in nature cannot be taken for granted.

As a consequence, we have focused our strategy on investments as well as R&D activities in order to contribute to a more sustainable world in the broadest possible sense. For us this translates in what we produce, how we produce, the way we interact with all other stakeholders and how we work together within our company.

The Jungbunzlauer Corporate Sustainability Report 2017 aims to provide a both formal and informative documentation of our approach, goals and achievements. We do believe that we are on the right track. At the same time we recognise that much more has to be done by society globally to overcome the challenges we face from global warming, creating renewable processes to fighting poverty. Our pledge and aim is to make our contribution to this, so that these challenges can be overcome to the benefit of future generations.

Tom Knutzen
CEO
Jungbunzlauer
at a glance
Jungbunzlauer at a glance
GRI [102-1; 102-2; 102-3; 102-4; 102-5; 102-6; 102-7; 102-8; 102-18; 102-45]

Jungbunzlauer is one of the world’s leading producers of biodegradable ingredients of natural origin. The roots of the international, Swiss-based company date back to 1867. Today, the family-owned company specialises in the production of citric acid, xanthan gum, gluconates, lactics, specialties, special salts, and sweeteners for the food, beverage, pharmaceutical, cleaners and detergents and cosmetics industries, as well as for various other industrial applications. More detailed information about our products can be found in our product brochure.

Jungbunzlauer’s products are manufactured utilising natural fermentation processes where microorganisms transform renewable raw material (carbohydrates from corn, grains or sugar beet) into useful biodegradable products. We are committed to rigorous quality standards and guarantee the excellence and sustainability of our products and services.

Besides the four production sites in Austria, Germany, France, and Canada, Jungbunzlauer operates additional sales offices in the USA, Singapore, the Netherlands, India, Japan, Mexico, and Switzerland.

Our vision "From nature to ingredients®" commits us to the protection of people and their environment. Our natural ingredients contribute to healthier, safer and more sustainable consumer products. Due to continuous investment, state-of-the-art manufacturing processes and comprehensive quality management, we are able to assure outstanding product quality.

Jungbunzlauer Holding AG is a privately-held company that owns several subsidiary companies. Jungbunzlauer Group is headquartered in Switzerland.

At Jungbunzlauer we continuously invest in developing the organisation and our people in order to grow and strengthen our market position – and to ensure that the company is a great place to work.

During the period 2008 to 2017 we invested 1 bn CHF in our four manufacturing sites. Our annual sales are around 900 m CHF. Consolidated equity is in excess of half a billion CHF, representing a solidity ratio of over 50%, and the indebtedness is low both in terms of equity and ratio to free cash flow.

Manufacturing plants & product portfolio

<table>
<thead>
<tr>
<th></th>
<th>Austria</th>
<th>Germany</th>
<th>France</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citrics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Salts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xanthan Gum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gluconates</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lactics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specialties</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweeteners</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Jungbunzlauer’s flat functional structure ensures focus, simplicity and responsiveness. Responsibility for decisions on economic, environmental and social sustainability lies with the Management Committee.

The Audit Committee, formed by members of the Board of Directors, provides independent monitoring and ensures compliance with various financial and legal aspects.
The majority of Jungbunzlauer employees are based in Europe, due to the fact that three of its four production sites are located there.
Percentage of Jungbunzlauer sales by region

Our regionalised setup of sales organisations and respective local distribution partners enables us to provide optimal and efficient service to customers in more than 130 countries. Furthermore, Jungbunzlauer’s flat organisation assures fast decisions.

<table>
<thead>
<tr>
<th>Percentage of Jungbunzlauer sales by market segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaners &amp; detergents</td>
</tr>
<tr>
<td>Health &amp; personal care</td>
</tr>
<tr>
<td>Beverages</td>
</tr>
<tr>
<td>Food</td>
</tr>
<tr>
<td>Industrial</td>
</tr>
</tbody>
</table>

North America 29%

Europe (incl. Russia, Africa and Middle East) 57%

Latin America 6%

Asia & Pacific 8%
Our value chain
Our biodegradable products are manufactured by fermentation of renewable raw materials. All of Jungbunzlauer’s products can be used, transported and disposed of in a secure and ecologically safe way. We produce the three main organic acids, citric, gluconic and lactic acid, by fermentation. Using this as a basis we manufacture a wide variety of derivatives such as mineral salts and esters. We also produce xanthan gum, a biodegradable stabiliser and a natural, zero calorie sweetener called erythritol.

Our main raw material is corn which serves as a carbohydrate source for the fermentation processes. We exploit all side streams in the production process so we produce almost no waste, making our business model very sustainable. Almost all of the by-products from our production processes can still be used and are sold for use in construction, agriculture, feed and biogas. No significant changes have occurred in our organisation or supply chain during the reporting period.

Our main fermentation raw material, glucose syrup, is derived from the renewable raw material corn. We manufacture almost all of the used glucose syrup in dedicated plants at our production sites in Austria, France, and Canada. The used corn is sourced in selected European countries or Ontario, Quebec and the American Midwest, respectively. Formal agreements are in place and in most cases we have a long-term relationship with our suppliers.

Our customers are producers in the food, beverage, pharmaceutical, cleaners and detergents and cosmetics industries as well as various other industrial manufacturers. We transform nature’s plants into useful ingredients and efficient solutions, thereby touching upon millions if not billions of people’s daily lives across the globe.
**Jungbunzlauer’s contribution to the sustainable development goals**

The Sustainable Development Goals (SDGs) are part of a global action plan, initiated by the UN, which has been defined to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.

Jungbunzlauer supports the Sustainable Development Goals and we contribute to several of the SDGs through our sustainability approach.

<table>
<thead>
<tr>
<th>SDG No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</td>
</tr>
<tr>
<td>9</td>
<td>Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation</td>
</tr>
<tr>
<td>12</td>
<td>Ensure sustainable consumption and production patterns</td>
</tr>
<tr>
<td>13</td>
<td>Take urgent action to combat climate change and its impacts</td>
</tr>
</tbody>
</table>

At Jungbunzlauer we believe that our employees are our most important resource. Therefore we attach the utmost importance to the highest labour and health and safety standards and these are embedded in our Corporate Social Responsibility policy. The global demand for citric acid continues to grow, due to consumer trends favouring healthier, biodegradable products. To meet future demands and continue to provide supply security, Jungbunzlauer has in 2018 initiated a project to build a new citric acid plant.

State-of-the-art technologies and process improvements are used at Jungbunzlauer production sites. In order to meet our high standards and to continuously improve product quality, we make ongoing investments in our manufacturing processes and in research and development.

