

SUSTAINABILITY REPORT

2011/2012



CONTENTS

01

ABOUT OUR COMPANY

02

SUSTAINABILITY STRATEGY AT JOH. BARTH & SOHN

03

SUSTAINABILITY MANAGEMENT AT JOH. BARTH & SOHN

04

VALUE CHAIN AND SUPPLIERS

05

PRODUCTS AND CUSTOMERS

06

EMPLOYEES

07

SOCIETY

08

STAKEHOLDER DIALOGUE

09

ABOUT THIS REPORT



FOREWORD

” DEAR BUSINESS PARTNERS AND FRIENDS OF OUR COMPANY,



With the end of the current fiscal year, Joh. Barth GmbH & Co. KG is presenting its first sustainability report. In this report we hope to demonstrate to everyone with an interest in our company the sustainability and long-term viability of our actions, not only in purely economic terms, but also from a social and ecological perspective.

First of all, in our capacity as partners, we want to assume responsibility not only for our company and its members, but also for the environment and society. It is in this way that a sustainability report ideally contributes to the institutionalisation of sustainable thinking within the company itself, for it is only through the explicit and systematic work involved in the creation and documentation of topics related to sustainability that advancements in sustainable corporate development can be revealed.

This sustainability report is intended to document our aspiration to assume a pioneering role within our industry with regard to sustainable business practices. The world's population is growing unabated. Over the coming decades the consumption of resources and the pollution of the environment are both set to dramatically rise. Increased prosperity has led to a change in consumption habits – including beverage consumption habits. If our quality of life is not to decline drastically, we will have to succeed in decoupling resource consumption and environmentally polluting emissions from economic growth.

Such a qualitative growth strategy is of course not possible without innovations in products and in their manufacture. And this is where

our obligation lies – to proceed down our long-established path and to constantly improve our expertise in hops and hop processing, and to place this expertise at our customers' and suppliers' disposal in the form of innovative products and complementary services. We also consider cooperative agreements along the entire hop value chain and the promotion of sustainable consumption as a key entrepreneurial responsibility for the years ahead. We are fully aware that only together with our business partners will it be possible for us to reduce the "ecological footprint" of our company and its most important partners and in turn to considerably reduce the environmental impact on the value chain. Today – and all the more so in the future – it is no longer merely a question of increasing labour productivity as it often was in previous years, but rather of the resources productivity itself.

For us, sustainability means conducting our business activities under consideration of environmental and social responsibility. We are convinced that sustainable business practices will contribute to the long-term increase in the value of our company. Therefore we also see this first report as an invitation to include other companies from the Barth-Haas Group in the report in a bid to significantly increase leverage with regard to sustainability.

We wish you and ourselves success in the future – preferably of the sustainable variety.

The managing partners – Nuremberg, August 2012

01

ABOUT OUR COMPANY

- » WHO WE ARE
- » WHAT WE DO
- » OUR WORLD
- » WE SET STANDARDS
- » OUR BUSINESS AND VALUE PRINCIPLES





WHO WE ARE

Joh. Barth & Sohn GmbH & Co. KG is part of to the Barth-Haas Group.

The Barth-Haas Group is made up of several privately owned family companies. With around 80 employees, Joh. Barth & Sohn is a modern family-owned enterprise which is managed by the 7th and 8th generations of the founding family. And true to the motto, "That which you have inherited from your fathers, earn it in order to possess it" (Goethe), the partners of every generation have each made their contribution to the company.

The Barth-Haas Group operates internationally in the following areas:

- » Hop production and breeding
- » Hop processing
- » Hop and hop product marketing
- » Hop storage and logistics services
- » Research and development on hops and application technologies for the brewing industry and beyond

The Barth-Haas Group operates on all continents. The motto "think global, act local" is reflected in our company's strong ties to its **Franconian-Bavarian roots** coupled with our **international** orientation. Founded in the small Franconian town of Betzenstein in 1794, it did not take long before the company moved to the city of Nuremberg, the centre of the European hop trade at the time.

The close vicinity to the Nuremberg hop market, a stock exchange-like institution, combined with relationships forged nationally and internationally in the old Nuremberg merchant tradition, enabled the company to develop continuously up until the turn of the 20th century. With offices in New York, Strasbourg and Saaz, the foundation stone for international operations was laid early on.

The disaster of two world wars in the 20th century shook the company to its foundations. However, time and time again it was possible to re-establish the long-standing, excellent contacts to the brewing industry around the world.

THE FOLLOWING COMPANIES BELONG TO THE BARTH-HAAS GROUP:

ALL THE COMPANIES ARE QUALITY CERTIFIED



JOH. BARTH & SOHN
HOPS ARE OUR WORLD
JOH. BARTH & SOHN GMBH & CO. KG
PRODUCTION AND MARKETING
OF HOP PRODUCTS
GERMANY



NATECO
NATECO, GMBH & CO. KG
EXTRACTION (CO₂)
GERMANY



HOPFENVEREDLUNG
ST. JOHANN GMBH & CO. KG
PELLETING (TYPE 90 AND 45)
GERMANY



JOHN I. HAAS INC., USA
PRODUCTION AND MARKETING
OF HOPS AND HOP PRODUCTS
USA



BOTANIX LTD.
PRODUCTION AND MARKETING
OF HOP PRODUCTS
UNITED KINGDOM



HPA
Hop Products Australia
HOP PRODUCTS AUSTRALIA
PRODUCTION AND MARKETING
OF HOPS AND HOP PRODUCTS
AUSTRALIA



barthInnovations
unlocking the potential of hops
BARTH INNOVATIONS LTD.
RESEARCH AND
DEVELOPMENT
UNITED KINGDOM



Simply Hops
LTD.
MARKETING OF HOP
AND HOPS PRODUCTS
UNITED KINGDOM



BetaTec
hop products
BETATEC HOP PRODUCTS
RESEARCH, DEVELOPMENT AND
MARKETING OF HOP PRODUCTS
USA/GERMANY



BARTH-HAAS (BEIJING) TRADE XINJIANG; GREEN DIAMOND HOPS CO., LTD.;
GANSU TIANMA HOPS CO. LTD.
PRODUCTION AND MARKETING OF HOP PRODUCTS
CHINA

WHAT WE DO

Hops are our world. We have been active in the hop industry as a leading market participant for many years. The brewing industry values hops as an irreplaceable ingredient in beer.

Other industries value them in wide applications ranging from environmentally friendly processing aids to health-enhancing compounds.

We are **marketers** of the raw material hops, which we develop, produce and sell in a wide variety of products. Our aim is to continuously improve know-how in relation to hop products and their production, and to systematically expand the potential applications of hops by targeted innovations.

As the member of the **Barth-Haas Group** with the broadest product

portfolio in the industry and highly efficient, quality-oriented processing plants in all major hop-growing regions, Joh. Barth & Sohn has always been a reliable partner for its customers, making an important contribution to secure their hop supply and their economic success.

In order to do this in a sustainable manner we have to be **innovative**: we are fully committed to expanding our specialist know-how regarding hops, to developing innovative value-added products for our customers, to raising our quality and service standards and to providing our customers and suppliers with advice and assistance.

As member of the internationally operating Barth-Haas Group, we can always be **where our suppliers and customers are**. We want to attract the **best brains** in the industry.

OUR WORLD

” THINGS TO KNOW ABOUT HOPS

The hop plant (*Humulus Lupulus*) has been cultivated for centuries and is an important raw material for breweries. It was known to the ancient Greeks and Romans who used it as a vegetable and as a medicinal plant. The current practice of adding hops during the brewing process can be traced back to the Finns, Latvians, Estonians and Wends.

It is believed that the use of hops made its way from the Baltic region to the West sometime between the 5th and 7th centuries. Hop growing in Central Europe can be traced back to the Carolingian period, and the first mention of hops was in connection with the Bavarian town of Geisenfeld in 737 AD.

However, how the hop actually found its way into beer remains unclear to this day. It was probably accidentally added to the brewing process, like so many other plants at that time, and its effect turning out to be extremely positive.

Due to the strict three-field crop rotation system of the time, hops were initially only grown in monastery gardens. From the 14th century they were then grown in larger cultivations. From the 16th to the 18th century, their flowers and roots were used for medicinal purposes and even today the hop's bitter compounds are used as a calmative. Just like hemp, the hop bine belongs to the **Cannabaceae family** which is related to the **Moraceae family**.

Today, both hop growers and brewers distinguish between aroma and bitter hop varieties. "Flavour hops" constitute a new variety category which, thanks to their fruity aroma, give the beer a special flavour in a natural way.

The hop plant is a perennial dextrorsal creeper that can climb trellises to reach heights of 5 to 7 metres. During harvesting the bines are cut at the base from which new shoots grow again in spring. The plants are dioecious, which means that the plant produces either only male or female flowers. Only the cones of the female plants are used for the brewing process, as they contain valuable compounds. The male plants do not produce cones and are rigorously removed from the hop-growing areas to prevent pollination of the female plants.

Hops are mainly used for the brewing of beer. They add the necessary bitterness and give a "floral hop aroma" to beer. The bitter compounds in the hops and the hop resins, which are responsible for the slightly dry and bitter flavour, are found in the yellow lupulin glands contained inside the cones. The hop compounds possess additional preserving and foam-stabilising properties.

The most important hop compounds relevant to brewing are: alpha acid (humulone), beta acid (lupulone), resins, essential oils and polyphenols (tannin).



” HOPS COME IN VARIOUS PRODUCT FORMS

While hops used to be added during the brewing process in their original form (as cone hops), today chiefly hop products are added (in the form of pellets, extracts or downstream products). The latter offer advantages with regard to homogeneity and product stability, as well as to suitability for automated hopping in the brewery.

RAW HOPS. Raw hops are hops which have been dried, cleaned and packed into bales after the harvest (cone hops).

PELLETS. Hop pellets are compressed hops. In order to produce pellets, cone hops are milled, pressed (pelleted) and hermetically packaged. Unlike raw hops, pellets are easier to dose and store, and thanks to their greater density they save space and weight.

HOP EXTRACT. With the help of the solvent carbon dioxide (CO₂), all compounds relevant to brewing (soft resins and oil) can be obtained from the hops in the form of extracts.

In addition to ethanol, liquid or supercritical CO₂ has proven its worth against other organic solvents for use in the non-destructive extraction of hop compounds.

The advantages of CO₂ extract are: longer shelf-life, reduced weight (reduced transport costs), more cost-effective storage (less cooling required), simpler handling in the brewery (automatic dosage) and possibility of enriching the oil content.

Common extract packages are cans of various sizes (1-4 kg) and barrels (approx. 200 kg).

Hops have been commercially processed into pellets and extracts since the early 1970s. Joh. Barth & Sohn is the majority shareholder in the most modern and largest hop processing plants in the world:

- » Hopfenveredlung St. Johann GmbH & Co KG (pellet production) and
- » NATECO₂ GmbH & Co KG (supercritical CO₂ extraction of natural substances).

DOWNSTREAM PRODUCTS. These are liquid hop products that are added to the finished beer. They contribute to the bittering and/or to the aroma of the beer and facilitate an increase in the hop yield of bitter and aroma compounds. Aroma products are mainly based on CO₂ hop extract that is subject to further treatment by means of various processes.

With the range of **Pure Hop Aroma products (PHA)** developed by Botanix Ltd. (member of the Barth-Haas Group), beers and other drinks can efficiently and flexibly be given a (non-bitter) hop flavour and aroma. These products are 100 % based on hops.

OTHER USES. A small proportion of harvested hops is used in the bioethanol and sugar beet processing industries as an antibacterial processing aid. Furthermore, hops are used for medical purposes, primarily as a tranquilizing or sleep-inducing agent.

In addition, hops are used for flavour enhancement in some liqueurs, schnapps and other foodstuffs (e.g. tea).

WE SET STANDARDS

” SELECTED MILESTONES OF THE COMPANY'S HISTORY

Some 100 years ago Joh. Barth & Sohn developed new ideas in the field of seaworthy packaging of raw hops and as a result established a reputation as a first-class trading company. The innovative and progressive character of the Barth company can be seen from a series of activities in more recent years:

LATE 1950S / EARLY 1960S. English and Belgian bitter hop varieties (Northern Brewer and Brewers Gold) are introduced for the first time in the Hallertau region.

1960S. Establishment of hop extraction using methylene chloride in collaboration with English partners in Wolnzach. At the end of the 1960s Joh. Barth & Sohn acquires a share in the company Hopfenveredlung Dr. A. Müller & Co. who at the time holds the patent for enriched hop powder (type 45).

EARLY 1970S. The world's most modern methylene chloride extraction factory of its time opens in Wolnzach. The Wolnzach factory develops an exemplary standard whereby the remaining

methylene chloride solvent content is several times lower than the legal tolerance.

1980S. At the start of the 1980s efforts are significantly stepped up to introduce **high-pressure extraction** using supercritical carbon dioxide (CO₂). In 1985 the first, and in 1988 the second high-pressure extraction plant goes into production in Wolznach.

Today, as a result of expansion the plant has a solvent-free extraction capacity of approx. 50 tonnes of pelleted raw hops per day.

1990S. 1992 sees the commissioning of a new processing plant for **type 90** pellets in the St. Johann facility. The capacity for **type 45** pellets is doubled, making St. Johann the largest and most modern pellet plant in the world. In 1994 it becomes possible to steplessly reach a higher concentration than was previously possible. **Type 30** is introduced.

In the mid-1990s, **large cold storage halls** are added to the small cold storage warehouses dating from the mid-1970s, bringing the total storage area to approx. 10,000 m² and providing storage space not only for packaged pellets but also for raw hops. This meant that for the first time large amounts of raw hops could also be cold-stored and preserved for longer periods at temperatures of 0 - 5 °C. Previously, this service was only available on such a scale in the USA, where cold storage is indispensable due to the weather conditions.

In 1994 Joh. Barth & Sohn acquires a majority holding in **Wigan Products Ltd.**, a company based in the UK specialising in so-called **downstream products** and boasting a good reputation in research and development in the field of high-tech hop products.

1997 sees the large-scale use of the new **rectangular RB-60 bales** for the first time, replacing the traditional bulky farmer's bales. Joh. Barth & Sohn has played an influential role in the development and research leading to this new form of packaging which is indispensable for modern logistics.

In addition to hop trading and the pelleting and extraction of this raw material, our company has also been involved for many years in the **extraction of phyto-pharmaceutical products**, such as evening primrose and borage seeds, as well as in tea decaffeination. These activities, including the engineering, are brought together in our company NATECO₂.

