

John I. Haas, Inc.

Sustainability Report 2021



Responsible Stewardship from Farm to Glass



INTRODUCTION MESSAGE FROM CEO

At John I. Haas, Inc. (HAAS®) sustainability has been at the core of our business since our founding in 1914.

In our first corporate Sustainability Report, published six years ago, we had just completed construction of our new, state-of-the-art Haas Innovations Center in Yakima, WA. This LEED Gold-certified building was intended to mark the beginning of a new era at HAAS, where sustainability was not an implied value, but a highly intentional one.

Over a century ago, HAAS' business was focused on the finest grown quality hops in the world. Sustainability was of paramount importance to ensure not simply the next year's crop but the long-term viability of the business.

Today, HAAS is part of the BarthHaas Group, and our operational activities have greatly expanded to include hop processing and distribution. While we still maintain and support multi-generational relationships with the families who farm the hops fields here in Yakima, and around the world, we now take a much broader view of what sustainability must entail.

HAAS, and the BarthHaas Group, is the largest provider of hops and hops products worldwide. We have a unique ability, and responsibility, to think about sustainability from an industry-wide perspective. Over the last six years, HAAS has taken a leadership role in the development of innovative products that positively impact our partners both upstream and downstream — improving land use, increasing brewing efficiencies, reducing process loss, reducing waste, and reducing the impact brewing has on community water and wastewater systems.

At the same time, we continue to invest in our Sustainable Agricultural Initiative (SAI) to ensure best practices in our grower supplier networks, our Environment Management System to monitor agrichemical usage, and developing better irrigation practices on our farms here in Yakima.

Above all, we recognize that climate change is already impacting the hop industry and will continue to affect the quality and predictability of our products well into the future. It is imperative that we take meaningful steps to continue to reduce our impact on the environment and to improve practices across our organization, and our global footprint, to ensure the long-term health and wellbeing of our company, our communities and our world.

—Alexander Barth, CEO



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COMPANY PROFILE



Who We Are

Corporate and Organizational Structure

Company Strategic Statement

Goal of This Report

Product Portfolio

Financial Overview

Our Stakeholders



WHO WE ARE

HAAS® provides world-class hops, bittering products, flavor and aroma products, and innovative brewing solutions to the world's best brewers. We are a proud member of the BarthHaas Group, a group of family-run businesses that form a powerful and innovative network for the finest hops.

From the experimental fields to the Innovations Brewery, our pellet plant to your brew kettle, we believe close collaboration fuels your success as well as ours. Whether it's ensuring your supply chain, improving brewing efficiency, helping you discover exciting hop flavors from around the world — or creating renowned hop products like **INCOGNITO**®, **LUPOMAX**®, and **FLEX**® — HAAS is dedicated to helping you brew your best possible beer.

Taking care of the land that has provided so much to us is important to us. We embrace our responsibility to grow hops and sustainably run our business so we can continue to provide top-quality products and services for our customers. We prioritize the environment by incorporating sustainable technological enhancements.

Located in Yakima, WA, we support and empower our community by purchasing locally and investing time and resources in numerous charities. We stand by responsible stewardship and by our five values: integrity, customer service, innovations, passion, and teamwork.



INTEGRITY

What do you get when you combine the largest United States supplier of hops with the integrity of a 100-year-old family business? Exactly what you were promised.



CUSTOMER SERVICE

We make it our business to know yours. Because we believe that great service comes from knowing not just what you need, but why you need it.



INNOVATIONS

From our world-famous hop varieties to our world-class experimental brewery, we have a history of delivering innovations that lead to better beers.



PASSION

HAAS is not just a supplier; we are breeders and growers of hops, and brewers of beer. For generations we have helped brewers discover their next great flavor.



TEAMWORK

Implement goals, performance measures, and incentives for employees that ensure seamless company operations by encouraging teamwork and collaboration.

CORPORATE AND ORGANIZATIONAL STRUCTURE

As a member of the BarthHaas Group, HAAS® proudly ensures our customers' needs are fulfilled with the highest quality products and services. We develop lasting relationships with our customers based on our understanding of the hop industry, our knowledge of brewing, and our dedication to customer service and innovations. The BarthHaas Group partners are located across the globe and include HAAS, BarthHaas®, and Hop Products Australia (HPA).

HAAS also keeps a network of authorized regional distribution partners, where breweries of any size can access our hops and hop products. Customers can buy direct from HAAS, or from any of our

hand-picked distribution partners dedicated to ensuring supply chain consistency and optimal product quality. Our authorized distributors include Yakima Valley Hops and SpotHops.com, Willamette Valley Hops, Hop Head Farms, Hops Connect, LNF, GE Corp, to name a few. See the "How to Buy" section on our website to learn more: johnihaas.com/how-to-buy.

HAAS works with additional business partners on other hop-related products, including the Hop Breeding Company and BetaTec®.



COMPANY STRATEGIC STATEMENT



HAAS®, an integral part of the BarthHaas Group, approaches the market from the minds of the brewers. We leverage our hops and brewing expertise as well as close customer relationships to create and produce innovative hop flavor solutions ranging from field to glass that allow our customers to make great tasting beers.



BetaTec, Inc. harnesses the Group's know-how by providing customers beyond the brewing industry with hop-derived alternatives in their evolving markets.



With our roots dating back to 1794, the philosophy of sustainability has always been part of our DNA as the Group is managed by Barth family members now in their seventh and eighth generation.

GOAL OF THIS REPORT

For over a century, we have been successful in building a resilient and strong relationship with our stakeholders. We care for the community we live in, the resources we use, and the prosperity we create.

THE FOLLOWING ARE THE GOALS OF THIS REPORT:

- Share with our stakeholders the major organizational activities accomplished during the reporting period
- Build greater trust through transparency and accountability with our stakeholders
- Demonstrate to our stakeholders how HAAS is committed to consistently reviewing and improving our environmental and social impacts
- Provide an industry-leading commitment to support sustainable projects to strengthen the environment and society within which we operate.

PRODUCT PORTFOLIO

The HAAS® companies proudly deliver innovative hop products, tools, training and support to brewers, and ensure the production of quality products.

HAAS®

HAAS provides hops and hop products for brewing. Product access is direct through HAAS and through our authorized product distribution network:

- Raw Hops & Hop Pellets
- Flavor & Aroma Products
- Bittering Products
- Brewing Solutions

Yakima Valley Hops/SpotHops.com

YVH and SpotHops.com provide hops, hop products, and brewing supplies to homebrewers and craft brewers. Product access is through their website:

- Raw Hops & Hop Pellets
- Flavor & Aroma Products
- Bittering Products
- Brewing Supplies

BetaTec®

BetaTec provides hop-based products for Beyond Brewing applications, with solutions for:

- Ethanol & Biofuels Production
- Sugar Production
- Yeast Production
- Bee Health
- Nutraceuticals
- Hop Flavorings
- Spirit Industry

More information about specific hops and hop products can be found at johnihaas.com/products.

FINANCIAL OVERVIEW

We often review our asset utilization and assess our corporate structure to streamline and optimize operations. We periodically review operations and corporate holdings, to make strategic decisions that address fluctuating market conditions to ensure our shareholders receive an adequate return on their investment.

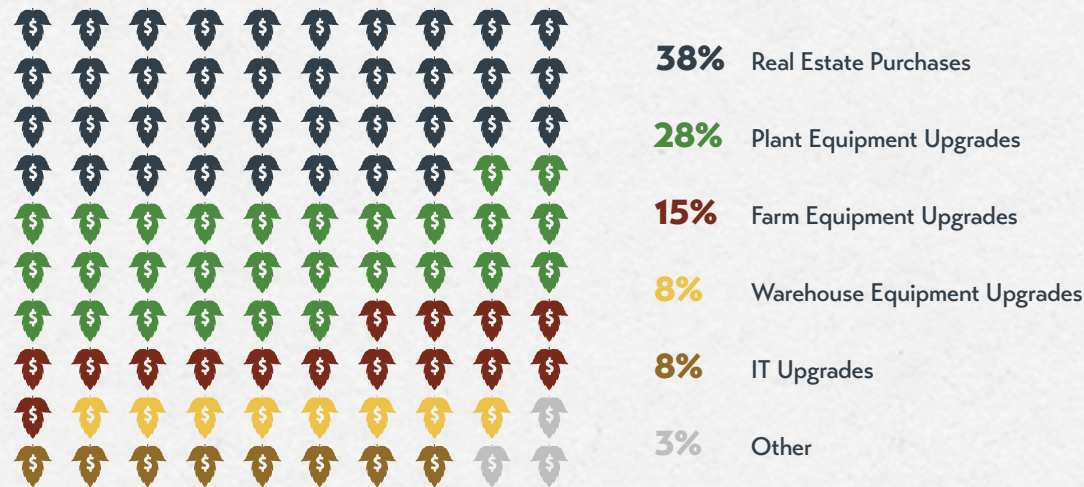
COST ALLOCATION

The following chart shows the cost allocation for fiscal year 2020, ending in July. Hop purchases make up the largest portion of the cost allocation, followed by operating costs, then wages and benefits.