At Jungbunzlauer, we use state-of-the-art technologies and process improvements to sustainably manufacture safe, readily biodegradable products of the highest quality. Our research and development activities are focused on process optimisation, such as the more extensive use of ultra filtration in downstream purification processes. This innovative process step lowers the consumption of filter aids which reduces waste streams and leads to yield improvement in both the fermentation and purification steps of citric acid.

Our investment in numerous energy-saving programmes has resulted in a substantial reduction in energy consumption per unit of production. We continuously work to minimise greenhouse gas emissions. We make use of nearly all our by-products in construction, agriculture, feed or biogas. We operate state-of-the-art wastewater treatment plants in order to lessen the burden on community utilities, we invest in water-saving projects and we continuously improve our processes to maximise the reuse of water.
Sustainability at Jungbunzlauer
As an economic and societal actor Jungbunzlauer is aware of its responsibility towards its clients, employees, environment, and society. As a global leader with brands and products known throughout the world, we aim to address all of our legal, ethical and economic responsibilities. Our mission commits us to the protection of people and their environment, hence our engagement in a variety of environmental, economic and social initiatives geared towards sustainability.
Our strategy
**Our strategy**
GRI [102-12; 102-13; 102-16]

**From nature to ingredients®**

**MISSION**
Be the first choice supplier of our bio-based ingredients. We strive to be the most reliable and sustainable manufacturer building on our core values: excellence, responsibility, commitment and teamwork.

**STRATEGY**
Create superior organic growth and value for all stakeholders through focus, quality, knowledge and efficiency leadership meeting the mega trends demanding safe, sustainable and healthy solutions.

Our vision “From nature to Ingredients®” is to be the preferred provider of bio-based ingredients using our state-of-the-art fermentation technology and renewable raw materials. Consistent with this vision, our Group is dedicated to providing products and services with an emphasis on high quality, reliability and environmental awareness.

The Jungbunzlauer Group takes responsibility for the safety and health of its employees and for the protection of the environment and natural resources. We want to contribute to a positive change in these areas. By committing to our core values – excellence, responsibility, commitment, and teamwork – we have a positive influence on the environment and society while creating growth and value for our stakeholders.

Our strong values have been an essential element of building and growing our company, defining where we come from, what we are and how we want to behave and position ourselves in the future. Embedded in our values is a fundamental expectation that we will behave ethically towards all our stakeholders and within the company itself.

Our commitment to high ethical standards is codified in our Legal, Ethical and Social Commitments.

**Initiatives / Associations**
- GFSI (Global Food Safety Initiative)
- FSSC
- Non-GMO
- Responsible care
- Sedex
- EcoVadis
- Committed to the Ten Principles of the UN Global Compact
- International Labour Organization’s Fundamental Conventions
- Universal Declaration of Human Rights
- REACH
- GHS
From Nature to Ingredients® – our sustainability approach
GRI [102-11; 102-46]

Throughout Jungbunzlauer’s history, the company has sought to make sustainability a keystone of its strategy and has successfully developed and adapted to the requirements of a continuously changing economic and social environment. Today, however, the state of our planet requires a much broader vision in terms of our approach to sustainability. Our environment and climate are threatened by pollution and the unsustainable use of resources. We believe it is necessary for every individual to engage and cooperate with each other in order to address these pressing issues and to find solutions that contribute to the preservation of the planet for future generations. One way of doing this is by choosing business partners that support this vision. Jungbunzlauer’s mission, “From nature to ingredients®,” aimed at environmental, economic and social sustainability, commits us to the protection of people and their environment. We and all our operations are dedicated to sustainability and to bettering society, the environment and the economy.

In order to meet the high quality and safety standards we have set for ourselves, Jungbunzlauer has established a Hazard Analysis Critical Control Point (HACCP) programme for all lines used in the manufacturing of food grade additives or ingredients in all production sites. This meets the requirements of the seven Codex principles (Codex Alimentarius 1997). To demonstrate the efficiency of our food safety systems we have certified our production plants according to the requirements and guidelines of FSSC 22000 as well as ISO 9001. Adherence to these management systems is audited regularly.

Furthermore, all Jungbunzlauer production sites adhere to the Responsible Care® programme, an initiative by the global chemical industry whereby companies, through their national associations, work together to make continuous improvements to their health, safety and environmental performance. In addition, our production site in Germany is certified according to ISO 14001 environment management standard.

The Health, Safety and Environmental Policy of the Jungbunzlauer Group has been issued as a guideline for the management of affiliated companies. It is the responsibility of the management of the subsidiaries to ensure the implementation of this policy, adapted to local circumstances.

Our biodegradable ingredients offer many possibilities for our customers in the production of more sustainable consumer products. Our Application Technology and Technical Service teams support our customers in finding more sustainable and innovative solutions for their products. One example is the development of more environmentally friendly detergents where phosphates can be replaced by our sodium citrate. We choose our suppliers carefully and often have a long-term relationship with them. By screening for social criteria, we ensure that they are in line with our high ethical standards.

Committed to the future – engaged in sustainability
Stakeholders and materiality analysis
GRI [102-40; 102-42; 102-43; 102-44; 102-46; 102-47]

Our stakeholders, as listed below, are affected by our business activities and, in turn, affect our own activities. By acting in accordance with our values and working towards our goals, we earn the trust of our shareholders, customers, business partners, co-workers, suppliers, employees and the communities where we live and work.

Engagement with our stakeholders is conducted by different means, depending on the stakeholder. Customer and employee surveys are carried out on an ongoing basis. The owner family is represented on the Board of Directors. We are in close daily contact with our suppliers and customers. Through our active participation in many organisations and institutions (Initiatives & associations listed in “Our Strategy”) we are aware of changes in relevant regulations and are in contact with local governments and communities.

---

**External stakeholders**
- Customers and potential customers
  - Suppliers
  - Legislature
  - Local governments
  - Local community
  - Competitors
  - Business partners
  - Industry associations
  - Academic institutes

**Internal stakeholders**
- Employees and future employees
  - Management
  - Owner family

---

We constantly strive to develop, explore and implement measures to reduce the environmental impact of our products and to promote environmental sustainability.

We foster communication and cooperation with business and industry partners in order to share experience, knowledge and innovations.

We transform nature’s plants into useful products and efficient solutions for industries around the globe.
Jungbunzlauer’s key topics were defined and validated by an expert group of members from different key departments and by secondary research, taking into consideration the opinions and inputs of our internal and external stakeholders (e.g. customer surveys, dialogue with local communities, employee surveys).