As a further innovative service provided by our company, a **research brewery** with its own training centre is established in **St. Johann**. This allows us to offer our customers the possibility to commission research and have specific projects conducted according to their specifications. Since then we have been able to greatly increase

our knowledge regarding hops as a raw material and their mode of action in different beer matrices.

In the mid-1990s the group becomes active in China. This period sees the founding of **Green Diamond Hops (GDH)** and **Gansu Tianma Hops Co. (Flying Horse Hop Company, FHH)**. Both companies dedicate themselves to the predominantly domestic trade in Chinese hops and both have their own pellet plants.

SINCE 2000. In 2000, Joh. Barth & Sohn merges with **Hopunion Raiser Scharrer KG**. Following the takeover of another British company, **English Hop Products (EHP), Botanix Ltd.** is established in 2001. Botanix, today a wholly-owned subsidiary of Joh. Barth & Sohn., takes over and continues the operations of Wigan Products and English Hop Products.

In 2006 the **Barth-Haas (Beijing) Trade Co.** is founded in Peking. The Barth-Haas Group is therefore ideally positioned to be able to offer the most comprehensive product portfolio of the hop industry in China, too. 2010 sees Green Diamond Hops (GDH) move to a new site in Hutubi. This site provides GDH with a pellet plant and state-of-the-art cold storage warehouses.

In the 70s – and even more so in the 80s – as a result of increasing public concern the company builds up **laboratory capacity for pesticide analysis** which is unparalleled in the industry. The in-house laboratories are capable today of analysing all commonly used agents.

Thanks to the **early analysis of leaf samples** conducted during the vegetation period, we have had an early warning system in place for over 20 years that helps us to identify potential problems at an early stage and to take the appropriate measures. The laboratories of the Barth-Haas Group are just as familiar with the analysis of agent residue as they are with the detection of radioactivity and, to the necessary extent, of heavy metals, nitrate and solvent residues.

Barth Innovations Ltd., is founded in 2010 in Paddock Wood. Thanks to Barth Innovations, it is now possible to create new resources, coordinate research activities and to ensure that key figures can devote themselves to targeted research and development. This serves to implement the mission of Joh. Barth & Sohn, i.e. to persistently broaden the application potential of hops.

In the same year we establish the **Barth-Haas Hops Academy**. It offers customers and everybody interested in hops a transfer of knowledge by means of workshops and presentations covering all matters concerning hops. The Academy is intended to provide a better understanding of the complexity of hops and their full potential.



OUR BUSINESS AND VALUE PRINCIPLES

OUR MISSION

Hops are our world. Hop products are of high, irreplaceable value to the brewing industry. Other industries value the diverse application potential of hops as flavouring and health-enhancing ingredients. We strive to persistently increase our knowledge regarding the application potential of hops and to set standards. We provide our customers and suppliers with options for achieving their objectives. As a member of the Barth-Haas Group, we have access to the most extensive product range in the hop industry and to the most modern production plants in the most important hop-growing regions in the world. We therefore make an important contribution to raw material security and to the success of our customers. Due to the global market presence of the Barth-Haas Group we are a valuable partner for our suppliers. We offer our employees opportunities for their professional careers and personal development that can only be realised in a globally operating, family-owned company. We are Barth and hops are our world.

OUR COMPANY VALUES

Customers and suppliers are the basis of our business. Treating people in a respectful and competent manner is our self-evident duty.

We are both demanding and supportive as far as our **employees** are concerned. We want to be and to remain an attractive employer for them.

Economic success is the result of our employees' consistent commitment to performance in all areas of the company and in collaboration with our value-adding partners.

We always observe the prevailing individual, social and legal norms and **environmental standards** in all our areas of activity.

Sustainability is a key value in everything we do. We actively protect the environment and provide manifold support for the society in which we work and live.

As a **family-owned company**, we also shape our future in our obligation towards our forefathers. Our corporate culture is a visible expression of this responsibility.

OUR CORPORATE CULTURAL VALUES

Corporate cultural values describe the way in which we, as human beings, interact with other people within the framework of our daily work. We have identified the following principles which we at Joh. Barth & Sohn live by:

We work in a solution-oriented manner. We anticipate problems. As competent employees of Joh. Barth & Sohn, we develop the right solution for ourselves, our customers and suppliers at all times, based on our own initiative and taking a structured approach.

We act with a sense of responsibility. We accept our responsibility towards society, our customers, suppliers and colleagues in an exemplary manner. As a matter of principle we act prudently in all situations. When it comes to realising our objectives we implement effectively. We achieve this by acting independently and decisively in our daily work. This makes us credible in the eyes of our customers and suppliers.

We are team players. Our helpful and respectful attitude in our dealings with customers, suppliers and colleagues creates a foundation for meeting the requirements asked of us by acting flexibly at all times. We act reliably.

We treat others with respect. For us, that means being open-minded. This applies to new ideas regarding working methods, products and technologies, as well as our interaction with each other. We empathise with the needs and interests of our partners and colleagues and communicate understandably in order to ensure that we are able to master the resulting challenges. As a result, we are in the position to constantly improve ourselves and our services in collaboration with our partners.

02

SUSTAINABILITY STRATEGY AT JOH. BARTH & SOHN

- » SUSTAINABILITY –
RESPONSIBILITY FOR THE
ENTIRE VALUE CHAIN
- » AREAS OF ACTIVITY
- » OUR ECONOMIC
PERFORMANCE





SUSTAINABILITY – RESPONSIBILITY FOR THE ENTIRE VALUE CHAIN

For us, sustainability means conducting our business activities under the constraints of environmental and social responsibility. We are convinced that sustainable business practices contribute to the long-term increase in the value of our company. Growth in itself has no intrinsic value for us. What we aspire to is sustainable, **qualitative growth**.

Our strategic intention is as follows: We want to offer our stakeholders **"added value"**. We rely on providing our customers and suppliers in the best-possible way with innovative products and services which offer an excellent cost-benefit-ratio, so that we can meet their constantly growing requirements. Alongside these **value-adding** activities, we wish to support legitimate social causes at the same time. Furthermore, we want to take environmental aspects into consideration and reduce our **"ecological footprint"** in everything we do.

We see our responsibility for the industry in terms of sustainability in assuming responsibility for the **entire value chain**: from the cultivation of the hops to their further processing and storage on to their worldwide distribution to our customers.

The continuous improvement of our processes and structures, coupled at the same time with the reduction of our resource consumption and our environmental impact, is a fundamental component of our sustainability efforts.

Ever since the company was founded, Joh. Barth & Sohn has always succeeded in making recognised contributions to the further development of both the hop and brewing industries by improving products and processes throughout the entire value chain. (see history "Milestones" page 7/8)



ECOLOGICAL FOOTPRINT – A DEFINITION

The ecological footprint represents the land area that is necessary to maintain the lifestyle and standard of living of a person, an organisation or a country on a permanent basis (if current production conditions continue).

This is an ecological indicator which compares the human demand for natural resources with the Earth's capacity to provide them.

- This includes areas which are required for
- » the **production** of a person's **clothes** and **food**,
 - » the **provision** of **energy**, but also
 - » the **disposal** or **recycling** of the **waste** product and
 - » **binding** the **carbon dioxide** emitted through the person's activities

The values are indicated in hectares per person (or organisation or country) per year.



AREAS OF ACTIVITY



In order to implement our strategy, we are focusing our **activities** on the following areas which also reflect important development trends in our industry:

- » complaint-free and sustainable products and services
- » health and safety
- » reducing environmental pollution
- » increasing resources productivity (raw materials, energy, water)
- » enhancing our corporate citizenship

with projects and other measures as well as with improvements in products, in technologies and in our organisation along the entire value chain.

Furthermore, our aim in the medium term is to involve all the companies in the Barth-Haas group in a **group-wide** sustainability reporting system.

In all of these areas we promote sustainability in our business activities



OUR ECONOMIC PERFORMANCE (2010/2011)

The economic performance of Joh. Barth & Sohn during the 2010/11 fiscal year gives the following picture with regard to stakeholders.

The majority (64 %) of the company's economic performance went to our raw materials suppliers (growers) as material costs.

14 % of the company's economic performance was received by banks and other lenders of capital and 16 % by other suppliers and service providers (value-adding partners).

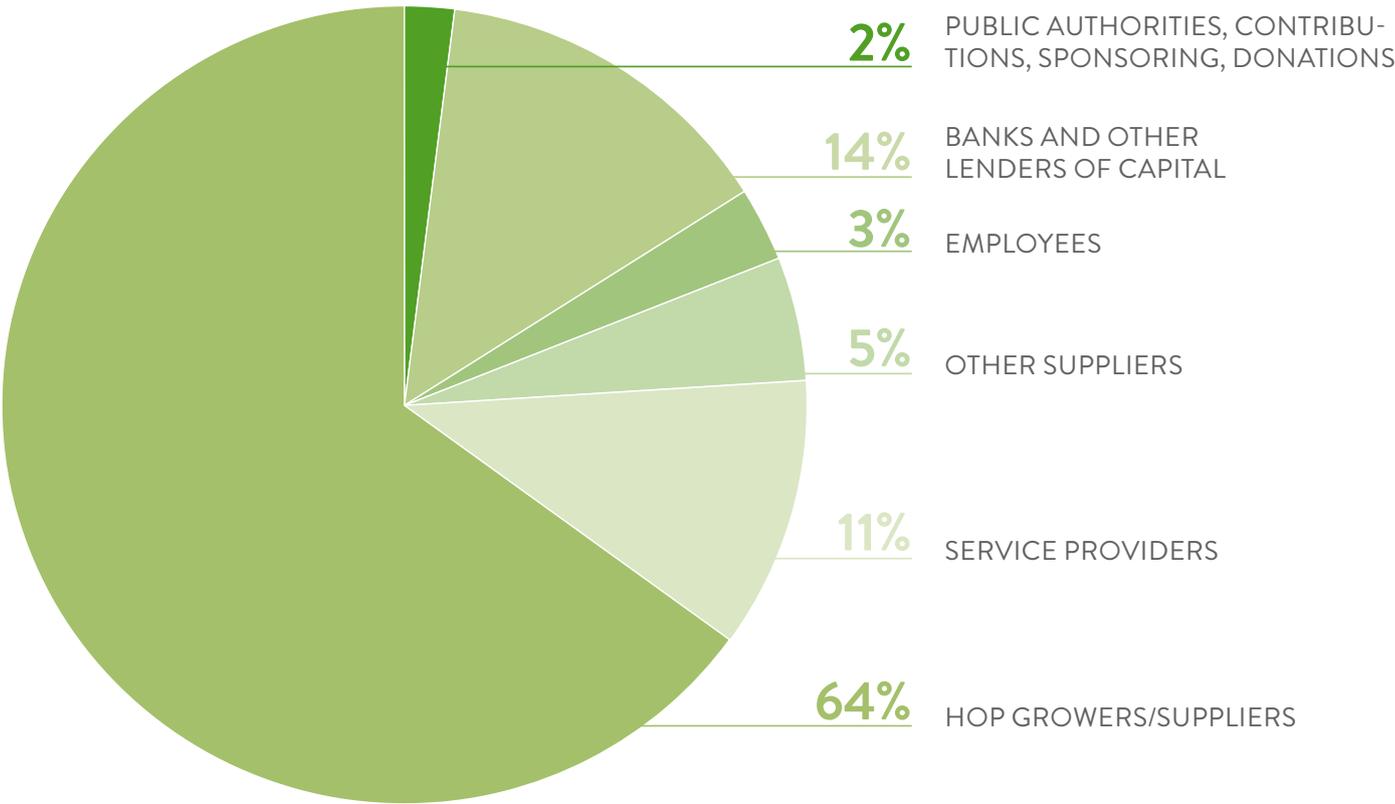
3 % of the company's economic performance went to employees in the form of wages, salaries and pension provisions, while 2 % went

to public authorities, the local community and the education system (contributions, sponsoring, donations).

Employees are supported by means of additional social benefits on a case-by-case basis, if required, and also in their voluntary social activities.

In the year under review, Joh. Barth & Sohn did not receive any financial grants, such as subsidies, from the public purse.

As a local employer, buyer and investor, Joh. Barth & Sohn promotes economic, social and societal progress at its company locations.



Discrepancies from 100 % may occur as a result of rounding.

03

SUSTAINABILITY MANAGEMENT AT JOH. BARTH & SOHN

- » MANAGEMENT SYSTEMS
- » SUSTAINABILITY ORGANISATION





MANAGEMENT SYSTEMS

In order to implement our **sustainability strategy** in each of our individual areas of activity, it is necessary to have sensible organisational and methodical support.

On the basis of our **business and value foundation**, we are using our existing **management systems** for this purpose and are systematically enhancing them with regard to sustainability requirements.

In order to raise awareness amongst our employees about ethical and sustainability issues, we will develop explicit **"codes of conduct"** which clearly state the rules of action we expect them to adhere to.

Furthermore, quality audits and relevant control within the leadership process shall ensure that employees behave in accordance with these guidelines.

The formal **organisation** will also be adapted to deal with sustainability topics:

STRUCTURALLY, by defining the responsibilities for finding, selecting, treating and assessing the impact of sustainability topics; and

METHODICALLY, by implementing relevant projects and by developing systematic and regular sustainability reporting.

Joh. Barth & Sohn has a range of management systems at its disposal to guarantee that the company performs in accordance with its own expectations and with those of its most important stakeholders. Over the course of our company's long history, these management systems

have arisen from the requirements of the business environment and the various interest groups.

These systems serve as a set of tools for reliably, qualitatively and efficiently shaping the activities of the company in response to environmental changes. We regularly take the opportunity to **align** them continually with the demands of sustainable corporate governance.

This includes not only the **complaint-free provision of products** for customers' individual purposes but also the reliable **supply of raw materials** and the constant further **development** of employees' talents and skills. In the **management process**, target-setting, planning and control information is aligned with constantly monitored (environmental) events recorded in risk management.

The functioning of the interaction between the different systems in the management process is also continuously monitored and guaranteed not least by means of the entire **quality management system**.

We identify the **sustainability topics relevant** to us from the ongoing reporting process with the help of the various management systems as well as through active suggestions contributed by all the stakeholders, especially our customers, suppliers and employees, which we obtain on a wide variety of occasions.

The management board discusses such findings and suggestions and also decides which initiatives are to be pursued and implemented in specific projects.



SUSTAINABILITY ORGANISATION

Without organisational implementation, lasting sustainability management cannot be established. The responsibilities for our sustainability activities are structured as follows: A sustainability handbook provides the basic description and structure of all the organisational responsibilities and the necessary processes for all sustainability activities.

MANAGEMENT BOARD

The management board of Joh. Barth & Sohn assumes overall responsibility for sustainability policy and also aligns the business policy with the requirements of sustainable and socially responsible business practices.