CAPITAL EXPENDITURE

During fiscal year 2020, 38% of our expenditures were diverted to Hop Storage Purchase, and 59% were distributed for upgrading and buying new equipment and technology to increase efficiency.



OUR STAKEHOLDERS

Our major stakeholders include, but are not limited to: customers, growers, the local communities, employees, government authorities (local, regional, and global), and the board of directors and shareholders. The relationship we cultivate with our stakeholders is the backbone of our company. We are constantly working to maintain an open line of feedback and communication with them. Over the past several decades, we have been engaging our stakeholders through a variety of approaches such as surveys, on-site visits, and tours. As a result, we were able to build a rapport of collaboration and engagement with our stakeholders. With this strong relationship, we are able to provide responsible sourcing, support, and improve transparency among our stakeholders. As a whole, we have been very successful in improving the quality of service we provide to our customers.

COMMUNITY

Our company's strength depends on the health of the community in which we operate.

CUSTOMERS

Our Customers are a fundamental component to our success and the reason for our existence.

BOARD OF DIRECTORS & SHAREHOLDERS

The BOD and Shareholders ensure the company's prosperity by guiding and monitoring the strategic direction for our operations and investments.

EMPLOYEES

We consider our employees to be our greatest asset and acknowledge that by helping them reach their full personal potential, the entire organization will benefit.

GOVERNMENT AND AUTHORITIES

National Government and regulatory authorities are important stakeholders. We comply with all regulations.

GROWERS

Over the last 100 years, we have built and maintained strong relationships with our growers. We are committed to their success and share a common goal of providing only the finest hops.

HAAAS®

SUSTAINABILITY STRATEGY AND MANAGEMENT



Message from the Sustainability Manager

Management Systems

Goals



MESSAGE FROM THE SUSTAINABILITY MANAGER

The COVID-19 pandemic has had devastating impacts on our communities throughout the world. It has changed how we work, learn, and socialize. Each day we are faced with new challenges that require us to adapt to this new normal. It has not only forced us to change our habits but compelled us to think of our greater impact.

Throughout this pandemic, consumers have prioritized sustainability, and we have remained committed to that mission. HAAS® has been supplying our customers with new great flavors for generations. Without prioritizing sustainability, our goal of providing the best products would have been short-lived. Our commitment to environmentally friendly products has been and will continue to remain stronger than ever. We will continue to focus on developing innovative products which are both sustainable and economically viable.

Our customers motivate us to be a positive force for change and growth. We are committed to helping them through this tough time and the next. We are confident that the joint driving force from our partners and stakeholders will advance the progress to protect our community and our environment.



LAXMI KOIRALA PANDIT

(Master in Environmental Assessment,
Master in Gender and Agriculture,
B.S. in Agriculture)

MANAGEMENT SYSTEMS

Our board and management team provide the strong leadership needed to accomplish the highest standards of conduct. Our Chief Executive Officer, Alexander Barth, leads our HAAS® Senior Management Team of professionals across Quality, Supply Chain, Finance, Sales and Marketing, Human Resources, Manufacturing teams, as well as through our BetaTec® and Yakima Valley Hops/SpotHops.com subsidiaries. This management team oversees the implementation of our sustainability initiatives, elevating and advancing our company.

OUR TEAM

The sustainability team is accountable for assessing the environmental, social, and economic impact of the company. The team is comprised of employees from different departments. They meet as needed to discuss any areas of concern related to our sustainability management.

LEADERSHIP TEAM



QUALITY LEADERSHIP TEAM

The team is accountable for reviewing all quality management and food safety system requirements, supplier performance, and recommendations for improvements.



SUSTAINABILITY LEADERSHIP TEAM

The team is responsible for reviewing all environmental management system requirements, examining objectives, and recommending improvements.

OUR STRATEGY

Our sustainability strategy is built on three pillars: planet, people, and prosperity. These pillars represent our company's values, as well as that of our stakeholders. We implement our strategies to minimize our environmental footprint, explore and practice sustainable innovations, and give back to the community and people.

OUR SUSTAINABILITY STRATEGY



PLANET: Through waste reduction, responsible recycling, green supply chain management, and sustainable innovations, we strive to minimize our ecological footprint.



PEOPLE: Our people are the heart of our company. Happy employees and healthy communities are essential components of our companies. We have employee assistance, health and wellness programs, and training in place. We continuously and actively support our local farmers and growers, and contribute to local charities.



PROSPERITY: Sustainability is vital to the growth and longevity of our business. To remain efficient, we recognize that our century-long success is highly dependent on our good corporate governance and risk management.

We have defined our sustainability strategy in line with the **United Nations Sustainable Development Goals**.

WHAT WE STRIVE FOR

- Select suppliers and vendors who fully comply with local, state, and federal laws and regulations to assure responsible sourcing
- Recycle old products responsibly and minimize the waste created
- Continue usage of energy-saving equipment and appliances to reduce CO₂ emission
- Support the local community by adopting sustainable procurement practices
- Explore and practice sustainable innovations and ideas such as saving energy, reducing waste, and renewable energy
- Give back to the community through charity and donations



WE SUPPORT



GLOBAL COMPACT AND THE UNITED NATIONS (UN) SUSTAINABLE DEVELOPMENT GOALS

Focusing only on economic prosperity has brought inequity to the growth and development of the global economy. This mindset is responsible for the unparalleled amount of greenhouse gas emission, and social inequalities that consequently undermine the advancement of sustainable development. Therefore, through the United Nations 17 step sustainable initiative to end unsustainable economic development, we at HAAS® have taken the necessary steps to promote ethical and sustainable business practices.

Human Rights

- We provide safe and healthy working conditions.
- We ensure our work environment is free of unlawful discrimination, intimidation, and/or insult.
- We provide health insurance, education, and training to our employees.
- We provide housing for the workers and their families who work at the farm.

Labor

- We address the needs of our workers such as training, safety and health issues.
- We comply with minimum age provisions of national labor laws and regulations.
- We hire employees based on qualification, skill, and experience.

Environment

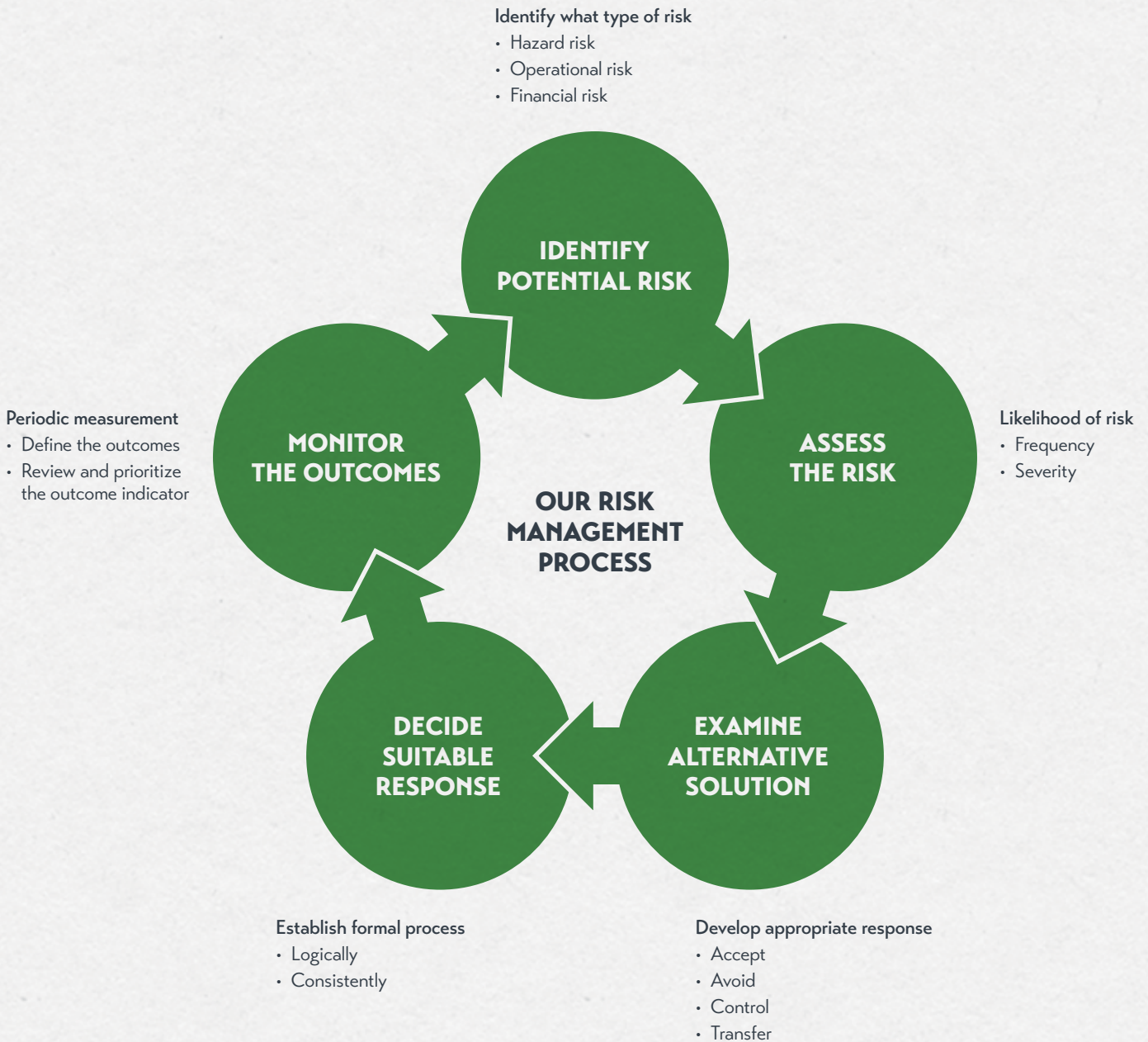
- We have developed standard operating procedures to assure our commitment to environment, health, and safety.
- We have defined our strategy for sustainable development — economic prosperity, environmental quality, and social equity.
- We provide transparency and accountability to our stakeholders.