After creating a long list of topics and evaluating these for their impact on sustainable development and their relevance to our stakeholders, the final material topics were chosen. These material topics apply to all subsidiaries of the Jungbunzlauer Group.
Economic
Introduction
GRI [103-1]

As one of the world’s leading companies within our industry, we have a responsibility to set high standards: to be, and be seen to be, a business which is committed to a high level of business ethics (i.e. “We take responsibility”), competence (i.e. “We strive for excellence”), cooperation (i.e. “We work as a team”) and responsibility (i.e. “We are committed”). In a complex global business environment like ours, it is not always easy to adhere to these high standards. As a guideline for this complex topic, our Code of Business Conduct defines the behaviour that the Jungbunzlauer Group expects of all its subsidiaries and employees. It promotes compliance and good corporate governance in a broader sense and enshrines the Jungbunzlauer Group’s commitment to business ethics, integrity, credibility and the preservation of our long-term reputation.

Jungbunzlauer is committed to meeting the expectations of its stakeholders and customers. We supply our customers with high-quality products which are sourced and manufactured in a fair, ethical and environmentally responsible way, and we deal fairly with our customers, suppliers and competitors. We will not engage in anti-competitive sales practices, unfairly limit trade or attempt to exclude competitors from the marketplace. This means that while we compete vigorously, we must act independently and in our own interest in all commercial situations affecting competitive conditions of trade and avoid practices that restrict competition.

It is crucial for our customers to be able to rely on us regarding supply security of safe and specification-conforming products. A lack of supply security can result in serious damage to a company’s reputation and brand, and lead to a loss of trust by stakeholders. Our Group’s reputation is the result of the tradition of high integrity, good conduct, dedication, and unbiased excellence of the people who work here and are fundamental to our success. Our continued ability to successfully compete in our marketplace depends greatly on our employees’ understanding and support of this tradition.

The quality of our products has a profound impact on the quality of our customers’ end products and hence a potential impact on consumer health and safety. Product quality, and product marketing and labelling, are therefore of considerable importance to us and our stakeholders. Jungbunzlauer has implemented many procedures in order to guarantee the secure supply of safe products, such as a sound business continuity plan with corresponding risk assessment. Jungbunzlauer’s commitment to all relevant regulations and to maintaining our high quality standards is assured through our rigorous adherence to the quality systems in place.

In consultation with our stakeholders, “Business practices”, “Supply security” and “Product safety and marketing & labelling” have been identified as relevant challenging topics for Jungbunzlauer in the field of economic sustainability.
Our business practices
GRI [103-1; 103-2; 103-3; 205-2]

Today’s laws and standards of business conduct can be complex, especially for a globally active business. Jungbunzlauer management has issued various policies (Code of Business Conduct, Health, Safety and Environmental Policy, Sustainability Policy, 3rd Party Code of Conduct) which have been shared with all employees, including all governance body members, and are available on our Jungbunzlauer intranet. Standards addressed by these policies include Anti-Competitive Behaviour, Anti-Trust, Anti-Corruption, Bribery and Fraud, Conflicts of Interest, Whistle Blowing, and Data Protection.

The Jungbunzlauer Code of Business Conduct explains in a practical and easy-to-understand way many of the basic rules and principles that apply to our businesses and is applicable throughout our company. It also explains the personal responsibilities each of us bear as a member of the Jungbunzlauer Group. Following the Code of Business Conduct ensures that Jungbunzlauer’s reputation is maintained and helps to make working in the Jungbunzlauer Group a source of great pride.

The Code applies to the Jungbunzlauer Group and all of its subsidiaries, branches and representation offices worldwide and includes members of the Board of Directors, executives, officers and employees, irrespective of their location. The management team of each Jungbunzlauer company is responsible for observing the guidelines in our policies.

All commercial employees (Sales and Product Management) and all six members of our Management Committee received training in Business Ethics and Compliance Basics as well as Corruption Prevention in 2015. The ten members of the board of Jungbunzlauer have not yet received this training. However, training is planned for 2019.

To keep up our high standards in business practices, we are committed to managing the issue of anti-corruption by identifying all individuals to be trained and by delivering new training on general compliance, anti-trust and anti-corruption in 2018. Anti-corruption training will become mandatory for all relevant employees from 2019 onwards. Members of the board will also participate in this training. Business Practices and potential issues are regularly discussed by senior management during monthly Management Committee meetings, and remedial measures implemented if necessary.

We at Jungbunzlauer take all reports of potential misconduct seriously and we have established a transparent and fair grievance system to deal with any concern or complaint. We encourage employees as well as external parties to inform us of potential ethical or legal violations and we investigate any arising issues thoroughly. Our managers and executive board members report any such complaint or concern to the CEO or report at least once a year on the overall situation regarding such issues. The CEO gives the Board of Directors or Compliance Committee a summary report on any such issues that have arisen.
The importance of supply security
GRI [103-1; 103-2; 103-3]

Many threats and challenges arise in today’s business world and it is essential for companies to be prepared. Issues in supply security can harm not only the company’s assets, but also its reputation and brand. It is therefore indispensable for businesses such as ours to analyse potential risks which could compromise the security of supply to our customers. It is of the utmost importance to us at Jungbunzlauer that we be a reliable business partner able to guarantee secure supply of our products.

To strengthen Jungbunzlauer’s ability to avoid interruptions and disruptions in production and to ensure we can act rapidly in crisis situations and thus facilitate continuous supply to our customers, a business continuity plan has been incorporated in our corporate strategy. This plan helps us to be prepared and continue to operate in the event of economic changes, incidents and crisis events, all of which could affect our production and thus the security of supply to our customers. Since robust risk assessment is the basis for a successful business continuity plan, this has been carried out for all of our production sites. Business continuity management offers a structure for an effective response in emergency situations and therefore helps to minimise damage to the company, stakeholders and customers.

An analysis has been performed to identify the most relevant risks and response plans have been implemented.

Another advantage is that our production sites are located in politically stable countries, making any disruption in production less likely. Additionally, since most of our customers are in quite close proximity to our manufacturing plants, the supply is less dependent on logistics.

<table>
<thead>
<tr>
<th>Relevant risks</th>
<th>Precautionary measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw material supply</td>
<td>We operate our own raw material plants which provide the carbohydrate raw material needed to manufacture our products. Thus we do not rely on third parties for supply security of our main raw material – glucose syrup. Own stock level of corn covers several weeks supply for glucose syrup production. We usually source other crucial materials from multiple suppliers and agreements with different approved suppliers are in place to mitigate the risk of delivery shortages.</td>
</tr>
<tr>
<td>Energy supply</td>
<td>The risk of a production standstill due to power failure is mitigated through the use of a mix of own power generation in the various sites and different supply lines that provide secure grid power to the production plants.</td>
</tr>
<tr>
<td>Production</td>
<td>Jungbunzlauer production plants are well organised and high safety standards are in place. The condition of all crucial equipment and machinery is monitored and supported by preventive maintenance programmes to avoid unplanned outages.</td>
</tr>
<tr>
<td>Inventory</td>
<td>We carry sufficient inventory at company-owned and distributor warehouses around the world.</td>
</tr>
<tr>
<td>IT systems</td>
<td>Customer-related business data processing systems are hosted on dedicated servers, operated by a professional data center, having a redundant infrastructure. All intersite data transfer and public-facing IT server interfaces are encrypted. General security measures are in place.</td>
</tr>
<tr>
<td>Natural disasters</td>
<td>Emergency plans and evacuation procedures are in place in case of fire or flooding. Alarm systems and firefighting measures are in place at all production sites.</td>
</tr>
<tr>
<td>Terrorism</td>
<td>All sites are certified to the FSSC 22000 food safety standard. Food defence, biovigilance and bioterrorism have been taken into account in accordance with Chapter 18 of FSSC 22000 guidelines. Furthermore, we are in compliance with the guidelines of C-TPAT (Customs-Trade Partnership Against Terrorism).</td>
</tr>
</tbody>
</table>
How we assure product safety
GRI [103-1; 103-2; 103-3; 417-2]