"CHIEF SUSTAINABILITY REPRESENTATIVE" (CSR)

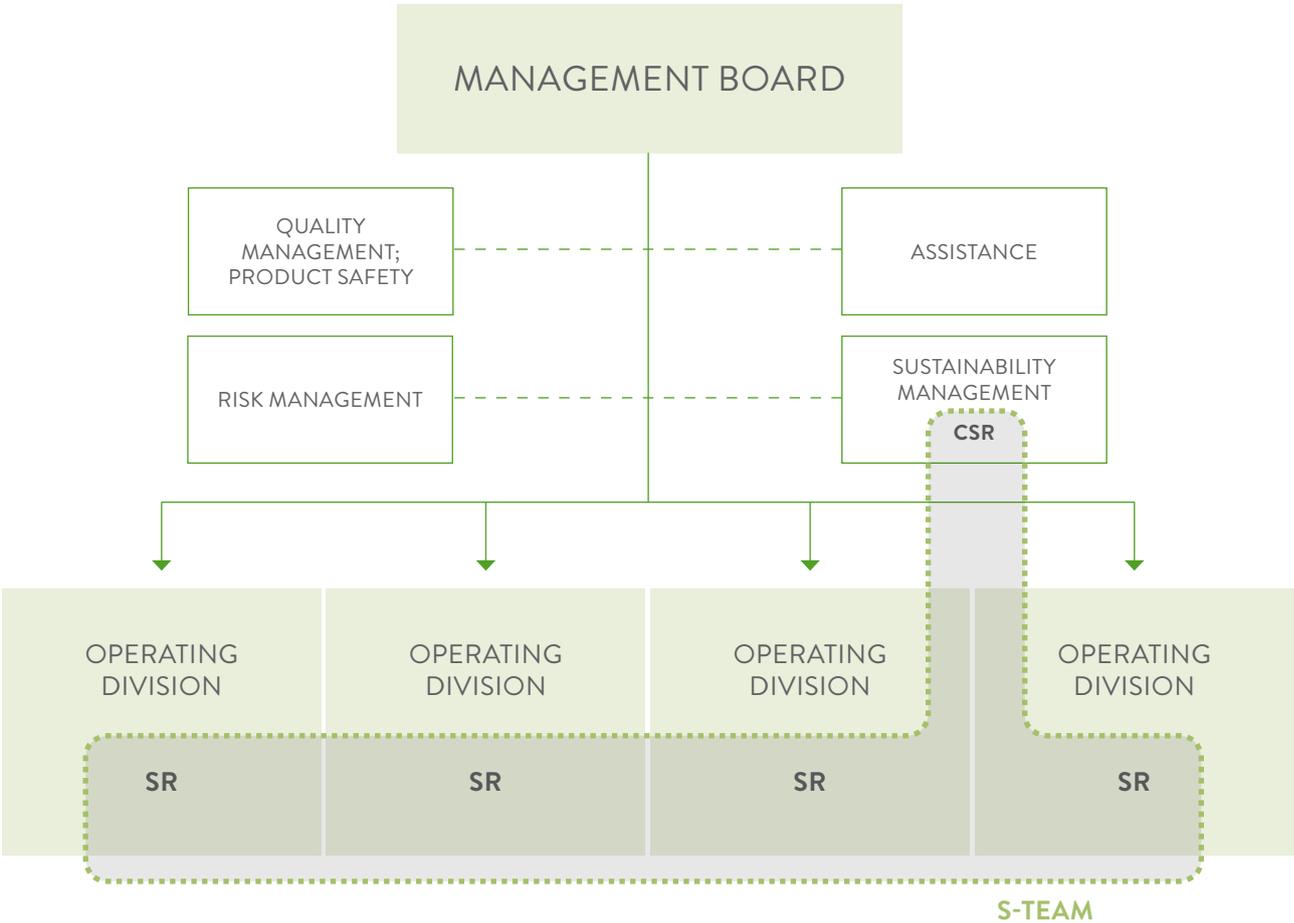
A member of the management board is nominated to ensure that the tasks arising in sustainability management are executed. This person leads the sustainability team and is responsible for initiating sustainability goals and projects and monitoring their implementation.

"SUSTAINABILITY REPRESENTATIVES" (SR)

In conjunction with the CSR, each operating division appoints its own sustainability representative (SR). This person is responsible for implementing of the projects and measures in their respective division that are carried out within the framework of the sustainability strategy.

"SUSTAINABILITY TEAM" (S-TEAM)

As a central decision-making committee chaired by the CSR, the sustainability team steers the (global) implementation of the Joh. Barth & Sohn sustainability strategy. The members of the sustainability team are the SRs, representing the company's various operating divisions. The sustainability team coordinates the (global) activities in the company's operating divisions, the central functions and the regional companies. As chair of the S-team, the CSR convenes regular meetings with the SRs to initiate sustainability goals and projects and to monitor their implementation. He regularly reports to the management board on the status of the projects and achievement of objectives.



04

VALUE CHAIN AND SUPPLIERS

- » VALUE CHAIN
- » COOPERATION WITH HOP GROWERS IN A SPIRIT OF TRUST
- » BARTH-GROWERS' LEARNING SYSTEM
- » VALUE CHAIN AND ENVIRONMENTAL INDICATORS



VALUE CHAIN

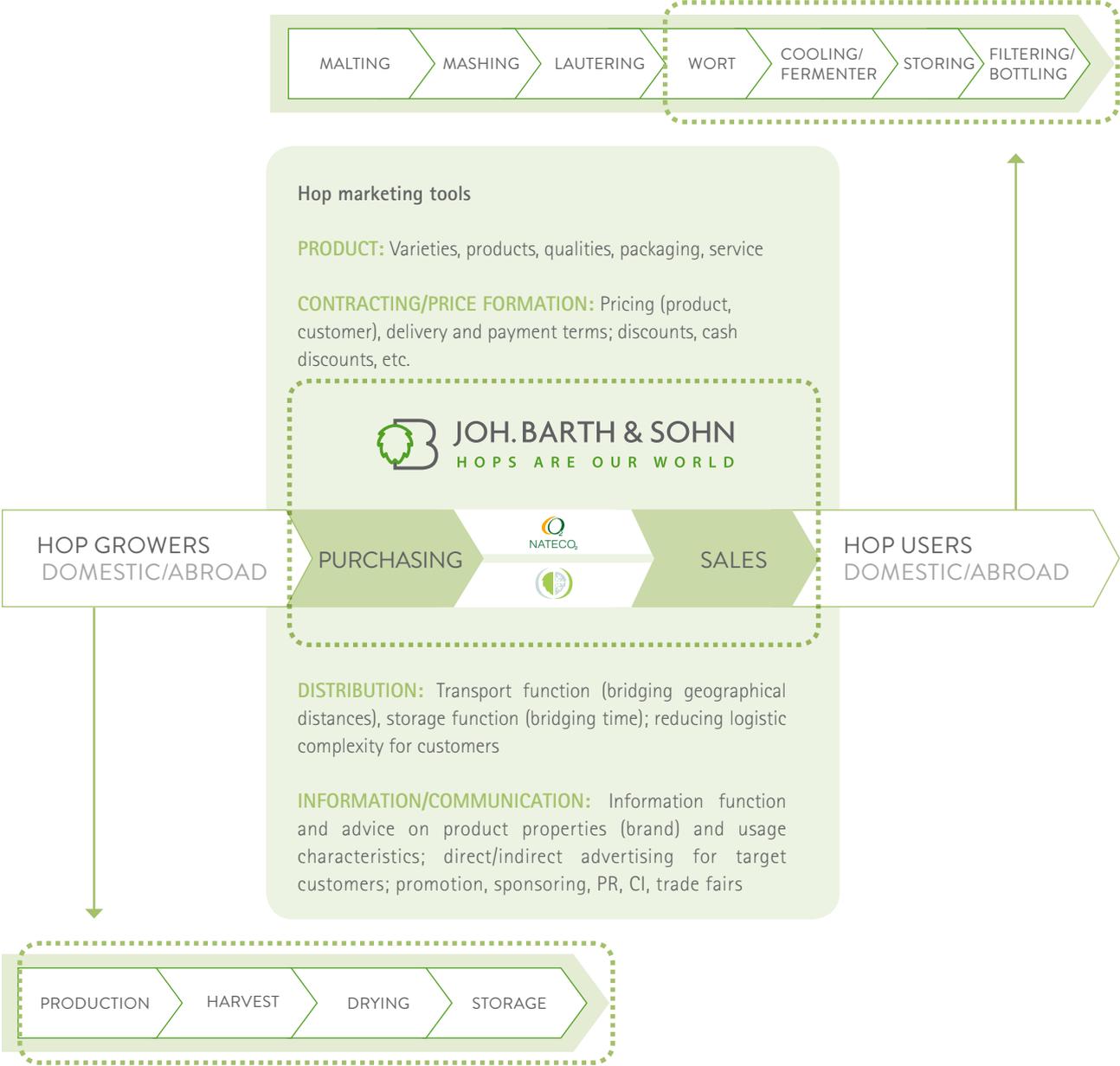
Seen from the **perspective of sustainability**, as a **hop marketing company** acting between growers and brewers, Joh. Barth & Sohn has the opportunity to create **"added value"** for the customer throughout the entire value chain by its influence on the individual business activities involved and to reduce the **"ecological footprint"** of the entire value chain at the same time.

In the view of Joh. Barth & Sohn, many direct and indirect measures influencing sustainability present themselves as a result of strategic cooperation with growers and customers, and these measures also support, supplement and improve the operational activities of hop marketing.

On the **customer's** part, besides developing the product and its quality, the logistic **complexity** of the raw material procurement can be reduced and at the same time a better **supply security of raw hops** can be guaranteed.

Among **growers**, Joh. Barth & Sohn can ensure, by means of the BARTH-growers' learning system amongst other things, that greater attention is paid to sustainability topics, thus guaranteeing sustainable production on the part of **all hop growers**.

Joh. Barth & Sohn complies with the current environmental and social standards in all its strategic and operational activities.





COOPERATION WITH HOP GROWERS IN A SPIRIT OF TRUST

Joh. Barth & Sohn believes that sustainability includes the obligation to operate responsibly in cooperation with business partners along the entire value chain. This is because the more the customer-supplier relationship is orientated towards purely financial aspects, the more short-term and short-lived are the business relationships. Neither side will then subject itself to the efforts that are continuously called for today in order to ensure that competitiveness is maintained in the future.

Our **purchasing philosophy** therefore focuses primarily on the development of **trust**, on **cooperative** relationships and on a **long-term** approach in our cooperation with our growers. Such an attitude is **sustainable** from the very outset.

We regard sustainability in connection with our suppliers – first and foremost the **growers** – as being aimed at establishing a long-term, trusting and smoothly functioning **collaboration**.

This does not mean that trust and competition are mutually exclusive. When Joh. Barth & Sohn makes a commitment to the idea of sustainability, we know only too well that, under present-day competitive conditions, this also means constant **competition** for growers, especially for those who operate very flexibly and with great initiative. We therefore make intensive efforts to be attractive to our suppliers as a customer and to remain so. It is our endeavour together with our suppliers to become better as a "**value creation chain**" as a whole, thus increasing the overall value of this value chain.

This changes the **rules of the game** to some extent. The objective to which we aspire is no longer defined merely in terms of a short-term focus on price, but in terms of **cooperatively** and sustainably utilising efficiency potential along the entire value chain. The argument over how to divide up the (then larger) cake will therefore gradually become less heated in the long term. We are also convinced that in our international industry environment, the only businesses that will survive are those which, for the sake of the overall optimum, are willing and able to face the future challenges of competition.

From the idea of sustainable management it therefore follows that companies must be willing and able to prove that they are taking on **responsibility** for their creation of value. This is not simply because individual stakeholders – e.g. customers – increasingly want to know about the environmental, working and social standards according to which the products and services were provided. It is also because critical confrontational questions demonstrate very clearly how things look in terms of the ability to take on responsibility. Responsibility and trust can only develop when the parties know one another. Openness and transparency about activities in the company today and plans for the future are what is called for.

For the purchasing policy of Joh. Barth & Sohn this means understanding the growers' potential and their value creation conditions and at the same time developing good relationships based on partnership. Joh. Barth & Sohn intends to systematically continue this process of getting to know and understand its growers by the **BARTH-growers' learning system**.

BARTH-GROWERS' LEARNING SYSTEM

The BARTH-growers' learning system is a management concept which lays emphasis on the hop growers' responsibility for the productivity and capacity for innovation of the whole value chain, thus shifting the focus from the purchase price and other revenue components to **sustainable supplier development**.

The aim of this concept is basically to create an even closer relationship with the strategically important suppliers and growers, to further develop their potential and also to gain new suppliers for Barth.

In order to make progress with implementing the sustainability concept in the value chain, customers and suppliers/growers must be able to derive a benefit for themselves at the same time. Just as Joh. Barth & Sohn tries to be attractive to its suppliers as a customer, the suppliers likewise need to be open, flexible and geared towards innovation. The topic of sustainability thus becomes an integral component of the dealings between Barth and its growers. **The term**

learning system is particularly appropriate, because Joh. Barth & Sohn and its growers both have to develop further in terms of the requirements and opportunities of sustainable business practices.

Corresponding **benefit potential** will only arise for both sides if they share a sustainable (trusting, responsible and long-term) customer/supplier relationship which is expressed in

- » a reciprocal improved exchange of information in technical matters,
- » more effectivity handling processes and operations
- » avoiding conflicts and the unnecessary collateral transactions.

In detail, this can mean greater satisfaction on the part of the hop growers and of Joh. Barth & Sohn or an improvement in competitive flexibility and pace due to closer collaboration. It can also produce a stronger commitment (a sense of unity) resulting in greater willingness on the part of the hop growers to innovate and invest.

Additional positive effects can be:

- » Reducing the complexity and transaction costs by
 - » diffusing conflicts (e. g. over quality problems, disagreements, etc.),
 - » avoiding/reducing the number of changes of suppliers and contract negotiations
- » Improved quality management through
 - » trusting exchange of information and
 - » advice for hop growers

The BARTH-growers' learning system can be used to systematically categorise suppliers and assess their performance followed by

TYPES OF SUPPLIERS

This is based on categorising the suppliers (hop growers). In this categorisation, each grower is classified according to their **present turnover** and **future potential**.

Joh. Barth & Sohn works with a large number of suppliers and growers whose importance for the company can be read off on the basis of their performance capacity and respective turnover.