Anti-corruption

- We have policies and practices to meet high ethical standards toward compliance with local, state, and federal laws and regulations.
- We stand by our values: integrity, customer service, innovations, passion, and teamwork.

RISK MANAGEMENT

During this pandemic, risk management has become an integral part of our management system. We believe risk can be minimized or mitigated by identifying the location of the risk. We take a comprehensive approach to managing the risk associated with new projects as well as ongoing projects and programs. When we evaluate the risk associated with our projects and programs, we examine both the environmental and social impacts.



COVID-19

Throughout the COVID-19 global pandemic, HAAS® remained dedicated to being responsive to customers' needs by continuing our operations while always ensuring our employees' safety. Essential workers are the heart of our community and company. Without their sacrifices, the pandemic would have been unimaginably worse. We understand the responsibility and challenges that come with being considered an essential business. To keep our customers and employees safe, we have implemented and executed the following policies and procedures to prevent the potential virus spread in our company as well as in our community.

Training

- Created COVID-19 training logs for employees, visitors, vendors as well as contractors
- Organized weekly COVID-19 trainings for employees
- Established weekly COVID-19 supervisor audits
- Launched biweekly COVID-19 manager audits
- Performed monthly COVID-19 VP audits
- Organized regular meetings with BarthHaas Human Resources group to exchange best practices

Prevention/control

- Implemented daily health screening procedures (employees as well as all visitors)
- Established a Maximum Remote Work policy
- Elevated our safety protocol.
- Developed and adopted COVID-19 safety protocols
- Adopted social distancing strategies and a mandatory face mask policy
- Installed Flexiglass and glass extenders on workstations
- Created COVID-19 "decision tree" to address any risks associated with the pandemic.
- Installed UV lights in the HVAC system to kill germs and recalibrated it to draw more fresh air from the outside
- Had COVID-19 vaccine clinic at John I. Haas, Inc.

Support program

- Provided hero pay for employees who needed to be onsite during our Maximum Remote Work policy period
- Offered emergency childcare benefits to our employees
- Conducted Wellbeing surveys to monitor employee's mental health and address the needs of our employees
- Continued employee engagement programs to boost mental health

COVID-19 Financial Expenditure

Throughout the pandemic, we have spent over two million dollars on prevention, control, and mitigation of the impact of COVID-19. 90% percent of our expenditure was diverted to employee compensation, namely: hero pay, childcare benefits, and high-risk employees. The remaining 10% was dispersed to manufacturing and miscellaneous office requirements.



COVID-19 Support Program

During the spring, summer, and fall of 2020, we provided hero pay to all employees that were required to physically report to work. Additionally, we offered emergency childcare assistance to those that needed the support while working both remotely and on-site. We provided further aid during the start of the school year where we disbursed another one-time payout to our employees that earned up to \$70,000 to help support their children with tutors, laptops, supplies, internet, desks, etc.

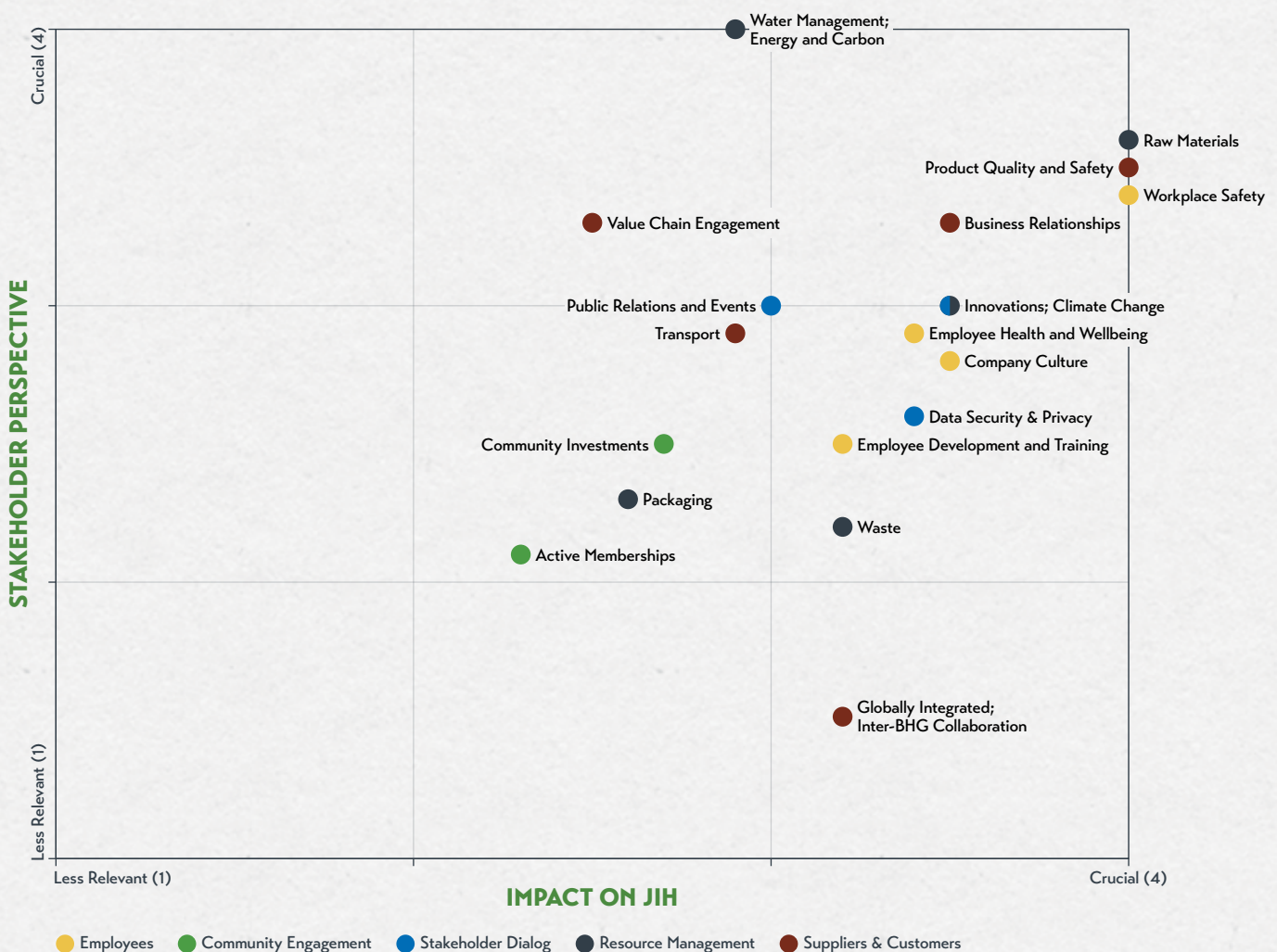
While the pandemic has highlighted the importance of physical health, we have learned to value mental health equivalently. We frequently provide wellbeing surveys to identify employees' emotional and social needs and accordingly design better responses to address them. 83% of our employees have reported feeling safe and confident, 17% feeling somewhat nervous, and none feeling unsafe about working on-site. We organized monthly zoom meetings that we called "Hoppy Hour" featuring different hosts to boost our employees' morale and sent weekly emails detailing resources for mental health support, tips for working from home, positive "food for thought," and fun and safe activities for employees and their families.