Jungbunzlauer is committed to providing an overall positive experience to its customers, and establishing itself as a trustworthy, reliable, and professional partner.

The quality and safety of our products has a profound impact on the quality and safety of our customers’ end products. This is why we subscribe to the zero defects principle which applies not only to our products, but also to packaging, documents and logistics. Jungbunzlauer is committed to complying with all relevant legal obligations, providing products with the highest levels of food safety and fulfilling our specifications. We constantly assess our quality and food safety systems in order to assure continuous improvement and question systematically the effectiveness, efficiency and safety of our processes, and we implement preventive and corrective actions where necessary. Our management systems for food safety and quality are tools we use to assure our success in realising our food safety and quality policy.

Jungbunzlauer’s comprehensive quality commitment means that it fulfils the requirements of the ISO 9001 Quality Management System Standards. The company’s plants have therefore also been certified according to ISO 9001 criteria. Furthermore, all Jungbunzlauer production sites have completed their Food Safety System Certification (FSSC) 22000:2010, which is audited by a third party every three years. This ISO-based certification scheme is internationally accepted and is one of the food safety management systems recognised by the Global Food Safety Initiative (GFSI). The Ladenburg plant in Germany is dedicated to the manufacture of active pharmaceutical ingredients (APIs) and manufacture of these products complies with the ICH Q7 Good Manufacturing Practice for Active Pharmaceutical Ingredients. This plant is GMP-inspected by Regierungspräsidium Tübingen, Germany and by the US FDA.

Jungbunzlauer continuously improves its food safety management systems based on customer feedback and internal and external audits. In the event of complaints from our customers, thorough investigations are performed at the production sites and corrective actions are implemented immediately.

Quality goes beyond manufacturing; strict regulations in packaging and logistics ensure delivery on schedule without loss of quality. Our consistently high quality and purity standards minimise the risk of quality deficiencies in our customers’ products and therefore prevent brand and image damage.

All relevant Jungbunzlauer products are REACH-registered. GHS standard Safety Data Sheets, maintained by our Technical Service, are available for all products in all relevant languages and are automatically distributed via our ERP system. To stay up to date with relevant laws and regulations worldwide, our Technical Service monitors these regularly and works in close cooperation with organisations and consultants as well as with distribution partners.

During the reporting period, there were no incidents of non-compliance with regulations and/or voluntary codes concerning product and service information and labelling.
**Introduction**

GRI [103-1; 103-2; 103-3]

We are facing global challenges such as climate change, water security, waste generation, and access to energy services. Pollution and the unsustainable use of non-renewable resources threaten our environment. Jungbunzlauer’s business activities are both affecting our environment and are being affected by the global challenges connected to environmental change. Our business depends largely on the availability of renewable raw materials (corn), water and reliable access to energy sources - key areas that are all vulnerable to climate change. Because of the global nature of our company, our key concerns focus on challenges such as CO₂ emissions, energy consumption, water usage, waste generation and sustainable procurement, which give rise to opportunities for us to have a positive impact on our environment. This in turn influences all our stakeholders, from our customers, our suppliers and our employees to local communities.

At Jungbunzlauer we recognise that in pursuing our objectives to be the supplier of choice for our bio-based ingredients, we are responsible for exercising sustainable principles in all our manufacturing operations in order to ensure that our operations protect the availability of our natural resources and the quality of the surrounding environment. We are committed to implementing sound environmental management practices into all aspects of our business. All Jungbunzlauer production facilities have implemented a formalised environmental policy, which includes, among other topics, energy, water, waste and pollution management, health and safety and sustainable consumption. All our production sites adhere to the Responsible Care® programme to monitor and improve our environmental performance. Resources for the implementation of Responsible Care® principles are provided in all our plants. In addition, our production site in Germany is certified to ISO 14001 Environmental Management standard. Monitoring under the Responsible Care® programme ensures that the environmental impacts of Jungbunzlauer’s activities are reviewed internally on an annual basis.

Our investment in numerous energy-saving programmes has resulted in a substantial reduction in energy consumption per unit of production. We continuously work to minimise greenhouse gas emissions by our factories. We strive for an ongoing reduction in waste and for optimal recycling of waste-flows. We make use of nearly all our by-products in construction, agriculture, feed and biogas. The majority of our raw materials are sourced either on site or from nearby production sites.

At Jungbunzlauer we believe it is important to be aware of our responsibility towards the environment and to work together proactively for a more sustainable future.
**Tracking and reducing our emissions**

GRI [103-1; 103-2; 103-3; 305-4]

Greenhouse gases (GHG) are a major contributing factor towards global warming, a key challenge of the 21st century. The main source of Jungbunzlauer’s GHG emissions is our product manufacturing process. Our production process requires water and energy, which generates direct (scope 1) and indirect (scope 2) emissions. In order to keep track of our emissions and our efforts to reduce GHG, and to determine, evaluate and communicate the effect of our products on the climate, we committed ourselves to performing a regular assessment of our scope 1 and 2 CO₂ emissions. Since 2014 we have calculated our Corporate Carbon Footprint (CCF) on an annual basis. In addition, we regularly assess the individual Product Carbon Footprints (PCFs) of our seven major product groups in order to gain an in-depth understanding of the specific emissions related to the production of our final products. All our carbon footprint calculations are performed in accordance with ISO standard 14040/44, based on secondary data from Ecoinvent V2.2 and externally verified by "myclimate", an independent non-profit organisation with extensive expertise in lifecycle inventory assessments.

Each of Jungbunzlauer’s four production facilities uses a formal Environmental Management System (EMS) document based on the Plan-Do-Check-Act principles. Following a risk assessment, a number of Significant Environmental Aspects (SEAs) concerning environmental performance with respect to emissions, energy use, waste generation and recycling are defined. The SEAs are then used to assess and track changes in environmental outputs (e.g. CO₂ air emissions).