This gives rise to different types of hop growers:

- » **Suppliers** whose turnover with Joh. Barth & Sohn amounts to >x% of their production; **growers** whose turnover is <x% of their production.
- » **Basic** or **top** category, depending on whether the achievement potential exceeds the defined value m.

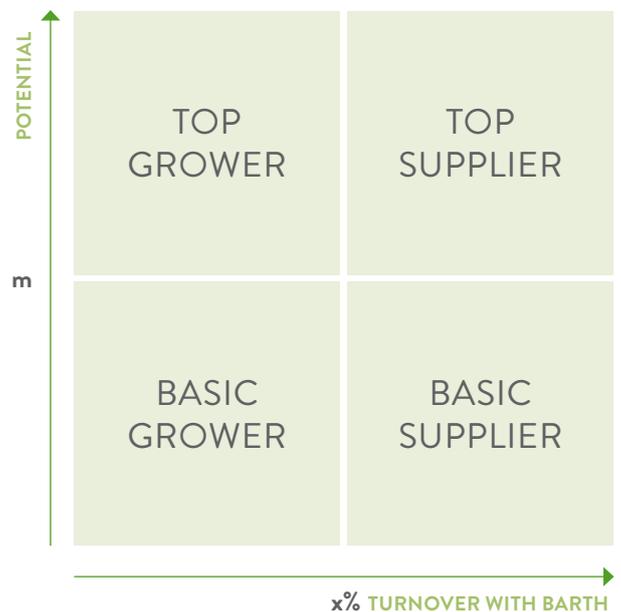
The entire Joh. Barth & Sohn supplier portfolio can be represented using these two dimensions. Both dimensions result from a specific rule which systematically and clearly takes account of additional assessment criteria.

joint to train growers so that they develop a sustainable attitude ("cool farming"). To achieve this, the concept has to provide useful tools with a visible surplus for hop growers and which, if possible, should be quantifiable in financial terms.

PILLARS OF THE BARTH-GROWERS' LEARNING SYSTEM

The Joh. Barth & Sohn supplier management system is based on the following two pillars:

- » Types of suppliers
- » Customer-supplier cycle

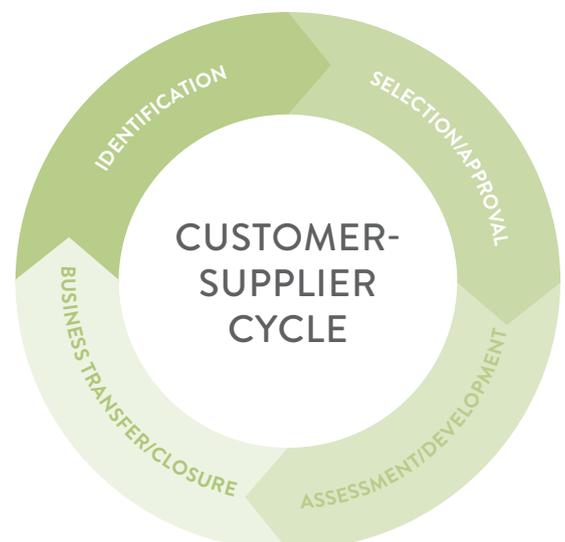


CUSTOMER-SUPPLIER CYCLE

Joh. Barth & Sohn aims to constantly improve the quality of its entire supplier portfolio. To achieve this it is important to actively manage the respective customer-supplier cycle: The quality of performance and the quality of its production can be analysed using a number of regular assessment steps, from identification, through selection and development, to separation.

The aim is to use appropriate measures to develop the basic growers into basic suppliers and the top growers, as well as the basic suppliers, into top suppliers and to keep them at the highest level possible.

From this point of view, the BARTH-growers' learning system describes the systematic development, care and controlling of our business relationships with the growers.





SYSTEMATIC ASSESSMENT OF PERFORMANCE AND POTENTIAL

The assessment of a supplier's potential is carried out using various **comprehensible weighted criteria** whose values are defined on a scale and calculated in a **scoring model**. What is known as a **"supplier figure"** is used for identification purposes and serves as a simple and quick way to describe which supplier category the grower is assigned to.

SUPPLIER RELATIONSHIP DIMENSIONS

The intervals at which assessments are made and the conclusions which are drawn from the findings are crucial. There are significant differences in the type of supplier relationship, the key dimensions being:

- » **Competence**
(practical support, experience, special services)
- » **Intensity**
(frequency and depth of interaction)
- » **Reciprocity**
(common interests, commitment of both partners)
- » **Recognition**
(personal acceptance, confirmation, recognition as equal partner)
- » **Likeability**
(affinity, individual closeness, "chemistry" between the partners)

MEASURES FOR SUPPLIER DEVELOPMENT AND RETENTION

The supplier figure and the supplier relationship dimensions provide initial indications as to which **set of measures** is suitable for supplier development between Joh. Barth & Sohn and the respective supplier.

Joh. Barth & Sohn compiles a suitable package of measures for each of its suppliers which is worked out in accordance with the current supplier profile. There is a comprehensive and sophisticated **range of measures**, including:

- » a variety of information support packages (such as a growers' portal on the Internet, BARTH fax, crop status fax)
- » direct and indirect advisory support
(e. g. BARTH Irrigation Workshop)
- » granting of special conditions
- » other cultural and social measures
(e. g. BARTH information evening).

CONTINUOUS FURTHER DEVELOPMENT REGARDING SUSTAINABILITY

The **systematic development and support of the different qualities in our suppliers throughout the entire customer-supplier cycle means:**

- » creating **performance profiles** and
- » **regularly assessing** the effectiveness of the agreed measures

We are convinced that this will enable our core values and our standards to be transferred to our suppliers in order to enhance their awareness for sustainable working practices.

Regular **feedback activities** shall increase the sensibility to sustainability in particular.

In line with our motto – demand, support and reward – we also encourage our suppliers to take responsibility for the success of our common value chain, e. g. through appropriate investments in sustainable working practices.

We are convinced that only sustainably "healthy" suppliers are capable of working on a basis of partnership and can therefore also produce "healthy" products.

The **Barth Hops Academy** also offers our suppliers programmes and training courses for professional development on issues relating to the technology and management of hops.

In cooperation with our network partners we intend to set up a separate programme of training courses on **"Sustainability for hop growers"**.

OUR OBJECTIVES FOR THE NEXT FEW YEARS:

- » To develop and improve methods for measuring and collecting data regarding "sustainable hop growing"
- » To set up internal data collection and information systems on sustainability requirements
- » Comprehensive communication of our philosophy
- » Joint projects and initiatives for environmental and energy projects
- » To offer the "Sustainability for hop growers" training programme

VALUE CHAIN AND ENVIRONMENTAL INDICATORS

Our business activities in the value creation chain cause various effects through

- » extraction of resources (problem of shortages) and
- » disposal of consumed resources (pollution problem).

CONSUMPTION OF ENERGY AND RESOURCES

Selected criteria (environmental indicators) represent the extent of consumption by Joh. Barth & Sohn at its German sites. This takes account not only of the **direct** effects but also of those caused **indirectly** as a result of processing the raw hops in the processing plants ("service providers").

We have shown the calculated consumption according to the energy carriers on the one hand and the different impact levels (direct and indirect) on the other.

In addition, the directly attributable total water consumption measured for Joh. Barth & Sohn amounted to approx. 3,820 m³. The water consumption attributable to processing (service providers) was approx. 2,750 m³.

ENVIRONMENTAL IMPACT

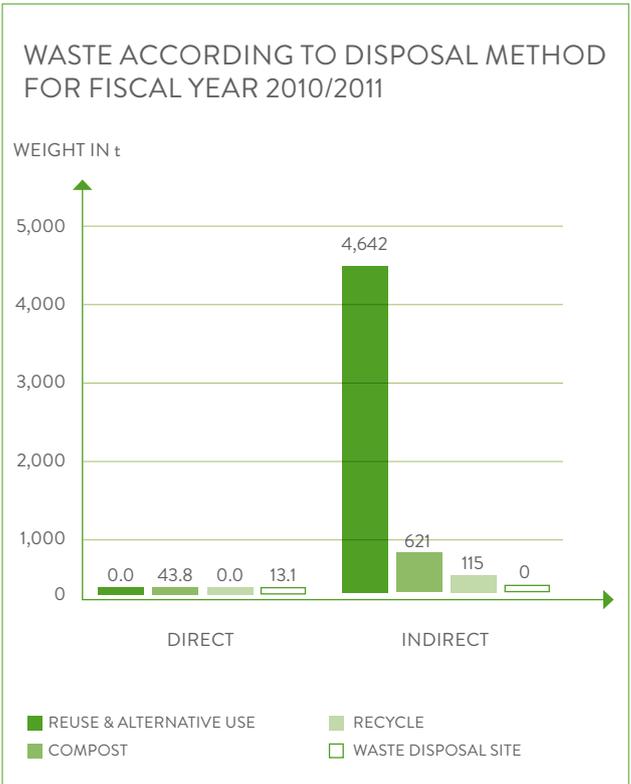
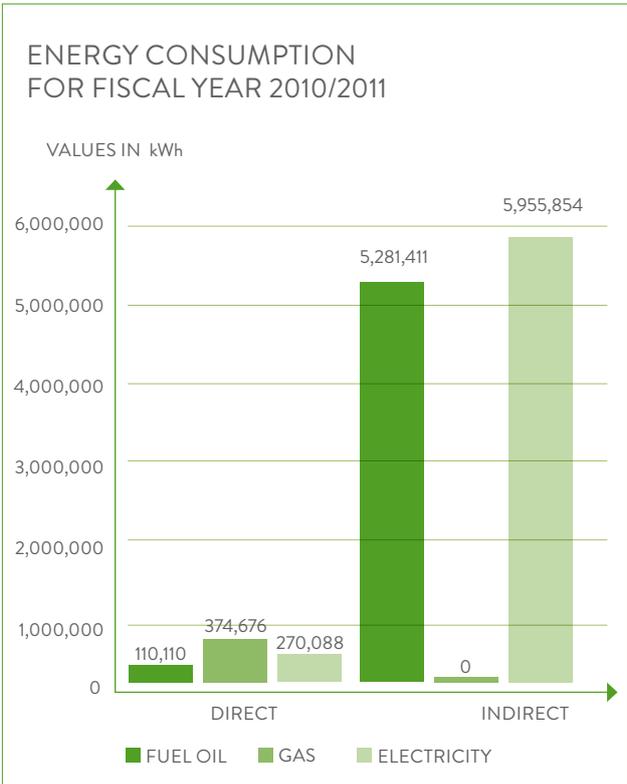
The business activities of Joh. Barth & Sohn caused effects on the environment by producing by wastes and emissions. The total weight of **wastes** recorded in the 2010/11 fiscal year was approx. 5,435 t, of which 5,378 t was caused indirectly by service providers (processing plants).

Waste disposal is handled exclusively by the municipal disposal service and by special service providers (e. g. for document disposal).

Computer and electronic waste which occurs at irregular intervals was not taken into account.

Directly produced wastes are almost exclusively recycled by the conventional municipal disposal service through recycling/reuse and through the waste disposal site and other forms of disposal.

Indirectly produced waste was processed mainly via direct reuse and alternative use (e.g. spent hops used as animal feed) and by recycling/recovery performed by special service providers.



The directly and indirectly attributable water discharge volumes were almost the same. As this refers exclusively to municipal water supplies, for the sake of simplicity we have assumed that the same quantity of directly attributable waste water returns to the municipal waste water disposal facility.

The indirectly attributable waste water discharge can be measured directly. It amounted to 2,755 m³ in the 2010/11 fiscal year.

Direct and indirect greenhouse gas emissions and other important air emissions (NO_x, SO_x) were not taken into account, as the recording techniques still need to be developed.

Although the environmental impact of the reporting organisation caused by the transport of products, materials and people was not recorded specifically, our guidelines point clearly in the direction of sustainability.

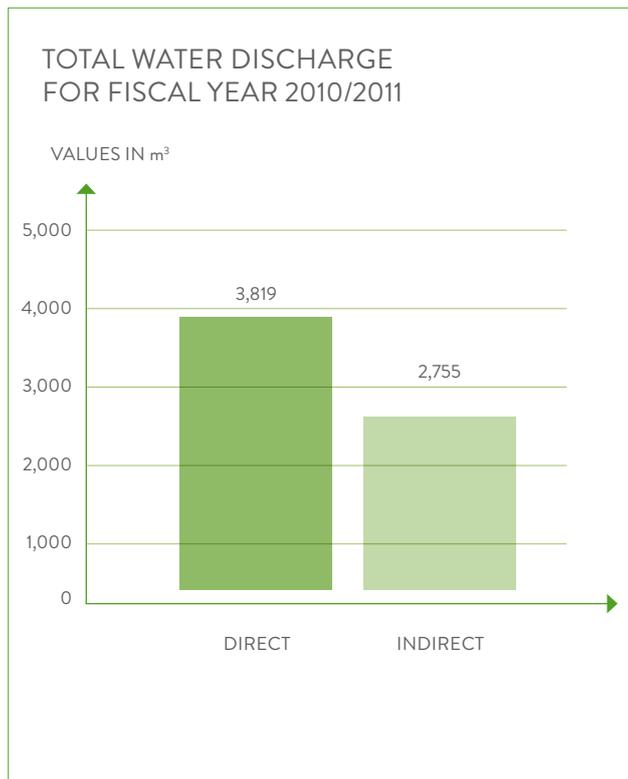
For example, most of the transport takes place overland or by sea, and high-emission air freight is only used in exceptional cases when explicitly requested by the customer.

Rail transport only accounts for a small percentage of overland transport. Most goods are transported by truck, which is often necessary to meet deadlines. We are trying to increase the proportion of rail transport in future as a matter of principle.

Likewise, Joh. Barth & Sohn encourages its employees to use public transport.

We will bring our vehicle fleet into line with sustainability criteria by creating incentives for our employees to choose vehicles with low CO₂ emissions (green fleet).

Joh. Barth & Sohn was not required to pay any penalties or fines on account of non-compliance with environmental regulations.



05

PRODUCTS AND CUSTOMERS

- » OUR “ADDED VALUE” STRATEGY
- » QUALITY MANAGEMENT SYSTEM
- » QUALITY CERTIFICATES
- » PRODUCT SAFETY CONCEPT
- » QUALITY AND INNOVATION





OUR “ADDED VALUE” STRATEGY

The strategic target of our management is to be the value leader in our industry, i. e. to offer our customers the best ratio of price to performance. This involves a great deal more than simply delivering complaint-free hops. We see it as our duty to investigate everything worth knowing on the subject of hops and to place the knowledge we acquire at the disposal of our customers.