DATA SECURITY AND PRIVACY

Under the General Data Protection Regulation (GDPR), HAAS® has fully mapped all customer Personal Identifying Information (PII) as it flows through its internal IT systems. This data flow is maintained and monitored by the IT department in conjunction with administrative management for approval of specific personnel granted access to employee data via the access control list. PII Data stored is encrypted and can be removed from the system at a customer's request. These practices are requirements for GDPR compliance and are not only adhered to for customers but internal data as well. HAAS employs external edge protection via firewalls and network monitoring as well as internal threat protection and mitigation while it also exercises internal audits annually. Disaster recovery is also a high priority and IT systems have been put in place to support these efforts.

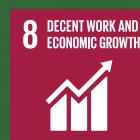
MATERIALITY MATRIX AND ACTIVITY AREAS

The materiality analysis was done to characterize the economic, social, and environmental aspects and issues that matter the most to our business and stakeholders. This matrix not only aided in recognizing the priorities of our stakeholders but also identified which aspects were the most crucial to us and where we need to focus our resources. The identified issues were placed on a matrix, see figure below. Most of the issues are interdependent and changing one component consequently can impact the others.





KEY ACTIVITIES



- Climate Change
- Energy and Carbon
- Sustainable Agriculture
- Water Management

- Employee Development and Training
- Health and Employee Wellbeing
- Community Investments

- Innovations
- Company Culture
- Product Quality and Safety

GOALS



We recognize the value of integrating the sustainability program in our supply chain. Being more environmentally friendly not only facilitates our objective to go green but also provides an opportunity to be a responsible member of the community. From where we receive our hops to our processing plants and recyclability of product and by-product, we aim to continuously be more innovative and creative throughout our manufacturing and supply chain. We will evaluate supplier performance using surveys and audits to enhance collaborative efforts among our stakeholders to provide a more innovative atmosphere.



PROSPERITY ALONG OUR SUPPLY CHAIN



Our Supply Chain

Purchasing and Suppliers

Products and Customers

Hops Education and Training

Collaborations and Partnerships

Quality and Product Safety



Nose Cone



HAAS

OUR SUPPLY CHAIN

Our multigenerational relationships with our growers allow us to deliver the highest quality hops and hop products to our customers. From developing new varieties, through cultivation, processing, and worldwide distribution, our processes add value to every stage of our supply chain, ensuring our customers' satisfaction. For more than a century, we have been a dedicated and responsible breeder, grower, and supplier through hops education, breeding, sourcing and supply assurance, research brewing, and more.

Similarly, we are committed to being a leader in the development of hops by implementing sustainable products and processes throughout our supply chain. We have accomplished this through the development of disease- and pest-resistant varieties, adoption of best agricultural practices, utilization of solvent-free supercritical CO₂ extraction, installation of energy-efficient lighting at the extraction plant and facilities, and the use of transportation companies who have documented objectives for reducing carbon emission.



2
ZERO
HUNGER



8
DECENT WORK AND
ECONOMIC GROWTH



9
INDUSTRY, INNOVATION
AND INFRASTRUCTURE



12
RESPONSIBLE
CONSUMPTION
AND PRODUCTION

OUR PARTICIPATION

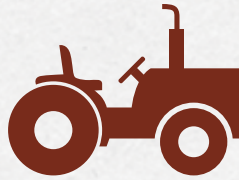
Most of our suppliers are local farmers. We have provided the technical and financial services needed to accomplish their goal of feeding our community by creating job opportunities (seasonal and permanent) for our community youth. We invest in innovations, such as drought- and disease-resistant hop varieties, which is crucial to achieving sustainable development.

We are actively minimizing chemical use and lab waste by utilizing new technology and have established a companywide paperless initiative.



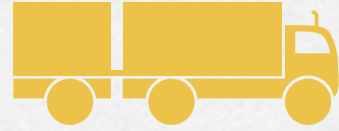
HOP BREEDING

We are creating disease- and pest-resistant varieties of hops that will minimize chemical and water usage while simultaneously preserving strong commercial qualities.



HOP GROWING

On both our own farm, and those of our suppliers we seek opportunities to discover and implement the best agronomic practices in the industry.



PURCHASING

We are committed to responsible sourcing; therefore, through the Hop Purchase Master Agreement (HPMA) established with our hop suppliers, we have been able to buy hops from the growers who comply with the environmental rules and regulations.



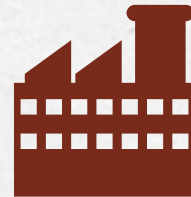
CUSTOMERS

We are committed to satisfying our customer's diverse needs, ranging from brewers to food production and nutraceutical companies.



SALES & DISTRIBUTION

Our endeavor in fulfilling our customer's long- and short-term needs is accomplished through handling our shipments in a sustainable manner by hiring carriers who have documented objectives to reduce carbon emission.



PROCESSING

We use state-of-the-art environmentally friendly tools and techniques such as supercritical CO₂ extraction while we process hops and hop products.



We use Sedex, a global supply chain information platform, to share our sustainability efforts and performance with our customers.

PURCHASING AND SUPPLIERS

PURCHASING PHILOSOPHY

As a leading supplier of hops and hop products, we recognize our social and environmental impact. Our purchasing philosophy is to continue maintaining low environmental impacts and providing more sustainable methods of sourcing by the use of sustainable procurement. The success of sustainable procurement is attributable to the following three strategies:

1. BUILDING STRONG FOUNDATIONS

Our relationships go back generations. This foundation of mutual trust and respect allows us to supply our customers with the best and highest-quality hops. Grower's focus on food safety, quality products, and reliability is the key component to our success.

2. SOURCING FROM RESPONSIBLE LOCAL SUPPLIERS

We purchase from local growers and vendors that meet our quality standards. Over 90% of our hop products are sourced

from farms located in the Pacific Northwest, and roughly 80% of our supply comes from Washington State growers.

3. HOP PURCHASE MASTER AGREEMENT

We utilize an HPMA with our growers, ensuring we receive the highest-quality hops from our vendors. The agreement defines expectations regarding environmental compliance, pesticide guidelines, and all local, state, and federal laws.

SUSTAINABLE AGRICULTURE

We maintain our commitment to sustainable production through a strong and productive grower base.

TECHNICAL AND FINANCIAL SUPPORT FOR FARMERS

We are committed to responsible sourcing, evident by our efforts to improve the quality of life in farming communities. By providing the technical and financial support needed, we increase the resiliency of these communities. We provide agronomy, marketing, and other technical services to strengthen their business practice and product quality. We also produce and provide the growers with high-quality plant materials (e.g., propagated plants) that are free of viruses and diseases, are varietally pure, and will result in higher yield and product quality, resulting in higher crop revenues for our contract growers. Similarly, we provide financial assistance to our farmers as needed. Additionally, we provide technical support, establish new hop fields, and expand their picking facilities. We review each request on a case-by-case basis and help provide solutions based on the grower's needs and stability.

PARTNERING FOR SUSTAINABLE AGRICULTURE



Sustainable Agriculture Initiative

We are a member of the Sustainable Agriculture Initiative (SAI) platform which supports the development of sustainable agriculture practices. We have adopted their Farm Sustainability Assessment for our farm operations. 64% of our farmers participate in this process.



Global G.A.P.