Jungbunzlauer Canada Inc., for example, has implemented a real-time online Energy Balance Monitoring System which is being used to monitor and optimise energy use, steam and heat recovery and thereby ultimately supports our continued efforts to reduce emissions. All our production sites have specific environmental targets such as continued reduction in energy use, water, waste, and raw materials per tonne of product manufactured. Target completion status is measured and monitored continuously throughout the year by each plant’s environmental manager who directly reports to their VP Operations.
As a result of company-wide energy saving programmes, water-saving projects and improved production processes at our plants, limiting the waste streams, Jungbunzlauer managed to reduce its overall CO₂ emissions intensity (mt CO₂e/mt final product incl. by-products) by 14% between 2013 and 2017. The increased emissions intensity in 2016 stems from the acquisition and implementation of our glucose factory in Canada, making our production facility in Port Colborne fully backward integrated.

1) In accordance with the GHG Protocol, this includes all direct GHG emissions stemming from sources that are owned or controlled by Jungbunzlauer (scope 1) and indirect GHG emissions generated by purchased electricity consumed by Jungbunzlauer (scope 2).

2) Emissions are reported in CO₂ equivalents. Included in the calculation are the following gases: CO₂, CH₄, N₂O, HFC-23, HFC-134a, and SF₆.

3) Includes scope 1 and 2 GHG emissions; scope 3 emissions are not included in CCF results.
Compared to the baseline year 2003 we have reduced the Product Carbon Footprint per tonne of final product\(^4\) in all our seven main product categories. At our largest production facility in Austria, we succeeded in reducing the PCF \(\text{CO}_2\) emissions intensity of xanthan gum (XG) and citric acid anhydrous (CAA) by 50% and 47% respectively between 2003 and 2017. These reductions are the result of efficiency improvements in production, backward integration and an increased share of energy provided by the Austrian electricity grid (low carbon footprint due to high percentage of hydropower). During the same period, we also managed to reduce the \(\text{CO}_2\) emissions intensity of CITROFOL\(^®\), our biodegradable plasticiser, by 37%. This reduction can be attributed to efficiency improvements in production, a lower share of energy from the German electricity grid (high carbon footprint due to high percentage of fossil fuels) and an improved PCF of CAA (raw material for CITROFOL\(^®\)). Furthermore, we accomplished to reduce the \(\text{CO}_2\) emissions intensity of erythritol by 17% between 2008 and 2017.

Going forward, one of the key challenges will be to grow our capacity in many product areas and extend our offering while at the same time further reducing future emissions per tonne of product manufactured. To tackle this challenge Jungbunzlauer will continue to invest in state-of-the-art process technology, innovate for safer products and processes that conserve resources and provide enhanced value, seek opportunities to evaluate new environmental control technologies, and encourage employees to be active in protecting our environment (e.g. energy efficiency training course on the subject of compressed air at our German production site). To underline the importance of our aspiration to further reduce GHG emissions, Jungbunzlauer has made a commitment to reduce its Corporate Carbon Footprint (CCF) emission intensity\(^2\) (\(\text{mt CO}_2\text{e/mt final product incl. by-products}\)) by 10% between 2017 and 2025 (from 2017 levels).

\(^4\) System boundary: cradle-to-gate  
Functional unit: 1 mt of product (ds), at factory gate  
Impact assessment: Global Warming Potential (GWP), IPCC 2007, 100a  
Data sources: primary data measured by Jungbunzlauer, secondary data retrieved from ecoinvent V2.2 (2010)  
Allocation: economic allocation
Water and waste

Another area of serious concern is global water supply and purity. Not only is climate change threatening our water resources but the unsustainable use of water and industry-related water pollution is accelerating this process. In order to counteract and prevent a worsening of this situation, Jungbunzlauer invests in water-saving projects and is constantly seeking to improve these processes to maximise the reuse of water. The three main water sources affected by Jungbunzlauer’s operations are the rivers Thaya in Austria, Neckar in Germany and the Welland Canal in Canada. Water is being drawn from these rivers mainly for cooling purposes and for use in other parts of the production process. While so called non-contact cooling water is directly returned to the river in question, process water is treated first in state-of-the-art wastewater treatment plants at all our production sites before it is returned to the water source.

Furthermore, we strive for an ongoing reduction in waste and for optimal recycling of waste-flows. Being readily biodegradable and ecologically safe, the vast majority of our by-products can be used in construction and agriculture as well as in the manufacture of biogas. One of the company’s HSE targets is to convert as much substance as possible into useful by-products, if economically viable.

Between 2013 and 2017 we were able to reduce landfill waste per mt of final product (incl. by-products) by 79%, from 0.09 to only 0.02.
Social
Introduction
GRI [103-1]

We believe the promotion of social sustainability should lie at the heart of every organisation. At Jungbunzlauer, social sustainability means maintaining a fair business environment over the whole supply chain in accordance with the highest ethical and social standards. Our employees are our most important resource and change, adaptation, innovation and development are only achievable through them. That is why we invest in our employees and encourage them to shape their careers within our Group. To attract and retain the right people, our philosophy is to ensure a good balance between the individual and the Group. We also attach the utmost importance to the highest labour, health and safety standards and this approach is defined in our Corporate Social Responsibility policy. This policy focuses on Jungbunzlauer's responsibility towards its stakeholders regarding health and safety conditions, business practices and the safety of our products and is reviewed and updated every five years.

According to the UN Global Compact, the world's largest corporate sustainability initiative, labour standards and anti-corruption are among the most important global challenges for businesses. While some sub-categories of these topics, such as human rights abuses and forced or child labour, are key challenges on a global scale, they are less relevant to Jungbunzlauer, since we employ our staff according to western standards.

Every company has an effect on its own employees, but also has an impact on workers throughout the value chain and on customers and local communities. We at Jungbunzlauer believe it is important to manage these impacts proactively. Reacting responsibly in matters of social sustainability promotes growth, productivity, employee engagement and effective risk management, unlocks new markets and attracts business partners. We also feel that it is just the right thing to do. This is why the material topics – labour standards, health and safety and sustainability in our supply chain – were chosen as essential for Jungbunzlauer.
Our employees
GRI [103-1; 103-2; 103-3; 102-41]

Employees matter at Jungbunzlauer. We all intuitively know that no organisation can be successful over the long term without engaged and competent people working well together and having the right tools to get the job done. Therefore, each and every one working at Jungbunzlauer is important. Embedded in our history and values lies a natural respect and appreciation of the individual. We simply care about each other. We aim to fulfil the aspirations of both the individual and the company by giving priority to training and education. Moreover, we always strive to build long-term working relationships. Every new employee receives in-depth training in preparation for his or her role. Our employees also regularly attend internal as well as external training courses to expand their knowledge in their respective fields. To further the development of our employees, we have a yearly appraisal process, which is an important tool for the employee as well as the manager and the company to ensure a mutual, appropriate feedback process and alignment of tasks, targets and development objectives for the employee and the workforce as a whole. Any organisation or group of people working together faces challenges, both small and bigger, from time to time. We acknowledge this and we believe that by addressing these challenges openly and directly through dialogue we actually provide the best conditions for problem-solving. Due to their different sizes and locations, our sites have different requirements and Jungbunzlauer subsidiaries are therefore free to adapt benefits and options according to their needs and are not globally harmonised. Jungbunzlauer fully respects the rules of conduct stated in the International Labour Organization’s Fundamental Conventions as well as the Universal Declaration of Human Rights.