In order to meet this target we have undertaken numerous initiatives in recent years which are based on the following three principles:

ENTHUSIASM FOR OUR PRODUCT AND DEDICATION TO THE SUCCESS OF ALL OUR CUSTOMERS

The “Hop Aroma Compendium” was produced in close cooperation with two world champion beer sommeliers and a perfumer. The book gives a systematic description of the aroma characteristics of the hop varieties available worldwide and is intended to support our customers in making their products more interesting (see page 30).

In 2011 we set up the “Simply Hops” web shop in cooperation with our partners at Botanix Ltd. in order to provide a more specialist service for micro-brewers and home brewers (see www.simplyhops.co.uk).

INNOVATION AND WIDENING THE APPLICATIONS OF HOPS

By founding a dedicated R & D facility under the name of **Barth Innovations Ltd.** in 2010, we pooled our European research activities under one roof. It aims at developing new hop products for known and new applications and of giving support to our customers on technical aspects of implementation. Our **research brewery**, established in 1997, enables our customers to test their own creations.

EXPANDING THE “HOPS PHILOSOPHY” ON THE INEXHAUSTIBLE POTENTIAL APPLICATIONS AND EFFECTS OF HOP COMPOUNDS

The **Barth-Haas Hops Academy** was established in 2010 in order to create a better understanding of the complexity of the hop and its full potential. Having in-depth knowledge of the usage, effects

and action of this special brewing ingredient enables the brewer to optimise process efficiency and develop distinctive high-quality beers.

By expanding the team in our Technical Sales Services department we have ensured that contacts are permanently available to answer our customers’ technical questions, starting from the correct and efficient use of our products all the way to developing entire beverage formulations.

We view our **sustainability endeavours** themselves as an important part of our “added value” strategy.

This strategy is embedded in **systematic and comprehensive quality and product safety management** which extends along the entire value creation chain, from hop growing to hop processing up to use product use.

As regards our current sustainability endeavours in the “products and customers” area, we would like to describe two core topics in greater detail below:

- » Quality and product safety
- » Producing an aroma compendium

QUALITY IS MORE THAN FLAWLESS GOODS

Joh. Barth & Sohn is a quality-driven company, committed to the highest possible customer satisfaction through teamwork, innovative product development and systematic further development.

During the company’s more than 200-year history, Joh. Barth & Sohn has often enough proved what it means to be a reliable partner for the brewing industry all over the world and, even in difficult times, to remain true to the high standards we have set ourselves.

Quality and product safety are the top priorities for Joh. Barth & Sohn. We guarantee to supply our customers with top-quality products and services at all times and to find good and acceptable solutions in every situation. This was the case in the past and will continue to be so in the future.

QUALITY MANAGEMENT SYSTEM

For the sake of maximum customer satisfaction, our comprehensive quality management system (QMS) enables us to ensure that the processes and manufacturing procedures in our organisation are constantly reviewed with the aim of continuously improving the quality of our products and services.

The QMS describes the methodology and supplies the tools used by our staff in their individual procedures for safeguarding and improving quality. All the necessary documents and instructions can be accessed by each member of staff on our intranet at any time.

As part of our commitment to providing safe, top-quality hop products, Joh. Barth & Sohn has developed and implemented HACCP (Hazard Analysis and Critical Control Points) programmes at all its company locations. HACCP is an internationally recognised management system focused on the prevention of food-related safety problems.

In addition to ISO guidelines, the Joh. Barth & Sohn QMS also includes the international HACCP guidelines in order to ensure a continuous improvement in quality and safety. Both systems, QM and HACCP, play a very important role in our continuous improvement process.

Since 2006, HACCP has also been an integral part of our ISO 9001 QM system and therefore subject to regular audits and certification.

During the development of our HACCP programme, all aspects of production were examined, from raw material procurement to storage and distribution of the end product.

Tests were carried out to determine whether a hop product is liable to a naturally occurring or process-induced safety hazard. Safety hazards, for example, can be the biological (principally microbiological), chemical and/or physical properties of a product that have the potential to injure or cause illness in the end user.

HACCP is used to identify existing or potential hazards and with its help a system is put in place to reduce the threat of risk in the final product.

The development and implementation of the HACCP programme is only one aspect of Joh. Barth & Sohn's continuing commitment to supplying its customers with safe, high-quality hop products.

QUALITY AS AN IMPORTANT ELEMENT IN THE SUPPLY CHAIN

Two decades of experience with the QMS and the audits carried out by our customers show that our work gives absolutely no cause for complaint and, thanks to numerous improvement measures in product and processing know-how, we repeatedly receive positive feedback with regard to sustainability issues (e. g. product safety or the reduction of environmental pollution).

The QMS is supported by all the departments of Joh. Barth & Sohn and the quality of our raw materials and products is monitored from the hop garden all the way to their arrival at the brewery. This enables our organisation to ensure an efficient process flow.

Even if hops have always had a pioneer role in quality matters amongst agricultural crops, particularly in terms of traceability and comprehensive control measures, potential for improvement still remains.

During the vegetation period, agricultural products are exposed to environmental effects, which may result in contamination.

Although Joh. Barth & Sohn hops been subject to regular and rigorous testing for pesticide residues for many years now, we have once again increased the extent of these checks and thus our quality requirements using our new product safety concept.





QUALITY CERTIFICATES

Our high quality requirements are documented by the many different quality certificates awarded to Joh. Barth & Sohn and to the Barth-Haas Group as a whole.

ISO 9001:2008 CERTIFICATION FOR JOH. BARTH & SOHN AND FOR ALL PROCESSING PLANTS WORLDWIDE

- » Joh. Barth & Sohn GmbH & Co. KG
- » NATECO₂ GmbH & Co. KG
- » Hopfenveredlung St. Johann GmbH & Co. KG
- » Botanix Ltd.
- » John I. Haas, Inc.
- » Hop Products Australia
- » Xinjiang Green Diamond Hops Co., Ltd.
- » Gansu Tianma Hops Co., Ltd.

ISO 14001:2004 ENVIRONMENTAL MANAGEMENT CERTIFICATION

- » NATECO₂ GmbH & Co. KG
- » Hopfenveredlung St. Johann GmbH & Co. KG
- » John I. Haas, Inc. (incl. BetaTec Hop Products)
- » Xinjiang Green Diamond Hops Co., Ltd.
- » Gansu Tianma Hops Co., Ltd.

ORGANIC CERTIFICATION

- » Joh. Barth & Sohn GmbH & Co. KG
- » Hopfenveredlung St. Johann GmbH & Co. KG
- » John I. Haas, Inc.

KOSHER CERTIFICATION

- » NATECO₂ GmbH & Co. KG
- » Hopfenveredlung St. Johann GmbH & Co. KG
- » Botanix Ltd.
- » John I. Haas, Inc.

PRODUCT SAFETY CONCEPT

“Creating added value” through “Barth hops with quality control guarantee”

Using our specially developed “Barth safety concept” with its integrated early warning system for seamless monitoring of the hops marketed by us, we offer our growers and customers maximum transparency for optimum “hop purity”.

Barth hops as an image factor

The “Barth quality seal” offers our customers and suppliers a hop with a quality control guarantee. They are therefore in safe hands with **Barth hops**.

The close monitoring for potential residues of plant protection agents ensures that only those hops which satisfy the requirements of both the law and our customers are brought into circulation.

This minimises problems with sales and liability, both for growers and for the customer.

Should problems arise nevertheless, we can detect these quickly using targeted measures, thus guaranteeing safety for everybody concerned. Remedial measures can be put in place rapidly thanks to the seamless batch documentation in our IT system.

Thanks to the rapid support provided by Joh. Barth & Sohn, damage in the marketplace for customers and growers is kept within very narrow limits.

OUR EARLY-WARNING SYSTEM DETECTS IN ADVANCE WHAT IS WRONG WITH ANY HOPS

The hops are tested for residues of plant protection agents prior to harvest using the “Barth leaf programme”.

Close cooperation and information exchange with the growers, as well as specialist advice from our knowledgeable purchasing experts, make early forecasts possible.

During the regular “Barth hop tour”, during which selected hop gardens are visited throughout the European growing regions, any kind of infestation or disease is observed and documented and appropriate action is taken.



* The Barth guarantee refers to the comprehensive quality control measures and analysis of active compounds to which Barth hops and hop products are subjected. It is not a guarantee for a 100% purity of these products. For details of the quality control programme please see at www.barthhaasgroup.com.

A RECENT EXAMPLE

A recent case shows just how reliably the Barth product safety concept operates.

SPRING 2010	Extreme threat of downy mildew infection in the Hallertau region.
JUNE 2010	Rumours of the use of an unlicensed fungicide spread amongst the hop growers in the Hallertau.
02.06.2010	The Hop Research Institute in Hüll issues an urgent warning against the use of such agents via the "Hopfenring" fax.
JULY 2010	Joh. Barth & Sohn decides to include the suspect substance in the regular screening programme.
OCTOBER 2010	Traces of the active substance are found in a leaf sample analysed by the Joh. Barth & Sohn early warning system.
NOVEMBER 2010	The active substance is detected in a Joh. Barth & Sohn mixed sample.
09.12.2010	Joh. Barth & Sohn informs the members of the inter-company Hops Analysis Working Group (Arbeitsgruppe Hopfenanalyse AHA) about the initial findings.
JANUARY 2011	Joh. Barth & Sohn decides to have all products from the 2010 harvest – whether already delivered or not – and all the raw hops which have not yet been processed, analysed for the suspect substance. The Joh. Barth & Sohn crisis management plan is updated and all necessary measures implemented immediately.
MARCH 2011	All Joh. Barth & Sohn products are analysed for the suspect substance. Contaminated batches are recalled or stopped. From this point onwards new batches for processing are only made from raw hop deliveries which have already been analysed.



THE MOST COMPREHENSIVE QUALITY CONTROL PROGRAMME IN THE INDUSTRY

All hops and hop products obtained from us are combined as mixed samples in a standardised form and comprehensively analysed. Details of the routine approach and the specified range of active compounds can be viewed on the Barth website.

The hops are not released for processing and marketing until the results of the analysis are available.

TRACEABILITY OF ALL HOP AND PRODUCT LOTS

Our IT system stores all the data and enables us to correctly allocate the hops to meet customer requirements. This means that the grower lots in any given product batch can be easily traced.

Reference samples of all hop and product lots are kept for at least five years. The plant protection form was developed by Joh. Barth & Sohn and has become the established standard within the German hop industry.

The plant protection calendar introduced by Joh. Barth & Sohn increases the reliability and comprehensiveness of documented plant protection measures, exclusively for our suppliers and customers.

All these quality measures have their price. At Joh. Barth & Sohn we believe that the safety and reliability of our products are important enough to justify this expenditure. By avoiding product recalls, production stoppages and damage to a company's image and thanks to better safety and transparency, this expenditure also indirectly benefits our suppliers and customers.

JOH. BARTH & SOHN PRODUCT SAFETY CONCEPT AND GROWERS

Our measures are not only well suited to detecting cases of damage at an early stage, they also ensure that our suppliers are operating sustainably and help to avoid damage events.

RELEVANT APPLICABLE STANDARDS

In the interests of consumer health and safety, the products and services supplied by Joh. Barth & Sohn are subject to a number of laws and regulations.

We entirely comply with our information obligations satisfactorily, which is verified both by our customers' quality audits and by the non-imposition of fines.

Below is a summary of the standards and regulations which apply to Joh. Barth & Sohn:

STANDARDS

EU Regulation (EC) No. 1107/2009: amongst other things, this regulation specifies all active substances which may be contained in plant protection agents and which must be licensed in the member states; it is the basis for the German plant protection law.

EU Regulation (EC) No. 178/2002 (basic regulation): amongst other things, this requires complete traceability (upstream and downstream) in food production

EU Regulation (EC) No. 396/2005: a harmonised list of maximum residue levels for all foodstuffs and all active substances

EU Regulation (EC) No. 852/2004: regulation on the hygiene of foodstuffs (HACCP etc.)

EU Regulation (EC) No. 1935/2004: applying to food packaging

German Food and Feed Code (Lebensmittel- und Futtermittel-gesetzbuch): this governs labelling obligations, hygiene regulations, food inspection, etc.

US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA): this governs pesticide residues in the USA

US Federal Food, Drug, and Cosmetic Act (FD&C Act): this lays down maximum permissible residue levels in foodstuffs (incl. hops)

Japanese Food Sanitation Law: this contains a positive list with maximum permissible residue levels in foodstuffs (incl. hops)

FEEDBACK SYSTEMS

Joh. Barth & Sohn regularly carries out an Internet-based customer satisfaction survey (every two years). The main purpose of this is to gather comments on potential areas for improvement and to enable us to further enhance our customer service.

The next sustainability report will contain full details of the results of the 2012 customer survey.

QUALITY AND INNOVATION

Creating added value for our customers is an important driving force for Joh. Barth & Sohn.

Our concentrated efforts to improve and expand knowledge about hops as a raw material is aimed at helping breweries to improve their products through the use of hops and thus be able to differentiate

themselves in their competition for customers.

One aid for this purpose is the Hop Aroma Compendium published by Joh. Barth & Sohn. Brewers can use this book to produce innovative beers with new flavour and aroma properties in a natural way, to an extent that was previously impossible.

THE HOP AROMA COMPENDIUM

No other raw material used in brewing has such a great influence on the aroma, flavour and bitterness of a beer as hops. And no other raw material has as many aromas as hops.

In the last few years, there has been an increasing number of brewers who wish to rediscover hops in order to make their beers more distinctive. They not only want to know the alpha or oil content; they are not interested in technical values alone. What they want to know is what the hops smell like, what aromas they have and what effect these aromas may have on the finished beer.