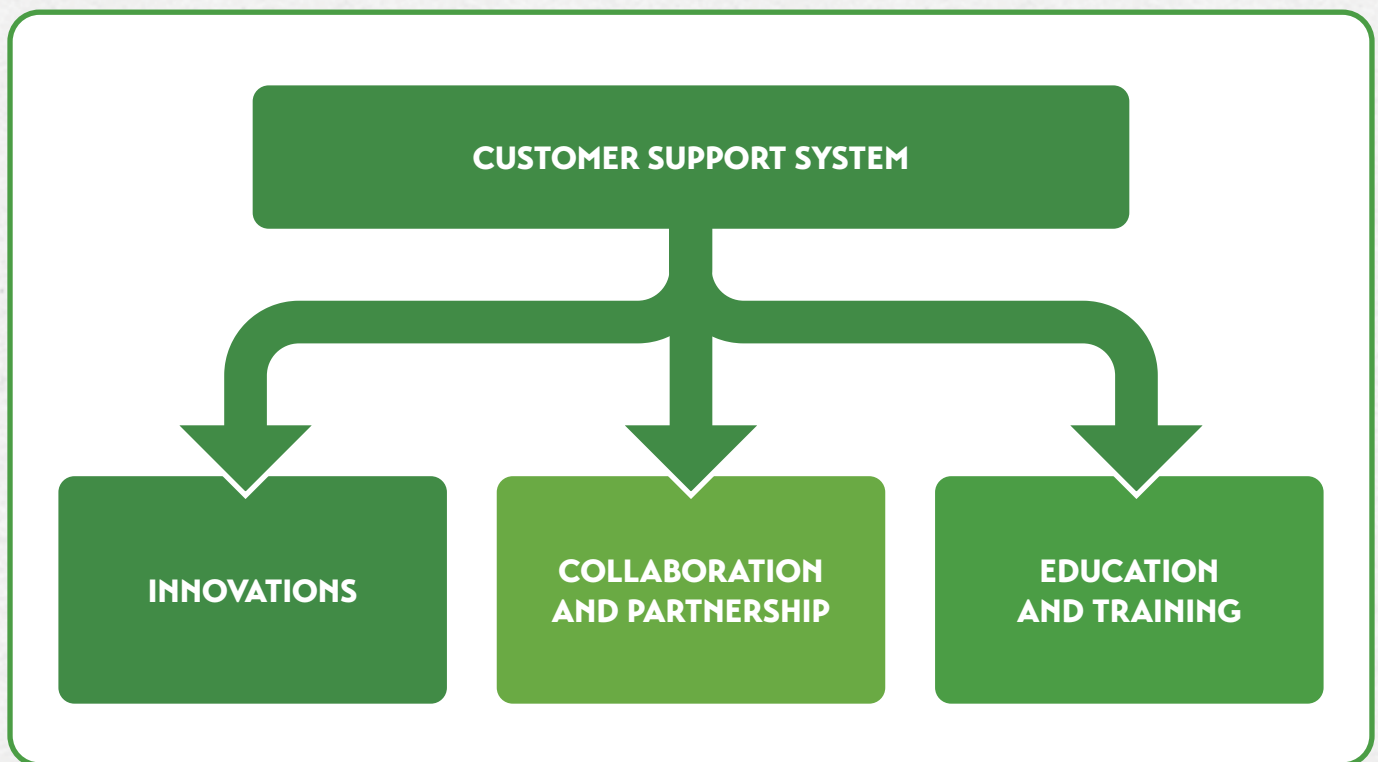
HAAS Yakima Golding Farm is certified by Global G.A.P. Global G.A.P. is a set of standards for Good Agricultural Practices (G.A.P.), which promotes safe and sustainable agriculture worldwide.

PRODUCTS AND CUSTOMERS

Customer satisfaction is our main priority. Their feedback helps us in our pursuit to deliver the best quality hops and hop products. The longevity of both our company and the relationships with our partners is a clear testimony to our dedication to listening and providing our consumers with the products that satisfy their needs.

CUSTOMER SUPPORT PHILOSOPHY

Our business was built on the conviction of providing great services to our customers. The reputation we have built amongst our community is attributable to our customer service, where listening to our brewers' and customers' needs is our top priority.





INNOVATIONS

We recognize that innovations are the key component of sustainability. In 2012, HAAS® made a substantial commitment to innovations with the construction of the Haas Innovations Center. This LEED Gold-certified building, with its brewery, laboratory, and business facilities, is a focal point for innovations — a concept applicable to all employees and a value ingrained in the HAAS culture. Innovations drive company profitability, the betterment of the environment, and the satisfaction, growth, and performance of the company's workforce.

HAAS INNOVATIONS CENTER

The HAAS Innovations Center is the first LEED Gold-certified building in the city of Yakima, Washington. It acts as a resource, road map, and icon for other high-efficiency developments in the area. Since HAAS developed a high-performance, sustainable, and energy-efficient building, it became an important part of helping the community and our clients understand our commitment to sustainable practices.

The HAAS Innovations Center is a 23,703 square-foot complex separated into three sections: the research brewery, quality assurance and research laboratory, and administrative offices. Situated on a prominent corner of the growing city, the facility is oriented along a north-south axis that allows the building to hug the busy adjacent street, improving its visibility and the streetscape.

HAAS INNOVATIONS BREWERY

The HAAS Innovations Brewery is an outstanding brewing research facility, situated at the HAAS Innovations Center. This state-of-the-art brewing research facility provides an excellent platform for HAAS teams and customers to explore new hop flavors and innovative products in true-to-life brewery recipes. Its extraordinary pilot-scale brewing experience allows our customers to minimize uncertainties that often come with new product development.



INNOVATIVE NEW PRODUCTS

We have developed various innovative products, like **FLEX®**, our flowable liquid hop extract, and **INCOGNITO®**, an all-natural flowable hop flavor extract. These products create less waste and require minimal storage space and shipping costs. One of our latest innovations, **LUPOMAX®**, is a pellet that's designed with consistent alpha for reliable brewing performance and is Sensory Plus™ selected for true-to-type hop flavor, year-to-year. With concentrated flavor and less green matter, you can increase beer yields and decrease transportation footprint. Similarly, our higher yielding hop varieties are energy efficient.

HOPGUARD® II AND HOPGUARD® 3

HopGuard® II and HopGuard® 3 are BetaTec®'s innovations. It is a natural hop product highly effective in defeating Varroa Mite (*Varroa Destructor*). HopGuard II and HopGuard 3 are scientifically proven natural Varroa control creations that provide the beekeeper with a natural, safe, and easy-to-use alternative to traditional harsh chemicals.

HOP-DERIVED NATURAL ANTIMICROBIALS FOR ETHANOL PRODUCTION

Ethanol is a renewable energy source that reduces CO₂ emissions and is an alternative to fossil fuels. Our BetaTec products are powerful tools for the ethanol production industry due to their antibacterial properties against gram-positive. Since BetaTec products are derived from hop plants, the need for antibiotics is eliminated. Furthermore, the products control lactic and acetic acid formation which can potentially increase ethanol yield.



HOPS EDUCATION AND TRAINING

We have educational training programs in place for our customers to share the skills and knowledge needed regarding our products.



HOPS ACADEMY

Our Hops Academy training program, offered by HAAS®, is designed to provide brewers and beer professionals with every level of information ranging from history, botany, agronomy, logistic, brewing science, and sensory evaluation. This academy is in place to strengthen their understanding of hops and various ingredients that ultimately create unique beer styles, flavors, and aromas. The training also provides information regarding the improvement of process efficiencies and the reduction of waste while exploring innovative hop products.

HOP FLAVORIST

Our sensory team provides training for both new and experienced members of the brewing community on basic aroma discernment, hop flavor, and aroma profiling.

HOP AROMA STANDARDS KIT

With no existing sensory standards in place, uniform sensory descriptions have been hard to come by. That's why the BarthHaas Group developed a uniform sensory language specifically for hops and hoppy beers that defines 12 aroma categories and identifies the specific aroma attributes of each. The Hop Aroma Standards Kit contains 12 individual aroma vials, each representing one of the aroma categories that comprise the 12-point BarthHaas® sensory language. The Kit was created as a tool to train brewers and the brewing industry on the unique aromas of hops. Each vial contains food-grade compounds specifically developed for smelling (orthonasal sensory training only).

COLLABORATIONS AND PARTNERSHIPS

YAKIMA VALLEY HOPS

HAAS® is a proud partner with Yakima Valley Hops (YVH), one of the first e-commerce distributors of hops and hops products. Our partnership with YVH enables both of us to guarantee that our homebrewers' and small craft brewers' demands are fulfilled with world-renowned, ethically-created and innovative products. YVH's commitment to sustainability is inspirational. Some of their sustainable initiatives include shredding cardboard to be reused as packaging filler and utilization of recyclable aluminum cans. They also provide stainless water bottles to their employees to cut down on disposable cups.

U.S. HOP INDUSTRY PLANT PROTECTION COMMITTEE

The US Hop Industry Plant Protection Committee (USHIPPC) was created to address pesticide registration efforts and plant protection issues on behalf of hop growers in Washington, Oregon, and Idaho. Our association with the committee helps us navigate international regulatory issues such as phytosanitary barriers in hop trading and harmonizing pesticide Maximum Residue Limits (MRLs).