We encourage pro-active behaviour, a visible and engaging leadership style, entrepreneurship, open two-way communication and collaboration across functions and levels. Jungbunzlauer is still a manageable size with a flat organisation, which enables us to make decisions quickly. We very often know each other across functions and geographical location, making communication and collaboration across functions and levels easy and straightforward. Through our Spirit programme, employees are encouraged to share their opinions and ideas, which inspires us as a global company, as a site or as a team to find methods to improve the way we work together and strengthen our overall engagement.

### Jungbunzlauer employees in our production sites with collective bargaining agreements in %

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jungbunzlauer Austria</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Jungbunzlauer Canada</td>
<td>63</td>
<td>65</td>
<td>61</td>
</tr>
<tr>
<td>Jungbunzlauer Germany</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Jungbunzlauer France</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Since the Jungbunzlauer Group comprises different entities based in different countries, different regulations and norms concerning collective bargaining agreements are applicable. However, as we place great value on the employment rights of our employees, collective bargaining agreements are in place for most of our workers in the four productions sites. Employees in our headquarters in Basel and our sales offices worldwide are not covered by collective bargaining agreements.
Employee engagement and development
GRI [103-1; 103-2; 103-3; 401-1]

Every Jungbunzlauer plant has a person responsible for labour practices and human rights issues. There is interactive communication with employees about working conditions, for example via our Spirit survey, on which we work with an external partner. Jungbunzlauer’s Spirit process is an organised way of gathering the honest and open opinion of our employees. This way we can discuss feedback and define areas for improvement through an open two-way dialogue. One outcome of the survey conducted during the reporting period was the formation of topic-specific working groups (e.g. for advancement or communication) to develop solutions in collaboration with employees.

To unlock our potential we need to be aware that the world outside is moving faster. And we are determined to keep up. It is important to us at Jungbunzlauer that we work better and smarter – not just harder – as an organisation and as individuals together to beat competition. It is about using our common intelligence and skills to prepare for the future, to gain the loyalty of our customers, to be more efficient and, at the same time, to embrace great leadership and an agile corporate culture to be a workplace that attracts and retains the best people.

It is our goal to continue growing Jungbunzlauer, by investing, by innovating, by keeping up corporate governance and ensuring that Jungbunzlauer becomes an even better place to work. For this, we need the engagement and contribution of all our employees to create and shape our future.

The health, safety and wellbeing of our employees are paramount to us because they reinforce our ability to compete in the global market and strengthen our performance for the benefit of our customers. Motivated and well-trained staff are at the core of the Jungbunzlauer business philosophy and we see engaged employees as the key to our success. Therefore, not only does Jungbunzlauer adhere to all international labour standards and relevant laws regarding employment and labour; we also strive to offer a good working environment with high standards where our employees can thrive. A lot of time is spent at work and we therefore deem it important to provide an agreeable environment where our employees feel comfortable and can also have some fun. All Jungbunzlauer locations also offer functions such as dinners or events at the end of the year. In our Jubilee year (2017) we celebrated the 150th birthday of Jungbunzlauer with events across all of our locations.

Being well informed is important to our individual ability to carry out our jobs and make the right decisions. One way of achieving this is through quarterly “Pulse” calls where information about company development is cascaded to all employees. A lot of information is also accessible on an ongoing basis on our "myJBL" intranet. Here employees are also invited to share information, create groups, comment on information, etc. “Spirit” – our employee survey – provides all of us with insights and, most importantly, inspires us as a global company, as a site or as a team to find methods to improve the way we work together and strengthen our overall engagement. This is a programme we take very seriously and keep working on. We are happy that 84% of Jungbunzlauer’s employees decided to participate in the survey conducted during the reporting year. We are equally happy to report an overall engagement index of 69% and a performance excellence index of 72%.

We value the opinion and ideas of our employees and foster open communication across all levels. We provide support for additional professional education where applicable. This, and other topics, can be discussed with the manager during the annual appraisal process. All of this makes Jungbunzlauer a great place to work.
The Jungbunzlauer Group has been assessed and approved based on the information provided on "environment", "labour practices and human rights", "fair business practices" and "sustainable procurement" on the EcoVadis platform. In previous years Jungbunzlauer always scored gold in the EcoVadis ratings. However, we only achieved silver in 2017. Due to the company’s increased size, with 1,100 employees, Jungbunzlauer was considered a large company and placed into a different category where assessment is slightly different and stricter. However we are aiming to achieve gold status again in the next evaluation and are confident we shall achieve this.

**Jungbunzlauer employee growth by region**

The Jungbunzlauer Group worldwide grew by 3.5% from 1,062 employees in 2016 to 1,100 employees in 2017.
Jungbunzlauer employee turnover by gender, region and age group. A table on the entry and exit turnover numbers can be found in the appendix.
Health and safety
GRI [103-1; 103-2; 103-3; 403-4]

Our personnel are of course employed in accordance with the legal employment standards applicable in the countries in which we operate. Additionally, we strive to improve health and safety conditions continuously for all our workers and employees. Jungbunzlauer strictly rejects child labour and slavery, discrimination due to gender, religion or race as well as corruption and bribery. Jungbunzlauer production plants are registered at the collaborative platform Sedex (Supplier Ethical Data Exchange), a non-profit organisation dedicated to driving improvements in responsible and ethical business practices in global supply chains. In order to ensure that our suppliers also drive improvements in social sustainability, we have all our relevant suppliers checked for social criteria.

All Jungbunzlauer production sites and offices adhere to a high standard of social responsibility. Jungbunzlauer provides a safe, healthy and hygienic working environment and takes effective steps to prevent accidents and injury to employees by setting clear and binding standards which are controlled by regular inspections. At a local plant level, personal safety equipment and protective clothing are provided by Jungbunzlauer where needed. A system has been established to detect, avoid or respond to potential threats to the health and safety of personnel. In the event of a work-related injury, first aid is provided and we assist the employee in obtaining follow-up medical treatment.