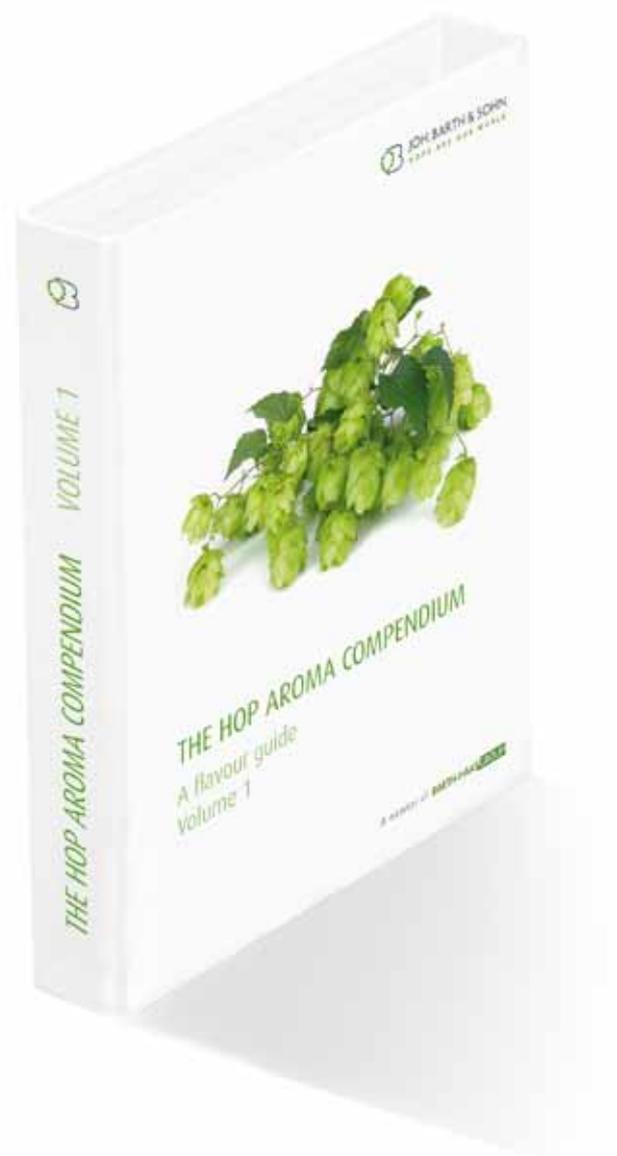
As the leading provider of hop-related services, Joh. Barth & Sohn has therefore classified and carefully described the aromas of the most important hop varieties in close cooperation with two world champion beer sommeliers and a perfumer.

Each hop variety has its very own aroma composition – and each hop variety can change a beer's flavour. The original hop aroma is, of course, only a starting point, but those who know the hop aromas and their effects can also arouse enthusiasm among their customers for nuanced beers.

Join us in discovering hops and their incomparable aromas – for the benefit of your beer and of your customers!

The Hop Aroma Compendium – a flavour guide – Volume 1.

The Hop Aroma Compendium gives detailed descriptions of the unique aromas of 48 varieties of hops from the United States, Australia and Europe.



06

EMPLOYEES

- » CHALLENGES FOR HUMAN RESOURCES MANAGEMENT
- » COMPETING FOR THE BEST TALENT
- » INTEGRATION OF OLDER EMPLOYEES
- » CONTINUOUS EMPLOYEE DEVELOPMENT
- » SYSTEMATIC POTENTIAL AND PERFORMANCE APPRAISAL
- » PERFORMANCE-RELATED REMUNERATION
- » WORK-LIFE BALANCE
- » HEALTHY EMPLOYEES
- » INCREASING SUSTAINABILITY AWARENESS
- » SOCIAL PERFORMANCE INDICATORS



CHALLENGES FOR HUMAN RESOURCES MANAGEMENT

Joh. Barth & Sohn's suppliers and customers operate in numerous countries. Their requirements and their cultural diversity place the highest of demands upon our capabilities.

This internationality and (cultural) diversity require the unifying elements worldwide of a sustainable **vision** and corporate **values** that we can live by. Our vision, which was redefined in 2010, and the values extrapolated from it are intended to contribute to establishing a performance-driven and sustainable culture at Joh. Barth & Sohn. (see corporate cultural values page 9)

Our cultural values – a **solution-oriented approach, capacity for teamwork, sense of responsibility and respect for others** – create a solid basis for productive international collaboration both within our company and with our business partners.

Our culture simultaneously fosters entrepreneurial spirit and personal responsibility; it rewards individual excellence and is based on the values of fairness and team spirit.

Our cultural values thus constitute not only an essential foundation to ensure we can fulfil our mission within the competitive environment, but also an important orientation guide for our employees. Our **HR management** is responsible for instilling these values throughout the organisation - in all of its activities. This begins with employee recruitment, and extends through employee retention, training and further professional development, all the way to subjects such as performance appraisal, remuneration, diversity and occupational health management. Future challenges regarding employees and sustainability can, in our view, largely be condensed down to the following **human resources policy** objectives





COMPETING FOR THE BEST TALENT

We try to be an attractive employer for employees. Our international business environment calls for highly flexible individuals who are ready to act on their own initiative. We look for talented employees who can also succeed in a constantly changing environment and can use change to their advantage.

Joh. Barth & Sohn invests in its **young talent** early on. We have built up a network with relevant universities and fostered collaboration with professors. Our internships afford **students** the opportunity to

put their ability to the test in conjunction with seminar papers and theses. This allows us to get to know highly-qualified and motivated talent at the same time and to foster links between them and the company at an early stage. (see Barth-Haas Grants page 44)

In addition, Joh. Barth & Sohn offers apprenticeships in **wholesale and foreign trade** and encourages the further professional development of employees in business administration and management, for example, through extra-occupational training.

INTEGRATION OF OLDER EMPLOYEES

Young talent is one aspect; the other is how to deal with the predicted demographic trend of ageing employees.

Against the backdrop of an obsession with youth, the prevailing opinion in industry was often that older employees (50+) should be put out to pasture as early as possible. Lacking the impetus to pursue further training, or as a result of reduced intellectual and physical capabilities and an inability to adapt, they would be sent into early retirement, often prematurely and often at the expense of the social security systems. But today, with the benefit of experience the situation is seen from a different perspective.

At Joh. Barth & Sohn there is no need for a specific human resources policy on the integration of older employees, but there is a change in focus.

Topics such as health promotion to preserve individual capabilities for as long as possible and the flexible organisation of working time will certainly have to be given even greater attention.

After all, it is only in this way that we can constructively take into account all the knowledge gained through experience, an increased quality awareness, employer loyalty, a high degree of judgement and the assumption of responsibility on the part of older employees.

CONTINUOUS EMPLOYEE DEVELOPMENT

The systematic development and promotion of the various talents and skills of our employees – regardless of age – is an essential prerequisite for the quality of our products and services – and thus for our success as a company.

Nine different nationalities work together in twelve different languages for the success of Joh. Barth & Sohn. For this very reason, we invest in the knowledge, creativity and social skills of our employees.

Joh. Barth & Sohn provides its employees with a range of internal and external further **education courses** and **training programmes** for the purpose of targeted professional development and life-long learning.

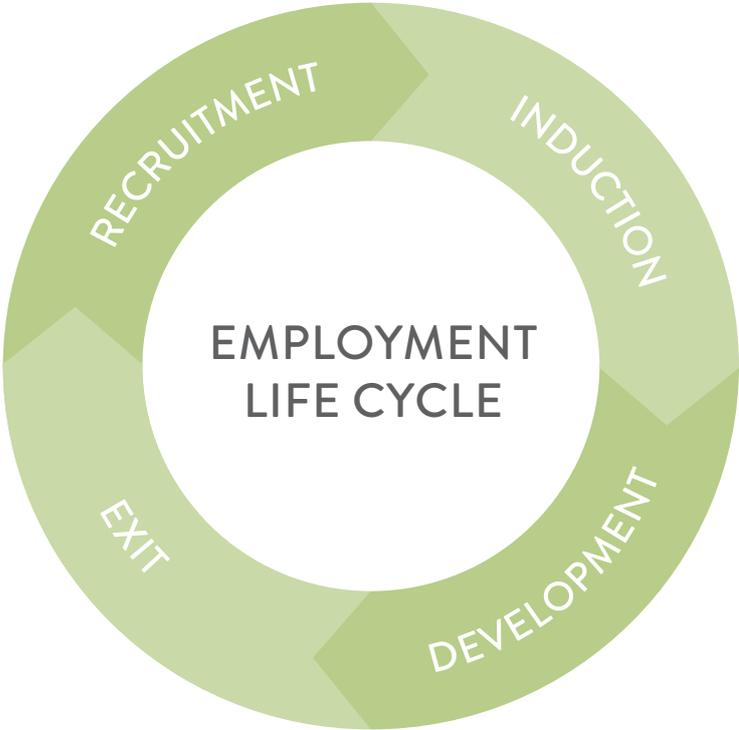
Our professional training portfolio ranges from (management) seminars and international research and development meetings for those involved in product development, to workshops on financial reporting in accordance with international standards.

Further examples are regular training courses for our purchasing and sales staff to provide them with greater knowledge on the sustainability of Joh. Barth & Sohn products.

On average, each of our employees spends approx. two days per year attending training courses to foster his/her professional and personal development, with the aim of furthering and deepening existing knowledge.

The Barth-Haas Hops Academy offers both customers and employees the opportunity to gain further specialist training on topics in hop technology and the hops industry.

We always endeavour to offer our employees suitable support individually and fairly throughout their whole period of employment (employment life cycle) with Joh. Barth & Sohn – from the moment they are recruited, to when they join the company, throughout their development, and until they leave.





TYPES OF TRAINING

It is essential for us to ensure that our employees are professionally qualified in order to preserve and constantly improve the quality of our products and services. For this reason, training courses are necessary in order that employees gain the required specialist knowledge and understand quality objectives and interdepartmental connections.

Employees regularly take part in training and professional development courses. These are based on training plans compiled by their managers together with the human resources department for each and every job. The types and contents of training courses are aligned to the specific requirements of the job and are fine-tuned in annual employee appraisal meetings. The level of training necessary in order to perform each job to the full is stated in the respective employee's skills profile.

Qualifications for our employees are provided by both external and internal training measures.

The emphasis of the training courses provided by us is on imparting and expanding industry-related and in-house knowledge, such as

- » product and process-specific further training courses in collaboration with our processing plants in order to optimise customer care
- » implementation of regular departmental or interdepartmental discussions (regular meetings, project teams, working groups). These assist the exchange of experience and information and support the coordination of individual tasks when solving complex problems
- » information for employees about organisational changes and changes concerning the quality management system (field force and buyer information, circulars)
- » IT training courses specifically tailored to Joh. Barth & Sohn, provided by our in-house IT department
- » information about current market developments (trade journals, weekly plant development reports about the growing crop)
- » specific information events for the sales force on the downstream-product sector, organised by the technical sales support service

For general further training measures on the other hand, such as language courses, we mainly call in external educational institutes.

SYSTEMATIC POTENTIAL AND PERFORMANCE APPRAISAL

The continuous development of skills and personal abilities is one thing. However, it is something that has to be carried out systematically. One of the most important tools within the management process for our managers and employees is therefore the systematic IT-based appraisal of potential and performance. This also forms the basis for performance-related remuneration.

ELEMENTS OF POTENTIAL AND PERFORMANCE APPRAISAL

- » Job descriptions/assessment
- » Skills and suitability profiles
- » Requirement profiles (professional, social, leadership and key qualifications)
- » Performance appraisal and remuneration
- » Feedback: Employee appraisal meetings and surveys, sponsorship and mentoring concept

DEVELOPMENT AND CAREER PLANNING MEASURES

- » On-the-job skills development by means of job rotation, job enlargement, job enrichment and project work
- » Systematic training and further professional development

Performance requirements and results are evaluated regularly for all employees using transparent, comprehensible criteria. These are based on job descriptions and requirement profiles.

Not only technical and problem-solving skills, but also, equally importantly, leadership, social and responsibility skills are explicitly assessed.

The employee appraisal is carried out by representatives of the employee's own and the human resources departments in **confidential feedback meetings** on the basis of performance during the appraisal period. As a result, our employees are able to recognise exactly what is expected of them, where their strengths and weaknesses lie and where there is still a need for development.

Such feedback meetings not only serve to acknowledge individual performance, but also facilitate further professional and personal development and therefore targeted and long-term career planning.

Individual **personal development plans** describe, for example, on-the-job training measures, training courses and job enlargement, preparation for future requirements and management responsibilities to be taken on.

All meetings, activities and measures are documented in writing and are reviewed at appropriate intervals.

The regular assessments are based on an internationally recognised, systematic and consistent methodology, which all employees and managers must undergo.

PERFORMANCE-RELATED REMUNERATION

We offer our **employees** safe working conditions, remuneration for their performance that is in line with that of medium-sized enterprises and everything else that is important for a job with a globally operating, family-run company with a long tradition and all of its specific cultural characteristics.

In keeping with our motto – demand, support and reward – we encourage our employees to take responsibility for the success of the company, but also for the implementation of our values.

We have been working intensively on our value system for several years now. We are also convinced that our values represent a foundation for sustainable success.

Our culture of open, respectful dialogue and feedback, in conjunction with other human resources-related objectives, is not only capable of providing orientation, but also has a motivating effect. Tangible and intangible incentives do the rest.

As a matter of principle, we offer each of our employees remuneration that is competitive for a medium-sized enterprise. In particular, this means:

Salary and other benefits

- » market-oriented remuneration
- » company pension scheme
- » monetary-equivalent benefits
- » free drinks

Work-life balance

- » monthly preschool fees
- » telecommuting jobs (home office)
- » various types of support for employees' personal problems.

Support for employees' social engagement

- » support or time off for participation in associations, clubs and cultural institutions

WORK-LIFE BALANCE

Work-life balance is a current social and political topic and one of our company's focal points.

We are convinced that we can only be sustainable as a company if we support our employees in successfully mastering the challenges of combining professional and family life. We regard flexible working hours as an important way to achieve this. We accommodate individual requests and facilitate flexitime, part-time work and telecommuting jobs as far as possible.

For example, Joh. Barth & Sohn offers telecommuting jobs to employees on parental leave in order that contact is not completely lost and also to facilitate a smooth return to work after their parental leave is over.

We also gladly support activities undertaken by employees in their private lives by way of contributions, be it through financial support or through time off.

HEALTHY EMPLOYEES

Workplace health promotion is gaining in importance, and not only due to the fact that integrating older employees into the work process will become more significant in future.

Relevant empirical findings show that companies which promote good health in the workplace thereby reduce illness-related costs and increase their productivity. This is the result of a healthier workforce with higher levels of motivation, improved morale and a better working atmosphere.

In terms of workplace health promotion, this means that programmes

which support mental health are becoming ever more important.

Joh. Barth & Sohn already offers its employees a wide range of support and also intends to continue to promote good health in future by means of targeted programmes and provisions. This includes taking preventative measures to avoid any workplace risks which may lead to long-term illness and occupational disability.

The possibilities we offer in terms of flexible organisation of working time help to improve our employees' work-life **balance** and to reduce workplace-related stress factors.



"JOHANNES BARTH MEMORIAL ASSOCIATION"

The "Johannes Barth Memorial Association" was established to offer

Barth employees financial support which extends beyond existing insurance systems in cases of exceptional pressures due to illness.

INCREASING SUSTAINABILITY AWARENESS

The development and awareness of all employees with regard to the principles of sustainable business practices plays a key role in our focus on sustainability.