HOP GROWERS OF AMERICA

Hop Growers of America (HGA) endeavors to increase worldwide use of American hops by facilitating communication between growers, merchants, and brewers while providing education on the quality, variety, and tradition of U.S. hops. HAAS' partnership with HGA helps the association to accomplish this mission, and to ensure the continued success and growth of the U.S. hop industry.

LIFE CYCLE ASSESSMENT FOR HOP PRODUCTION IN PACIFIC NORTHWEST

HGA, along with Shift Advantage, Groupe AGECO, and M2-Ag Assurance LLC, will conduct a cradle-to-gate life cycle assessment, measuring environmental impacts from the hop farm to end-product processing. HAAS has sponsored this study and will actively participate in the HGA Life Cycle Assessment Advisory Committee. This committee will be composed of industry representatives whose primary duties will include providing support, feedback, and advice to the Data Review Group, ensuring that the LCA project is on task and in alignment with the scope of deliverables.

HOP BREEDING COMPANY

Hop Breeding Company (HBC) is a joint venture between HAAS and Yakima Chief Ranches LLC, conceived in 2003 to develop high-yield, disease- and pest-resistant hop varieties with strong commercial qualities (more alpha per acre and more flavor per pound of hops). This strategic partnership of two leading breeding programs combines more than 40 years of breeding experience. By bringing these programs together, HBC can take advantage of increased efficiencies through consolidation of facilities, germplasm, shared knowledge, and efficiency.

HOP RESEARCH COUNCIL

HAAS is a voting member of the Hop Research Council (HRC), thus having a direct say in the types of hop research that is funded. Areas of investigation that have been supported include breeding, pest management, disease control and resistance, plant nutrition, weed control, etc. Many of these projects have direct sustainability applications including an integrated pest management that can result in reduced use of synthetic pesticides. The development of powdery mildew resistant hop varieties mitigates the need for chemical control of these types of fungi. Developing greater agronomic efficiencies reduces the demand for increasingly limited resources such as water.

QUALITY AND PRODUCT SAFETY

A fundamental element of our success is our commitment to providing the highest quality products. To do so, we have put in place procedures for receiving raw materials, detailed production logs documenting processing, inspection, labeling, storage, and shipping of our finished goods. Through the concerted efforts of all of those involved in the production, from the suppliers of raw materials to our consumers, we maintain the highest quality and integrity of our hops and hop products.

QUALITY AND FOOD SAFETY MANAGEMENT SYSTEM

Our Quality Management System (QMS) serves as a formal way to monitor, track, and ensure the quality of our hop products and systems. Our QMS is certified according to ISO 9001:2015 requirements and is externally audited once a year. To maintain our commitment in providing safe, quality hop products, our QMS has been aligned with the requirements of our Hazard Analysis and Critical Control Points (HACCP)-based Food Safety Management System (FSMS). This allows for an integrated management approach to food safety and product quality. Our food safety management system is certified according to FSSC 22000 V5.1.

HAZARD ANALYSIS AND CRITICAL CONTROL POINTS (HACCP)

We inspect all aspects of production, processing, packaging, and distribution. From raw material procurements to storage and distribution, we are able to determine whether the food product is liable to safety threats from intentional adulteration and naturally occurring or process-induced hazards. We have advanced our pesticide residue testing efforts to meet the needs of our customers' assurance programs and have implemented additional instrumental and visual product quality checks. Our hop products are vegan suitable, gluten, and GMO-free.

THE BARTHHAAS® GUARANTEE 100% TESTED

Here at the BarthHaas Group, we want brewers to concentrate on what you do best – creating first-class beers. To achieve this aim, our approach to quality assurance is uniquely comprehensive. We work with our growers to ensure that the hops and hop products you receive from us are of the highest quality. From the plant to the finished hop product, we can guarantee complete traceability and quality. In order to improve our products and services in the long term, our processes are regularly reviewed.

All the hops we purchase are combined into blending samples according to precisely defined parameters and 100% analyzed for possible pesticide residues. Only after we receive the analysis results, are the hops then released for processing or marketing. As an international acting group with facilities/sites in the USA, Australia, and Europe we have established a Global Quality Group with regular meetings, to be able to act upon quality requirements from our customers.



TRACEABILITY

Our products are sourced according to our philosophy of providing our customers with ethically-sourced goods. Being able to ascertain the traceability of all hop products is vital to our product integrity and consumer trust. We take extraordinary steps in making sure our products originate from sources with transparent traceability. Our software solutions enable us to precisely and efficiently allocate hops to meet customer demands. Furthermore, we retain samples of all hop products

for at least five years. We use these samples to validate our quality and microbiological, physical and chemical attributes. While providing these measures can be costly, continuing to ensure the safety and reliability of our products makes this expenditure justifiable.

ENVIRONMENTAL MANAGEMENT SYSTEM

Our company-wide ISO 14001:2015 Environmental Management System (EMS) was established to ensure our compliance with applicable regulatory requirements and to help us develop systems that enhance the environmental performance of our company. We recognize that continual improvement in our environmental performance is essential to the satisfaction of our customers, staff, and community, and the future prosperity of our organization. We demonstrate our environmental responsibility through:



Continual improvement of environmental performance and prevention of pollution.



Compliance with all applicable legal requirements relating to our environmental aspects.



Establishing, measuring, and reviewing annual environmental performance objectives and goals.

Along with our Environmental Management System, we have a company-wide Emergency Response and Preparedness Plan (ER&P). Our ER&P Plan is designed to assist our employees and nearby communities in the case of an unforeseen emergency and to provide a plan that will respond in a timely and appropriate manner. Currently, our procedures address incidents related to fire, oil spills, releases of hazardous chemicals, earthquakes, and flooding. For the safety of our employees and the local community, this preparedness helps reduce the likelihood of danger or risk should an actual event take place.

PLANET



Yakima Golding Farm

Greenhouse Gas Emissions

Energy Efficiency and Emission Reduction Projects

Waste and Water Management

The threats of rising temperatures, shifting weather patterns, and extreme weather events pose meaningful risks to the hops industry, affecting predictability in yield and quality around the world. Changing climate has both direct and indirect effects on rainfall patterns, drought, fire risk, and geographical redistribution of pests and diseases. These climate-influenced variables have the potential to change the way we grow, process, and distribute hops.

To minimize our impact on the planet, we established natural resource management goals for ourselves, including minimizing water usage, utilizing energy-efficient equipment, and developing an industry-leading commitment that supports projects benefiting the environment and society.



OUR PARTICIPATION

We have actively recycled water in our Advanced Products Plant since 2015, effectively reducing our water consumption by 25%. We replaced almost 90% of our old equipment and lighting with energy efficient versions in our offices, plants, and facilities to minimize CO₂ emission. We developed HopGuard®, a product that protects bees from Varroa Mite.

YAKIMA GOLDING FARM

At Yakima Golding Farm, the long-term sustainability of our production system drives our day-to-day decision-making. We have been growing hops here for four generations and will continue long into the future. It is critical that we conserve our soil and water resources so that the land can provide for future generations. It starts with choosing high-yielding varieties with desirable brewing characteristics that are bred on the farm. These varieties require reduced inputs and have high resistance to pests and diseases. We manage over 10 soil types uniquely, ensuring that each field is well-balanced to maximize the quality of our hops. By growing cover crops and practicing reduced tillage, we protect our soil from erosion while increasing soil health. Our employees return year after year and are happy to be a part of the HAAS® family. At Yakima Golding Farm, sustainability is crafted in the details where the team works together to ensure we are continuously improving our efforts.

ABOUT OUR FARM

Yakima Golding Farms is Global GAP certified and committed to growing quality hops while simultaneously incorporating all social, environmental, and economical aspects of sustainable farming. By operating our own farm, we can research and improve farming practices, develop, grow, and test new environmentally friendly commercial varieties, and provide the latest knowledge to other growers; contributing to a resilient and efficient hop industry. Our improvements to the farm are attributable to our understanding of the importance of researching sustainable practices. Due to our constant growing research, we continue to make improvements in various ways, such as converting from diesel to propane at all our hop kilns, using only drip irrigation on all existing and new hop acreage, practicing integrated pest management principles to protect the environment, and remain good stewards of the land.

DISEASE AND PEST RESISTANCE VARIETIES

Most of our hop suppliers are located in the Pacific Northwest, an area of the world that lends itself to an ideal environment for hops. Many of our suppliers need to take measures to reduce the intensity of diseases and pests to remain cost-effective. To reduce the agrichemical load on our future hop supplies, we continue to breed new and flavorful hop varieties that are disease and pest resistant. Our breeding activities are dedicated to developing disease- and pest-resistant hop varieties with strong commercial qualities and high yields.