The Jungbunzlauer Group takes responsibility for the health and safety of its employees. Therefore, all Jungbunzlauer production sites adhere to the Responsible Care® programme to improve health and safety performance. Jungbunzlauer is compliant with all ILO (International Labour Organisation) conventions. A Health, Safety and Environmental Policy, with the target of reducing the health and safety risks facing employees to the minimum, has been issued by the Management Committee and by all Jungbunzlauer companies. The policy is reviewed and updated every five years. Compliance with policy guidelines is audited continuously. Risk analyses are performed and plants, processes and projects are regularly assessed. Certification systems are in place to ensure adherence to our high standards. All Jungbunzlauer production sites are registered with Sedex, which is managed by a third party SMETA audit (Sedex Members Ethical Trade Audit) every three years. In the event of audit findings, corrective actions are implemented and, if deemed necessary, additional audits will take place to assure the implementation of corrective actions and their effectiveness. General health and safety conditions for the Jungbunzlauer Group and the legal, ethical and social commitments to our employees are summarised in our Corporate Social Responsibility policy.

“Safety first” is a fundamental maxim that must be observed by each and every employee. Our ambition is to strive for zero accidents within our company. Occupational safety is achieved through correct behaviour and attitude. Therefore, we attach great importance not only to safety training but also to motivating our employees and informing them about safety-related topics. New employees are trained in general and job-specific safety standards, and safety instructions are available on our intranet. Training in health and safety in accordance with Responsible Care® is regularly delivered in all production plants.

Jungbunzlauer records all injuries, which generate lost time at all sites. Corrective actions such as new or extended railings and handles to prevent tripping and falling, insulation of hot surfaces to prevent injuries, better marking of hazard points, training for safe loading, emergency and first aid exercises etc., are immediately implemented and goals to reduce accidents are set. We measure our performance by tracking the lost-time accident rate per million work hours. And we communicate the numbers for the Group and per site on a quarterly basis.
Safety is a collective responsibility so we must engage at all levels on this issue in order to improve and never lose focus on this important topic. LTI (Lost Time Incident) rate is reported, monitored and discussed monthly at senior management level. LTI rate was reduced by 17% between 2014 and 2017.

Whether health and safety topics are covered in agreements with trade unions depends on the country. For example, this is not the case in our production sites in Austria, France and Germany, since health and safety topics are already covered by national legislation. However, for our production site in Canada, health and safety is covered by two different trade union agreements, which account for 63% of employees.
Sustainability in our supply chain
[103-1; 103-2; 103-3; 414-1]

At Jungbunzlauer we place great value in sustainable procurement. Committed to rigorous quality standards, we guarantee the excellence and sustainability of our products. As a result, high-quality raw materials are essential for the production of our ingredients. Control measures for the safety of food as well as a traceability system are in place. Our suppliers are evaluated for reliability, service, quality and compliance with specifications and social criteria. Supplier performance measurement is based on data from incoming goods inspection, in process control, analysis data where available, and complaint statistics and feedback from the quality department. The process of selecting a new supplier starts with gathering specifications and other necessary documents, followed by sample qualification, quality agreements, supply of samples, and audits when necessary. First deliveries are thoroughly checked.

Social standards play an important role in selecting suppliers at Jungbunzlauer in order to maintain a fair business environment throughout the supply chain according to the highest ethical and social standards. We categorise suppliers with regard to their impact on our products. All relevant suppliers have undergone a social compliance check in the form of a questionnaire. In agreement with our policy, this social compliance check was carried out for all new suppliers during the reporting period. We review our supply chain internally and conduct supplier self-assessments and audits to assure all aspects of suppliers’ social compliance efforts and commitments.

All Jungbunzlauer production plants are registered at the collaborative online platforms Sedex (Supplier Ethical Data Exchange) and EcoVadis. Sedex, a platform driving improvements in responsible and ethical business practices in global supply chains, enables its members to assess risks in their own supply chain. The implementation of Sedex standards is monitored by a third party SMETA audit.

EcoVadis is another platform, offering supplier sustainability ratings for global supply chains, where Jungbunzlauer has been assessed and approved.

Back integration of our raw material production (glucose syrup) makes our supply chain more sustainable by reducing transportation and minimising energy use for production. We make use of almost all of our by-products as fertiliser or feed or in other applications, making our production very sustainable.
Corporate citizenship

We recognise our social responsibility to the communities in which we operate. In our role as a corporate citizen, we strive to create long-term value for the citizens in these communities. Through our commitment to our existing manufacturing locations in Europe and North America, we maintain and increase employment and as a result of this action our facilities support the economic and social health of the local economies in which they are located. As a corporate citizen, we aim to provide positive value to society and to meet the expectations of our stakeholders. We believe our business practices create added value for society and for our company.

The biggest impact is of course closest to home and therefore Jungbunzlauer takes great care of the immediate environment and local communities around its production sites. For example, in Marckolsheim, our production site in France, a biodiversity programme was launched with the creation of an ecosystem by planting local species, providing shelter for insects and birds and building a pond.

Since 1991 Jungbunzlauer has donated 22 mCHF to the Karl Kahane Foundation through continuous contributions. The Kahane Foundation, an independent, privately-funded, non-political and non-religious charitable foundation, works with a growing number of charitable organisations in various fields. During Jungbunzlauer’s Jubilee year, the Kahane family decided to triple the contribution to the Kahane Foundation for humanitarian work.

*K The Karl Kahane Foundation is a separate and independent body to the Jungbunzlauer Group.*
Goals and key figures
Goals and key figures

Our strategy is to grow organically and strengthen our position as a global market leader committed to the industry over the long term. We will continue to upgrade and expand our four manufacturing sites – increasing capacity, improving efficiency and lowering our unit cost while building upon the existing product portfolio. We will continue to invest in developing our organisation and people to become a quality partner to our customers and a great place to work. We seek superior growth and profitability while maintaining a risk profile that allows us to withstand possible headwinds. In this way we will always be a reliable and trustworthy partner to all our stakeholders.

Already achieved

We reduced our overall CO₂ emissions intensity (mt CO₂e/mt final product incl. by-products) by 14% between 2013 and 2017.

Future goals

2025 emissions target: 10% reduction in Corporate Carbon Footprint (CCF) emission intensity (mt CO₂e/mt final product incl. by-products) compared to baseline year 2017.

We aim for a continuous reduction of specific water and waste volumes.

We strive for zero accidents and continue to implement corrective actions to prevent accidents in our plants.

Although employee engagement and satisfaction are already at a high level, we want to improve it further by introducing a new employee engagement tool in 2020.