Merely appealing to individuals has little effect here. Our explicit **vision** and our organisation's cultural **values** are a good foundation; it is important, however, to create codes and standards to secure them in specific and implementable guidelines relating to ways of **thinking and behaving**. This is ensured in the individual management systems.

We intend to establish work modules on the subject of sustainability as an inherent part of **vocational training** and further professional

development. Regular activities, such as training courses on health and safety in the workplace or seminars on compliance and social standards are designed to show every employee how sustainability is linked to their everyday work.

OBJECTIVES REGARDING EMPLOYEES FOR THE NEXT FEW YEARS ARE:

- » to expand the company health programmes
- » to revise our code of conduct
- » to appeal to (potential) employees by means of improved presentation on our website

SOCIAL PERFORMANCE INDICATORS

The result of our efforts can be condensed into the following figures: During the reporting period, approx. 75 % of Joh. Barth & Sohn's employees had full-time employment contracts and 25 % had part-time or seasonal employment contracts.

The staff turnover rate was zero, as was the number of injuries and occupational illnesses.

Of the total employee absence time, 46 % was due to holiday, 16.7 % due to individual development and parental leave and approx. 11 % due to illness.

We currently do not provide any systematic or comprehensive

medical check-ups. These will be implemented gradually in the future. Well over half of the workforce are women. Joh. Barth & Sohn does not make a gender distinction with regard to salary.

All of our employees are subject to a regular performance appraisal.

We have never had to deal with any cases of discrimination, nor are we aware of any breaches of human rights clauses.

In future, in accordance with our human resources management philosophy, we will further increase the current quota of 20 hours per employee for individual development measures, particularly for training and further professional development.

07

SOCIETY

- » SOCIALLY RESPONSIBLE CORPORATE GOVERNANCE
- » CORPORATE MEMBERSHIPS AND COMMITTEE MEMBERSHIP
- » SUPPORT FOR CULTURAL, SOCIAL AND EDUCATIONAL ACTIVITIES
- » PROMOTING EMPLOYEE ENGAGEMENT



SOCIALLY RESPONSIBLE CORPORATE GOVERNANCE

Commitment to and responsibility for society and the environment is a key concern of our corporate governance. We want to be a good "corporate citizen". No legal action has been brought against Joh. Barth & Sohn due to anticompetitive behaviour, or anti-trust or monopoly practices. Joh. Barth & Sohn has also never had to pay any fines or been penalised in any other way for infringement of any regulations.

Together with our employees, customers and suppliers, we are involved in a number of projects and (charitable) institutions.

In particular, we support socially relevant activities in the following areas:

- » Corporate memberships and partnerships
- » Support for cultural, social and educational activities
- » Promoting employee engagement

The support provided by Joh. Barth & Sohn from the fiscal year 2007/08 to the fiscal year 2010/11 in all of these areas amounted to around 1 million euros.

CORPORATE MEMBERSHIPS AND COMMITTEE MEMBERSHIP

Joh. Barth & Sohn is a member of a number of associations and institutions and, as a "corporate citizen", thus contributes in various locations and with a great deal of both personal and financial energy to the maintenance and development of the hop-growing and beer-brewing industries in their entirety. Joh. Barth & Sohn is an active member of the following associations and institutions in the hop and brewing industries, in education and science and in the banking industry.

- » German Hop Industry Association
- » International Hop Growers' Convention
- » Hop Research Institute
- » Hops Advisory Group for the DG AGRI EU Commission
- » DBMB (German Association of Brewers and Maltsters)
- » MBAA (Master Brewers Association of the Americas)
- » ASBC (American Society of Brewing Chemists)
- » SEDEX (Supplier Ethical Data Exchange)
- » Member of the advisory board for the Nuremberg savings bank
- » Chamber of Commerce and Industry for Central Franconia, Upper Swabia and the Upper Palatinate
- » Research and Teaching Institute for Brewing in Berlin
- » Doemens e.V.
- » Scientific Station of Munich Breweries (Wissenschaftliche Station für Brauerei in München e.V.)
- » Association of Alumni of the Weihenstephan University Brewing Department
- » Munich Technical University Alumni Association mentoring programme

SUPPORT FOR CULTURAL, SOCIAL AND EDUCATIONAL ACTIVITIES

In order to make its contribution to the preservation and maintenance of customs and traditions, Joh. Barth & Sohn supports the "Dellnhausen Folk Music Festival", the "Hallertau Beer Festival" and, of course, the election of the Hallertau and Tett nang Hop Queens, to name but a few. (Weblinks: www.dellnhauser.volksmusikfest.de, www.hallertauer-bierfestival.de)

Joh. Barth & Sohn supports the Gabelsberger secondary school in Mainburg, where its central purchasing office is located, by organising **project days for pupils**. Furthermore, Joh. Barth & Sohn is a partner for **project seminars** assisting the senior classes of this secondary school with university course and career selection. (www.gabelsberger-gymnasium.de)

The Early Dürer. The largest Dürer exhibition in Germany in forty years, from 24 May – 2 September 2012 at the Germanisches Nationalmuseum, Nuremberg

This is the first large-scale exhibition devoted to Dürer's early works and the circumstances of the young painter's life, without which his unique work would have been inconceivable. Dürer's artistic development will be shown for the first time in the context of his time in order to extricate him from the aesthetic notion of the isolated genius. The exhibition's sections lead the visitor from biography and surroundings, through the core phenomena of the early work, to the question of Dürer's role as the archetype of the modern artist.

Joh. Barth & Sohn supported the "Early Dürer" exhibition not only because Joh. Barth & Sohn's shareholders have always been interested in art, particularly when it comes to art in Nuremberg, but because Joh. Barth & Sohn – like Albrecht Dürer – is also a "son of the city". Furthermore, there are various parallels between the topics of the exhibition and the company philosophy of Joh. Barth & Sohn (the importance of one's surroundings and business partners, innovation and continuity in development).

Further information: der-fruehe-duerer.gnm.de

PROMOTING EMPLOYEE ENGAGEMENT

Joh. Barth & Sohn supports its employees' voluntary involvement in various ways. Employees who take part in voluntary work in their free time are offered a choice of financial support, product donations or time off for this activity. The support provided ranges from financial assistance towards club shirts for youth teams, to material donations

for relevant events, to paid time off for voluntary activities (voluntary fire brigade, local politics etc.). Above all, we support projects in the areas of youth and education, sport, social work and health, the preservation of culture and customs and environmental protection.

08

STAKEHOLDER DIALOGUE

- » INTENSIVE DIALOGUE WITH OUR STAKEHOLDERS
- » SELECTED COMMUNICATION TOOLS
- » BARTH-HAAS GRANTS
- » BARTH-HAAS HOPS ACADEMY



INTENSIVE DIALOGUE WITH OUR STAKEHOLDERS

As a long-established market participant, Joh. Barth & Sohn attaches the utmost importance to contributing intensively to the fostering of our industry by means of a variety of initiatives, projects and publications.

We are therefore engaged in an ongoing and intensive **dialogue** with all of our stakeholders, i. e. with all the people and groups who have a legitimate interest in our company's activities, especially with our employees, customers, suppliers, associations, non-governmental organisations and the scientific community.

In particular, we support **technical and scientific dialogue** in the world of hops in numerous ways. All of our stakeholders receive news from and about our industry in a wide variety of publications appearing on a regular or occasional basis through various information channels.

Feedback from the various communication media is introduced into our internal sustainability discussions in order to derive from it relevant activities relating to sustainability where applicable.

SELECTED COMMUNICATION TOOLS

BARTH REPORT

The Barth Report has been published annually with few exceptions since 1877. The world has changed significantly since then, but what has remained unchanged is the timely and objective reporting on the events in the hop market following each crop year as provided by the many generations of authors of the Barth Report.

In addition to the regular Barth Report, we recommend the supplement, which gives statistical data about the market leaders and their challengers in the 40 largest beer-producing countries worldwide. This supplement is published in cooperation with Germain Hansmaennel in Strasbourg.

HOP SCIENCE NEWSLETTER

The Hop Science Newsletter contains updates on current research activities, new scientific findings or specific issues dealing with hops or hop-related topics. Take a look at the latest developments in hop research every month.

TECHNICAL PUBLICATIONS

The employees of the Barth-Haas Group have written many notable publications in the areas of brewing, hop chemistry and hop processing.

BARTH FAX

The Barth Fax gives all growers registered with Joh. Barth & Sohn a variety of information, such as

- » Market reports on specific occasions and routine events
- » Extracts from the Barth Report when it is published
- » Important events, for example storm damage (worldwide), water shortages (USA), hop acreage development, Barth crop estimates, plant protection news

MARKET REPORTS

In the Hop Market Report, Joh. Barth & Sohn reports on the situation in the world hop market several times a year. In addition, the John I. Haas market reports provide information on the situation in the US hop market. These reports are also available on our website.

ONLINE TECHNICAL SUPPORT

Are you a brewing expert and a hop lover? Do you have a lot of questions about hop products? The technical support on our website has the answers.

THE HOP ATLAS

The Hop Atlas is a well-respected standard reference work on the history and geography of the hop as a cultivated plant and brewing ingredient. This high-quality publication provides 389 pages of useful and interesting information on global hop growing, along with many illustrations.

The Hop Atlas is available in English and German. This extensive reference work is available free of charge for universities and professional schools (with a maximum of two copies per institution per year).



HIGHLIGHT: EUROPE'S BEST BEERS AWARDED PRIZES IN NUREMBERG

Press release of 24 May 2012

SAHM and BARTH honour European winners of the 2012 World Beer Cup

3,921 beers from 799 breweries from 54 countries competed for medals in 54 categories at the World Beer Cup in San Diego in early May.

At this beer Olympiad, breweries from Europe gained 49 medals, putting them in second place in the medal table behind the USA. The sheer variety of beers that were subjected to critical assessment by more than 200 judges from all over the world in the USA was hardly conceivable by German standards. The description of the individual categories alone for which the beers could be registered covered 42 pages.

Whether honey, spice or rye beer; beer with coffee, fruits or chocolate; Alt, Kölsch, Pilsner or wheat beer in its various expressions – there was hardly a beer style in the world that went untasted.

The official awards ceremony for the European medal winners took place on 24 May 2012 in the festive setting of the Germanisches Nationalmuseum in Nuremberg.

The organisers of the event were the American Brewers Association; SAHM, one of the world's leading suppliers of decorated drinking glasses for the drinks industry, and Joh. Barth & Sohn from Nuremberg, the world's largest provider of hop-related services. Around 70 representatives of breweries from Germany, Iceland, Austria, the Czech Republic and Malta, amongst others, had come to Nuremberg to collect their medals.

A special award went to the Michael Plank brewery in Laaber, which was honoured as "brewery and brewmaster of the year" in the small breweries category for the second time since 2006.

For Michael Sahn, the award-winning beers positively cry out for special drinking glasses in which their particular flavour nuances can be demonstrated to particular advantage.

Stephan Barth was particularly pleased to note the growing importance of hops for brewing beers with character. For Charlie Papazian, president of the American Brewers Association, which has organised the World Beer Cup since 1996, the 2012 World Beer Cup once again demonstrates the outstanding level of brewing expertise all over the world. Brewers, growers and suppliers, but also traders and, last but not least, beer lovers worldwide have played a decisive role in this.

BARTH-HAAS GRANTS

The Barth-Haas Group would like to get students all over the world interested in hop research and awards grants for this purpose. Significant progress has been made in hop research in recent years, but by far not all the potential uses of hops have been discovered. For this reason, the Barth-Haas Group has been awarding grants for hop research projects since 2007. With these student grants, the Group wants to encourage new research approaches dealing with hops and their application potential in the brewing industry and also in areas other than brewing.

The grants amount to 2,000 euros each for up to four diploma theses, and 700 euros each for up to three term papers or student research projects.

The decision is made by a jury consisting of the shareholders of the Barth-Haas Group and the members of the scientific advisory board.

Our grants have become so successful that hop research has been given a new lease of life. The studies that have been supported so far have dealt with topics such as hop-based anti-foaming agents, dry-hopping technologies, hop aroma yield during the brewing process, the role of hops in flavour stability, instrumental bitterness detection, hops and gushing and the constituents of hops that affect flavour.

BARTH-HAAS HOPS ACADEMY

CONCEPT

We brought the **Barth-Haas Hops Academy** into being in 2010 with the intention of creating a greater understanding of the complexities of hops and of their full application potential. Having an acute knowledge of the usage, effects and impact of this special brewing ingredient enables the brewer to optimise process efficiencies and to develop distinctive high-quality beers.

The closer one looks at hops, the more obvious their importance for beer becomes. Hops have seemingly inexhaustible potential, not only in terms of aroma and bitterness, but also with regard to other attributes that play an important part in the brewing process and for finished beer.

"Expertise through knowledge – Expand your knowledge about hops". In keeping with this motto, the academy offers our customers, suppliers and all those who are interested in hops knowledge about the topic of hops in the form of lectures, workshops and (in-house) training courses. The next step will be to make the curriculum accessible to our employees as well.

CURRICULUM

The courses at the **Barth-Haas Hops Academy** are divided into modules and use a variety of tools to cover diverse aspects of the subject of hops. It is possible to choose between obtaining a broad outline of certain topics or booking specialist courses such as "reaction mechanisms in light-struck flavour". The modules can be successively expanded and supplemented as required.

For **companies**, the topics of the training courses can be customised and tailored to individual needs.

Institutes and **universities** have the possibility of integrating selected topics into their own curricula.

Over time and with continuous **feedback** from brewers, the training courses provided by the **Barth-Haas Hops Academy** will be expanded to include other topics and the modules will be supplemented as required.