INTEGRATED PEST MANAGEMENT

Integrated Pest Management (IPM) is a system that helps us ensure high-quality hops by monitoring for crop pests and diseases during the growing season. It also helps us establish thresholds and rotates the use of chemicals to keep pests from building resistances.

COVER CROPPING AND REGENERATIVE AGRICULTURE

Hops are grown from perennial stock and live for almost 20 years. Every year, at the time of harvest, all vines are removed from the field, essentially stripping organic matter from the land during the cropping cycle. Cover crops are used to increase water retention capacity, decrease soil erosion, fix nitrogen, and control pests and weeds. We assess alternative cover crop species to use as ground cover and to add diversity to the cropping system.

PRECISION AGRICULTURE

In 2020, we refined our agronomy practices to maximize our land's health and hop growing performance. Our site-specific fertilizer applications are based on the particular soil nutrient content and hop yield potential needs for that particular location. The development of site-specific plans enables us to administer fertilizer specific to the site's needs, rather than applying the same amount or kind of fertilizer across the entirety of the farm. This environmentally friendly and cost-effective method allows us to minimize fertilizer loss, reduce pest intensity, and promote plant health and yield potential. We use drip irrigation to minimize water use and monitor soil moisture across the farm to ensure the plants are getting the right amount of moisture.



SCOPE 1

Direct emissions are produced as a result of processing our hops, from the point the hop bales are received, to when the product is shipped to the customer. This includes stationary combustion and mobile combustion sources, in addition to fugitive emissions from refrigerants and purchased gases.

- Stationary combustion emissions from pelletization, extraction, and advanced product facilities
- Process emissions
- Mobile emissions
- Fugitive emissions from heating and cooling
- Agricultural emissions



SCOPE 2

Indirect emissions caused by production. This includes purchased electricity.

- Purchased electricity from operations and offices



SCOPE 3

Indirect emissions including all other emissions along the value chain, from the production of raw materials to emissions from the use of the final product and related wastes after use.

- Employee Commuting
- Business Travel

GREENHOUSE GAS EMISSIONS

Here at HAAS® we recognize our responsibility to the land and our communities to monitor our natural resource use and our environmental impact. We believe climate change holds the potential for a real and imminent threat to our society, especially to our growers. Doing our part to help mitigate against this risk is important to us, our partners, and our customers.

To help make a positive change, we first need to understand our impact through better monitoring and analysis of energy consumption data.

OUR APPROACH

We adopted the Greenhouse Gas (GHG) Protocol methodology for collecting and reporting our emissions, which is the current global standard for emissions accounting and reporting. The GHG process highlights transparency, accuracy, and consistency throughout the reporting of Scope 1, Scope 2, and Scope 3 emissions.

Emissions data collection was conducted in cooperation with our production sites, energy suppliers, growers, and other members along our supply chain. Emission factors for fossil fuels were taken from government websites, like the Environmental Protection Agency (EPA), as well as from the GHG Protocol website itself.

This comprehensive inventory of our GHG emissions allows us to identify our largest emission sources, detect inefficiencies, and set goals to reduce emissions in the coming years.

KPIs AND ENVIRONMENTAL INDICATORS

Our primary Key Performance Indicator (KPI) is the ratio of Metric Tons of Carbon Dioxide Equivalent (MT CO₂e) Emissions per Metric Tons (MT) of Raw Hops. That is, the net of Scope 1 and 2 emissions, divided by the amount of hops we process.

Agricultural emissions from our farms are reported separately from the other Scope 1 emissions. We have created a separate ratio of total agricultural emissions since these emissions are only from the hops we are producing, not from the total amount processed.

To get an overview of the emissions of our growers, we encourage them to adopt tools where they can record their farming methods, land-use transformations, and energy use on the farm so they can understand their carbon footprint.

We are always looking to support our farmers in understanding the environmental effects of agriculture and how we can work together to farm for a sustainable, fruitful future.

SCOPE 1 AND 2 EMISSIONS

AGRICULTURAL EMISSIONS

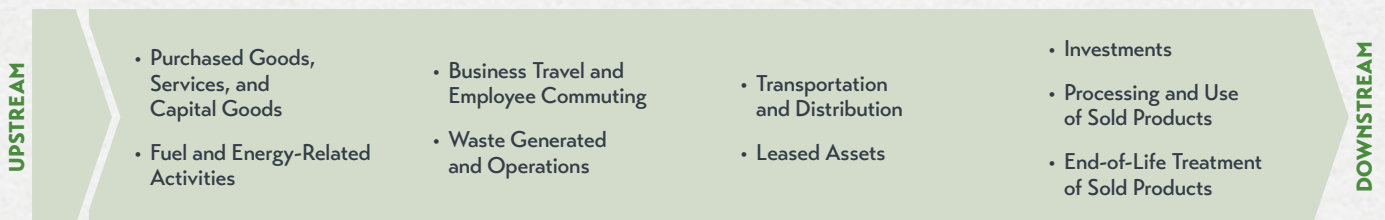
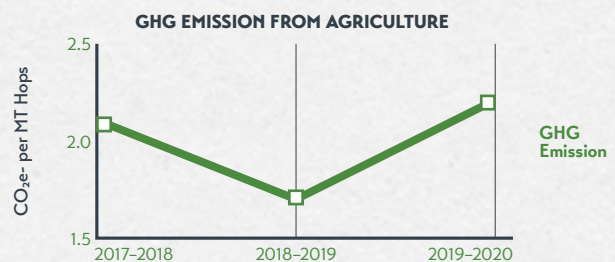
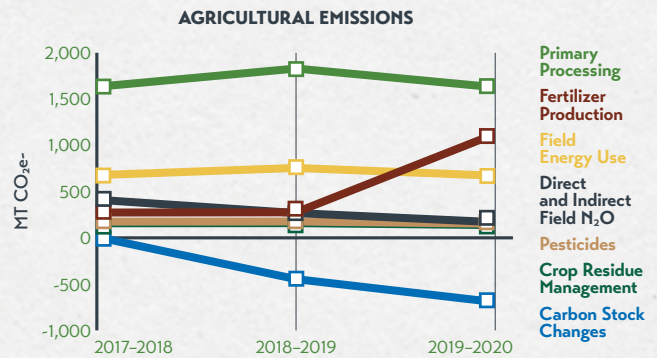
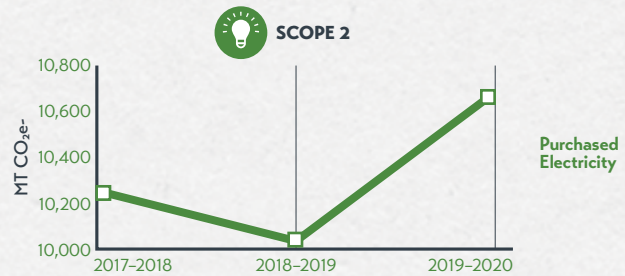
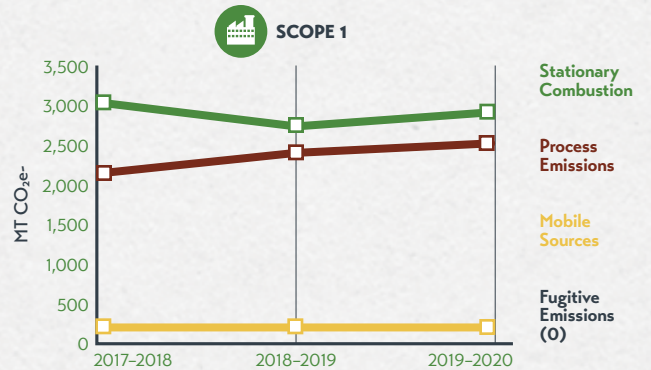
Agricultural emissions make up almost 40% of our total Scope 1 emissions. In recent years, we have adopted more sustainable fertilizer practices through using composted manure, which over time will increase the fertility of our soils while decreasing reliance on chemical fertilizers. By adding compost, along with planting cover crops and reducing tillage, we are promoting microbial activity in the soil and building organic matter. Over time, we expect to see a measurable increase in soil carbon. The sequestering of carbon through these practices will offset other agricultural emissions through increased carbon stock exchanges.

Overall, our emissions per ton of hops produced have increased over the past three years. The increase in emissions can be attributed to the change from chemical fertilizer to additions of composted manure. The composting process produces considerable amounts of Carbon Dioxide (CO₂), Nitrous Oxide (N₂O), Methane (CH₄), and Ammonia (NH₃). These emissions, coming from natural processes, are calculated in the production of fertilizer. This explains our increase in fertilizer production emissions; however, it will eventually contribute to higher organic carbon content and eventually offset the emissions from production, as well as decrease our use of chemical fertilizers in the future and improve our overall soil and plant health.