To ensure that all relevant employees are aware of the importance of anti-corruption, we will assess who needs to be trained on this topic and will deliver training on general compliance, anti-trust and anti-corruption to all relevant new employees.
<table>
<thead>
<tr>
<th>GRI Standard</th>
<th>Disclosure</th>
<th>Page number(s) and/or URL(s)</th>
<th>Comments and further sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 101: Foundation 2016</td>
<td>General Disclosures</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organizational profile</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-1 Name of the organization</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-2 Activities, brands, products, and services</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-3 Location of headquarters</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-4 Location of operations</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-5 Ownership and legal form</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-6 Markets served</td>
<td>5, 10</td>
<td>for more information see Appendix, p 40</td>
</tr>
<tr>
<td></td>
<td>102-7 Scale of the organization</td>
<td>5, 13</td>
<td>for more information see Appendix, p 40</td>
</tr>
<tr>
<td></td>
<td>102-8 Information on employees and other workers</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-9 Supply chain</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-10 Significant changes to the organization and its supply chain</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-11 Precautionary Principle or approach</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-12 External initiatives</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-13 Membership of associations</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strategy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-14 Statement from senior decision-maker</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethics and integrity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-16 Values, principles, standards, and norms of behavior</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GRI 102: General Disclosures 2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Governance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-18 Governance structure</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stakeholder engagement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-40 List of stakeholder groups</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-41 Collective bargaining agreements</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-42 Identifying and selecting stakeholders</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-43 Approach to stakeholder engagement</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-44 Key topics and concerns raised</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reporting practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-45 Entities included in the consolidated financial statements</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-46 Defining report content and topic Boundaries</td>
<td>16, 17, 18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-47 List of material topics</td>
<td>17, 18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-48 Restatements of information</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-49 Changes in reporting</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-50 Reporting period</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-51 Date of most recent report</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-52 Reporting cycle</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102-53 Contact point for questions regarding the report</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>

Jungbunzlauer Austria AG
Jungbunzlauer Canada Inc.
Jungbunzlauer Ladenburg GmbH
Jungbunzlauer SA (France)
Jungbunzlauer Inc. (USA)
Jungbunzlauer Singapore Pte. Ltd.
Jungbunzlauer BV (Netherlands)
Jungbunzlauer India Private Ltd.
Jungbunzlauer Japan Co. Ltd.
Jungbunzlauer Mexico S.A. de C.V.
Jungbunzlauer International AG
Jungbunzlauer Suisse AG
Jungbunzlauer Holding AG
<table>
<thead>
<tr>
<th>GRI Standard</th>
<th>Disclosure</th>
<th>Page number(s) and/or URL(s)</th>
<th>Comments and further sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 102-54</td>
<td>202-54 Claims of reporting in accordance with the GRI Standards</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>GRI 102-55</td>
<td>202-55 GRI content index</td>
<td>42, 43</td>
<td></td>
</tr>
<tr>
<td>GRI 102-56</td>
<td>202-56 External assurance</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>

**Material Topics**

**GRI 200 Economic Standard Series**

- **GRI 103: Management Approach 2016**
  - Business Practices
    - 103-1 Explanation of the material topic and its Boundary
    - 20, 21
    - 103-2 The management approach and its components
    - 21
    - 103-3 Evaluation of the management approach
    - 21

- **GRI 205: Anti-corruption 2016**
  - Supply Security
    - 205-2 Communication and training about anti-corruption policies and procedures
    - 21

- **GRI 103: Management Approach 2016**
  - Own Disclosure: Supply Security
    - Ability to guarantee deliveries on time; Reliability in deliveries to customers;
      Risk assessment and preparedness for emergency and crisis situations regarding
      the security of supply of products or services.
    - 21

**GRI 300 Economic Standard Series**

- **GRI 103: Management Approach 2016**
  - Emissions
    - 103-1 Explanation of the material topic and its Boundary
    - 22, 23
    - 103-2 The management approach and its components
    - 22, 24
    - 103-3 Evaluation of the management approach
    - 25, 25
    - 305-4 GHG emissions intensity
    - 11, 23
  - Effluents and Waste
    - 103-1 Explanation of the material topic and its Boundary
    - 26
    - 103-2 The management approach and its components
    - 26
    - 103-3 Evaluation of the management approach
    - 26

**GRI 400 Economic Standard Series**

- **GRI 103: Management Approach 2016**
  - Labour Standards & Employment
    - 103-1 Explanation of the material topic and its Boundary
    - 32, 33, 34
    - 103-2 The management approach and its components
    - 33, 34
    - 103-3 Evaluation of the management approach
    - 33, 34
    - 401-1 New employee hires and employee turnover
    - 33

- **GRI 403: Occupational Health and Safety 2016**
  - Occupational Health and Safety
    - 403-4 Health and safety topics covered in formal agreements with trade unions
    - 36

- **GRI 405: Social Performance Assessment 2016**
  - Sustainable Supply Chain
    - 414-1 New suppliers that were screened using social criteria
    - 13, 38

- **GRI 103: Management Approach 2016**
  - Product Safety & Marketing and Labeling
    - 417-2 Incidents of non-compliance concerning product and service information and labeling
    - 23
### Appendix

Turnover of Jungbunzlauer employees by region, age group and gender during the reporting period.

<table>
<thead>
<tr>
<th>Regions</th>
<th>Exit turnover</th>
<th>Entry turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>Europe</td>
<td>&lt; 30</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>30 - 50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>&gt; 50</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>8</td>
</tr>
<tr>
<td>Americas</td>
<td>&lt; 30</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>30 - 50</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>&gt; 50</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4</td>
</tr>
<tr>
<td>APAC</td>
<td>&lt; 30</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>30 - 50</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>&gt; 50</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>48</td>
</tr>
</tbody>
</table>
About this report
[102-48; 102-49; 102-50; 102-51; 102-52; 102-53; 102-54; 102-56]

This first Corporate Sustainability Report compiled by the Jungbunzlauer Group covers the calendar year 2017. Jungbunzlauer published this report to share information about our sustainability approach with our stakeholders and to keep them updated on our progress. Although sustainability has been an integral part of our strategy for many years, we decided that it is time to share information about our sustainability efforts externally with our stakeholders, and hence this first Corporate Sustainability Report has been compiled.

This report has been prepared in accordance with the GRI Standards: Core option. GRI is one of the most widely used organisations to define standards on sustainability reporting for companies and governments worldwide. Thus, it supports companies in communicating their impacts on the environment and on their social and economic surroundings.

Jungbunzlauer plans to publish an updated sustainability report every three years.

No restatements of information or changes in reporting occurred, since this is the first Corporate Sustainability Report compiled by the Jungbunzlauer Group.

All data and information in this report have been compiled to the best of our knowledge and have been internally reviewed and validated.

For questions regarding this report or any information herein please contact our marketing department: sustainability@jungbunzlauer.com

The authors

Lena Bieniek – Technical Service Manager, Jungbunzlauer International AG
Dominik Buser – Product Manager, Jungbunzlauer International AG