THE INDIVIDUAL MODULES IN DETAIL:



1. HOPS

- » Hops – an introduction
- » Hop varieties
- » Hop processing
- » Handling and storage

2. HOPS IN BREWING

- » Traditional hopping
- » Modern hopping
- » Hop chemistry
- » Hops, hop products and gushing
- » Hops, hop products for alcohol-free beers and light beers
- » Flavonoids
- » New hop products

3. QUALITY MANAGEMENT/FOOD SAFETY

- » Hops
- » Hops processing
- » Legislative framework
- » Labelling

4. ANALYTICS

- » BHG product-specific analysis
- » Industry methods for hops
- » Specific analysis for hop compounds in beer

5. SUSTAINABILITY

- » Raw hops
- » Processed hops
- » BHG sustainability endeavours

6. SENSORY ASPECTS

- » Hop aroma in beer
- » Bitterness in beer
- » Guidelines for conducting a tasting panel
- » Hops and flavour stability

7. COMMERCIAL ASPECTS OF HOPS

- » Hop supply
- » Hop demand
- » Factors influencing hop prices
- » Costs of hops in beer
- » Hop-purchasing strategies
- » Costs of hop cultivation

”Just a quick thank-you for the Hops Academy seminar this week. It certainly fulfilled my objectives as a refresher course in all hop-related topics, plus a few subject areas which were new for me. It was an excellent, well-balanced two-day programme covering all the basics, from hop growing to downstream products, which was ideal for me and the other brewers. I was able to get answers to my questions here. All of the speakers were obviously highly competent in their fields and passionate about all things regarding hops.” (S. M., UK)

”The technical explanations were wonderful. Our employees were very impressed. It is very important for us to train our employees so that they learn more about how malt and hops can be used in the brewing process.” (T., Vietnam)

09

ABOUT THIS REPORT

- » REPORTING FRAMEWORK
- » SCOPE AND APPLICATION LEVEL OF THE REPORT
- » REPORT FORM
- » DATA COLLECTION PRINCIPLES
- » REPORT BOUNDARIES
- » GRI INDEX
- » CONTACT



REPORTING FRAMEWORK

This Joh. Barth & Sohn sustainability report summarises important economic, ecological, societal and social developments in the company's fiscal year from 1 August 2011 to 31 July 2012.

The topics covered in the report reflect the challenges of sustainable development which are relevant to us.

This is the first such report. The Joh. Barth & Sohn sustainability report is intended as a yearly publication.

REPORT FORM

The report complies with the Global Reporting Initiative (GRI) guidelines, version 3.1. The GRI reporting framework is widely established and correspondingly well founded. It contains general and sector-specific content based on global input from numerous stakeholders and can also easily be adapted to the concerns of medium-sized enterprises.

The report is published as a stand-alone publication. Essential parts of content can, however, be found on our website.

SCOPE AND APPLICATION LEVEL OF THE REPORT

The reporting is carried out according to Application Level B.

The report covers more than 30 indicators relating to economic, ecological, human rights, labour, society and product responsibility dimensions.

DATA COLLECTION PRINCIPLES

All the figures presented are taken from Joh. Barth & Sohn's management information systems. Great care has been taken in drawing up the analyses. We shall, of course, accept responsibility for any errors.

REPORT APPLICATION LEVEL		C	C+	B	B+	A	A+
NECESSARY CRITERIA	G3 PROFILE DISCLOSURES OUTPUT	REPORT ON: 1.1 2.1 - 2.10 3.1 - 3.8, 3.10 - 3.12 4.1 - 4.4, 4.14 - 4.15		REPORT ON ALL CRITERIA LISTED FOR LEVEL C PLUS: 1.2 3.9, 3.13 4.5 - 4.13, 4.16 - 4.17		SAME AS REQUIREMENT FOR LEVEL B	
	G3 DISCLOSURES ON MANAGEMENT APPROACH OUTPUT	NOT REQUIRED		MANAGEMENT APPROACH DISCLOSURES FOR EACH INDICATOR CATEGORY		MANAGEMENT APPROACH DISCLOSURES FOR EACH INDICATOR CATEGORY	
	G3 PERFORMANCE INDICATORS & SECTOR SUPPLEMENT PERFORMANCE INDICATORS OUTPUT	REPORT FULLY ON A MINIMUM OF ANY 10 PERFORMANCE INDICATORS, INCLUDING AT LEAST ONE FROM EACH OF: SOCIAL, ECONOMIC, AND ENVIRONMENT.		REPORT FULLY ON A MINIMUM OF ANY 20 PERFORMANCE INDICATORS, AT LEAST ONE FROM EACH OF: ECONOMIC, ENVIRONMENT, HUMAN RIGHTS, LABOR, SOCIETY, PRODUCT RESPONSIBILITY.		RESPOND ON EACH CORE AND SECTOR SUPPLEMENT* INDICATOR WITH DUE REGARD TO THE MATERIALITY PRINCIPLE BY EITHER: A) REPORTING ON THE INDICATOR OR B) EXPLAINING THE REASON FOR ITS OMISSION.	
			IF THE REPORT HAS BEEN EXTERNALLY ASSURED		IF THE REPORT HAS BEEN EXTERNALLY ASSURED		IF THE REPORT HAS BEEN EXTERNALLY ASSURED

*IF SECTOR SUPPLEMENT IN FINAL VERSION IS AVAILABLE

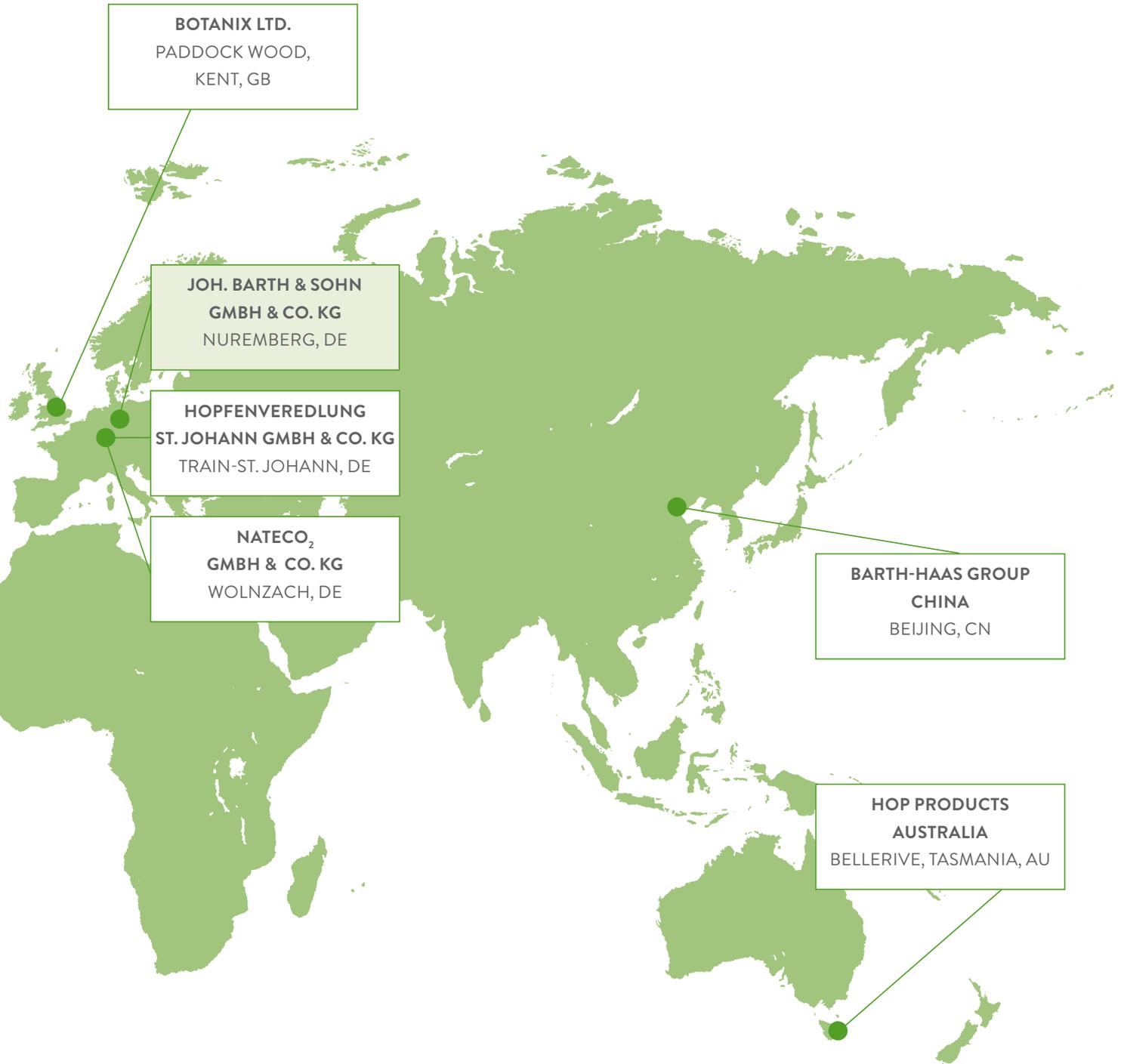
REPORT BOUNDARIES



BETATEC
HOP PRODUCTS
WASHINGTON, DC, US

JOHN I. HAAS, INC.
CORPORATE OFFICE
WASHINGTON, DC, US

The report is produced by Joh. Barth & Sohn GmbH & Co. KG and reports on its sustainability activities. Joh. Barth & Sohn is part of the Barth-Haas Group and largely brings together the group's trading activities. The production facilities (Hopfenveredlung St. Johann and NATECO₂) are not part of this sustainability report. They are, however, addressed in part in the environmental indicators section.



GRI INDEX

The following tables show where information corresponding to reporting elements and indicators in the Global Reporting Initiative (Version 3.1) can be found in the sustainability report. They contain the indicators taken from the GRI guidelines which Joh. Barth & Sohn consider relevant.

GRI Standard Disclosures		Page
PROFILE		
1. Strategy and Analysis		
1.1	Statement from the most senior decisionmaker	Foreword
1.2	Key impacts, risks, and opportunities	Foreword
2. Organisational Profile		
2.1	Name of the organisation	Title, 51
2.2	Primary brands, products, and/or services	4 ff.
2.3	Operational structure	4, 48 f.
2.4	Location of organisation's headquarters	51
2.5	Countries where the organisation operates	4 ff.
2.6	Nature of ownership and legal form	51
2.7	Markets served	4 ff.
2.8	Scale of the reporting organisation	4 ff.
2.9	Significant changes regarding size, structure, or ownership	none
2.10	Awards received in the reporting period	none
3. Report Parameters		
Report profile		
3.1	Reporting period	Titel, 47
3.2	Date of most recent previous report	Foreword, 47
3.3	Reporting cycle	47
3.4	Contact point for questions regarding the report	51
Report scope and boundary		
3.5	Process for defining report content	Foreword, 11 ff.
3.6	Boundary of the report	11, 48 f.
3.7	Specific limitations on the scope or boundary of the report	47
3.8	Joint ventures, subsidiaries, affiliate companies	5, 11, 48 f.
3.9	Data measurement techniques	47
3.10	Re-statements of information provided in earlier reports	Initial report
3.11	Changes in the scope, boundary or measurement methods	Initial report
GRI Content index		
3.12	Table identifying the location of the Standard Disclosures in the report	50 f.
External assurance		
3.13	External assurance for the report	none

4. Governance, Commitments and Engagement

Corporate Governance		
4.1	Governance structure of the organisation	14 f.
4.2	Indicate whether the Chair of the highest governance body is also an executive officer	14 f.
4.3	Members of the highest governance body that are independent and/or non-executive members	Foreword
4.4	Mechanisms for shareholders and employees to provide recommendations to the highest governance body	35, 42 ff.
4.5	Linkage between compensation for members of the highest governance body and the organisation's performance	11 f.
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided	16
4.7	Qualifications and expertise of the members of the highest governance body with respect to sustainability	Corporate charter
4.8	Internally developed statements of mission or values, codes of conduct and principles	6 ff.
4.9	Procedures of the highest governance body for overseeing sustainability performance	10 f., 15 f.
4.10	Processes for evaluating the highest governance body's own performance with respect to sustainability	15 f.
Commitments to external initiatives		
4.11	Explanation of whether and how the precautionary approach or principle is addressed	32 ff.
4.12	Externally developed economic, environmental, and social charters	38 ff.
4.13	Memberships in associations	39
4.14	Stakeholder groups engaged by the organization.	41 ff.
4.15	Identification and selection of stakeholders with whom to engage	42
4.16	Approaches to stakeholder engagement	15, 41 ff.
4.17	Key topics and concerns that have been raised by stakeholders	29
ECONOMIC PERFORMANCE INDICATORS		
Economic performance		
EC1	Direct economic value generated and distributed	13
EC3	Coverage of the organization's defined benefit plan obligations.	13
EC4	Financial assistance received from government	13
Market presence		
EC6	Policy, practices and proportion of spending on locally-based suppliers	17 ff.
ENVIRONMENTAL PERFORMANCE INDICATORS		
Energy		
EN3	Direct energy consumption by primary energy source	22
EN4	Indirect energy consumption by primary energy source	22



Water

EN8	Water withdrawal by source	22 f.
EN10	Water recycled and reused	23

Emissions, Effluents and Waste

EN16	Direct and indirect greenhouse gas emissions	23
EN17	Other relevant indirect greenhouse gas emissions	23
EN18	Initiatives to reduce greenhouse gas emissions	23
EN21	Water discharge	23
EN22	Waste by type and disposal method	22

Compliance

EN28	Sanctions for non-compliance with environmental laws and regulations	23
------	--	----

Transport

EN29	Environmental impacts of transporting products and members of the workforce	23
------	---	----

SOCIAL PERFORMANCE INDICATORS

1. Labour Practices and Decent Work

Employment

LA1	Total workforce by employment type and region	37
LA2	Total number and rate of new employee hires and employee turnover	37

Occupational health and safety

LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of workrelated fatalities	37
LA8	Education, training, counseling, prevention, and risk-control programmes in place to assist workforce members, their families, or community members regarding serious diseases	37

Training and education

LA10	Average hours of training per year per employee	37
LA12	Employees receiving regular performance and career development reviews	37

Diversity and equal opportunity

LA13	Composition of governance bodies and breakdown of employees per employee category	34 ff.
------	---	--------

LA14	Ratio of basic salary and remuneration of women to men	37
------	--	----

2. Human Rights

Non-discrimination

HR4	Total number of incidents of discrimination and corrective actions taken	37
-----	--	----

3. Society

Local Community

SO1	Operations with implemented local community engagement, impact assessments, and development programmes	36, 39 f.
-----	--	-----------

Corruption

SO3	Employees trained in organisation's anti-corruption policies and procedures	37
SO4	Actions taken in response to incidents of corruption	37

Anti-competitive behaviour

SO7	Legal actions for anti-competitive behaviour	39
-----	--	----

Compliance

SO8	Sanctions for non-compliance with laws and regulations	39
-----	--	----

4. Product Responsibility

Customer health and safety

PR1	Health and safety impacts of products and services	26 ff.
PR2	Incidents of non-compliance with regulations concerning health and safety	29

Product and service labelling

PR3	Product and service information	27, 29
PR4	Incidents of non-compliance with regulations concerning product and service information and labelling	29
PR5	Customer satisfaction	29

Marketing communications

PR6	Programmes for adherence to laws, standards, and voluntary codes related to marketing communications	29
-----	--	----

Compliance

PR9	Sanctions for non-compliance with laws and regulations concerning the provision and use of products and services.	29
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FURTHER INFORMATIONEN

For further information and sources please refer to the publications on our website

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