SCOPE 3: EMISSIONS ALONG THE SUPPLY CHAIN

We have always taken strides to act responsibly within our supply chain, and choose suppliers that also adhere to a similar code of conduct. The next step for us is to evaluate our supply chain more in-depth, taking environmental impact and performance into special consideration.

Scope 3 emissions usually account for most of our emissions; however, collecting all emissions along the value chain is very time intensive and requires collaboration amongst suppliers and customers.



One of our goals for this year is to complete a full Scope 3 inventory and increase awareness around sustainability reporting with our suppliers and customers.

ENERGY EFFICIENCY AND EMISSION REDUCTION PROJECTS

Department	Projects	Actions	Type of Project	Status
Pellet Plant	Reduce propane use	Install ducting to run warm exhaust air from two air compressors into the plant area as needed. This will largely reduce propane use.	Environmental	Completed
	Soft start controls for larger motors	Install soft start technology for all motors over 60 HP to reduce draw down.	Environmental	Completed
	Rewiring of pellet plant	Replace all old wiring and updated stranded wire for better continuity.	Environmental	Completed
	Air filter replacement	Replace air filter annually for better air filtration.	Environmental	Completed
	Replace all old and inefficient motors	Replace all old and inefficient motors with new high-efficiency motors.	Environmental	Completed
	Replace old plumbing	Replace all old galvanized water lines with Pex Piping to eliminate water leaks.	Environmental	Completed
	New cold room door	Install a new cold room door to better seal the room.	Environmental	Completed
	Electrical Ventilation Project	Install A FAN/LOUVER system in the ammonia/compressor room connected to the ammonia alarm system. This will allow for swift air change mitigating any possible explosions due to major ammonia leakage/discharge.	Environmental	Completed
	Condenser upgrade	Install a larger more efficient condenser for the ammonia system with VFD drive to save energy.	Environmental	Completed
Company Wide	Forklifts' emissions	Forklifts' emissions were checked and adjusted annually to reduce emissions.	Environmental	Completed
	Paperless initiative	Create paperless system to reduce paper use and increase efficiency.	Environmental	Ongoing
Advanced Product	Cut water usage by 10%	Increase process water recycle schedule to decrease water usage.	Environmental	Completed
	Safety and process training program with certifications	Create a robust training program to promote safe work practices.	Environmental and Safety	Completed
	Replacing tank sight lights	Replace older tank sight glass lights with high-efficiency LED lights.	Environmental and Safety	Ongoing
	Re-insulating tanks	Re-wrap/insulate older tanks to prevent heating/cooling loss.	Environmental	Ongoing
	pH adjustments to wastewater	Automatic pH adjustments to wastewater reducing the risk of groundwater contamination due to tank overflow or leakage.	Environmental	Completed
	Wash water recycling in the separation process	Increase process water recycle schedule to decrease water usage.	Environmental	Completed

Department	Projects	Actions	Type of Project	Status
Warehousing	Convert shipping operations to paperless	Utilize SharePoint® to reduce the amount of paper being printed for shipping.	Environmental	Ongoing
	Replace R22 refrigerants at the warehouses	Replace R22 refrigerant with 407F which is more environmentally friendly.	Environmental	Completed
Agronomy	Pest-resistant and higher-yielding varieties	Develop high-yielding, pest-resistant new varieties that decreases water and pesticide use.	Environmental	Ongoing
	Site-specific fertilizer recommendation	Make field specific fertilizer applications based on unique soil test values, instead of making the same fertilizer applications across entire farm. This practice will minimize the loss of fertilizer to the environment, help to grow healthier plants, and reduce pest pressure.	Environmental	Completed
	Double drip tube	Determine if there are yield and/or water saving benefits from using double drip lines as opposed to the current set-up of a single drip line on each hop row.	Environmental	Ongoing
	Compost application	Transition to using local composted manure as a fertilizer in place of synthetic phosphorus and potassium sources to increase soil organic matter and reduce synthetic inputs.	Environmental	Completed
	Reducing tillage	Conduct an in-depth review of our tillage practices with management to determine what is entirely necessary and where tillage can be reduced.	Environmental	Ongoing

REPLACING R22 REFRIGERANTS

We understand the hydrocarbon present in R22 refrigerants has the potential to cause depletion of the ozone layer in the atmosphere. Consequently, we have replaced all R22 with R-407F and R-717 in all our warehouse facilities due to its more environmentally friendly properties.

LIGHTING AND EQUIPMENT UPGRADES

Converting from regular to LED lights and energy-saving equipment in our plants and facilities is another step towards our sustainable practice goals. LED lights are not only well known for their efficiency, but also waste reduction properties due to their recyclable properties coupled with the lack of dangerous chemicals or materials. 31.5% of our hop warehouses have already switched to LED lights with the plan to fully switch to 100% by 2024. Similarly, our Extract and Advanced Products Plants have replaced all lights, including tank sight glass light, with LED. Likewise, 100% of the lights at the Pellet Plant have been changed to LED lights with motion sensors and 95% of the motors are to be replaced with new high-efficiency units.

WASTE AND WATER MANAGEMENT

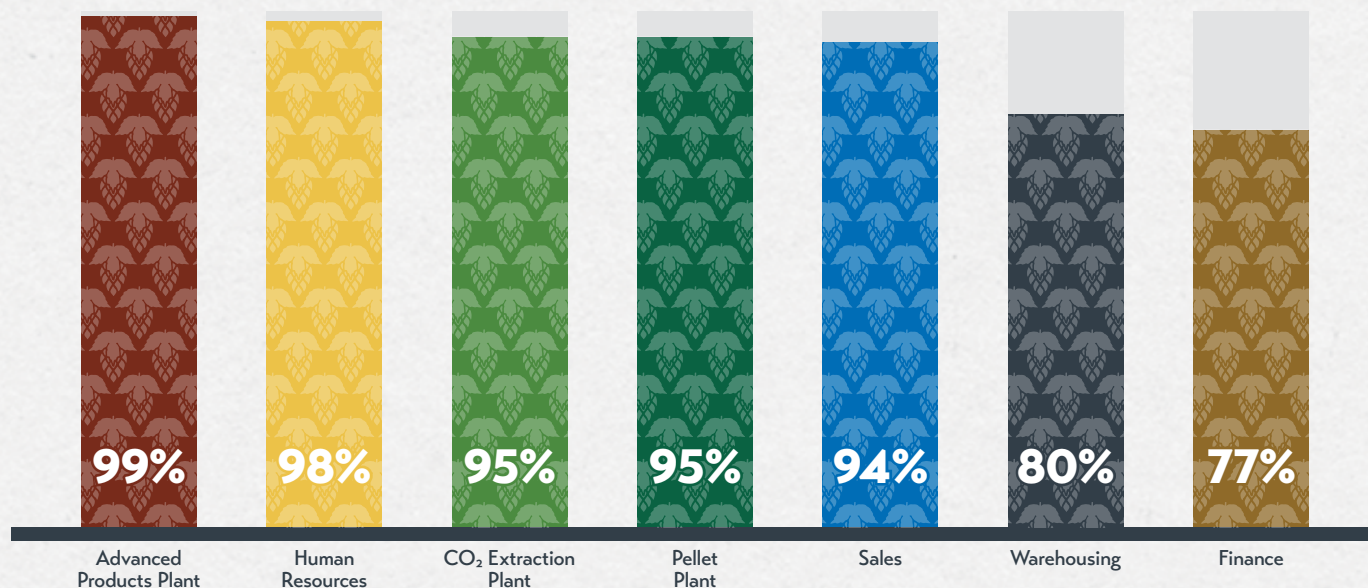
Due to the nature of the Pacific Northwest climate, we heavily rely on irrigation water supplies for hop production. As a result of our dependency on our natural resources, sustainable waste and water management is a key factor to our future success.

WASTE MANAGEMENT PROJECTS

PAPERLESS INITIATIVE

The global consumption and manufacturing of paper has detrimental impacts on the environment; therefore, we are committed to cutting down our paper consumption. The transformation from paper to a cloud base service provides the opportunity to implement the paperless initiative in an efficient and accessible way.

We have adopted an electronic document management system. It provides us the convenience of easily accessing and retrieving documents, as well as a platform for shared documents. This feature has proven to be highly valuable amid a pandemic. By encouraging the paperless initiative, our departments were able to save the following amounts of paper:



NEAR-INFRARED SPECTROSCOPY

Official methods of analysis used for the identification and quantification of hop components are not economically and environmentally friendly; they are time-consuming and use hazardous chemicals. As a result, we have been searching for a more sustainable alternative.

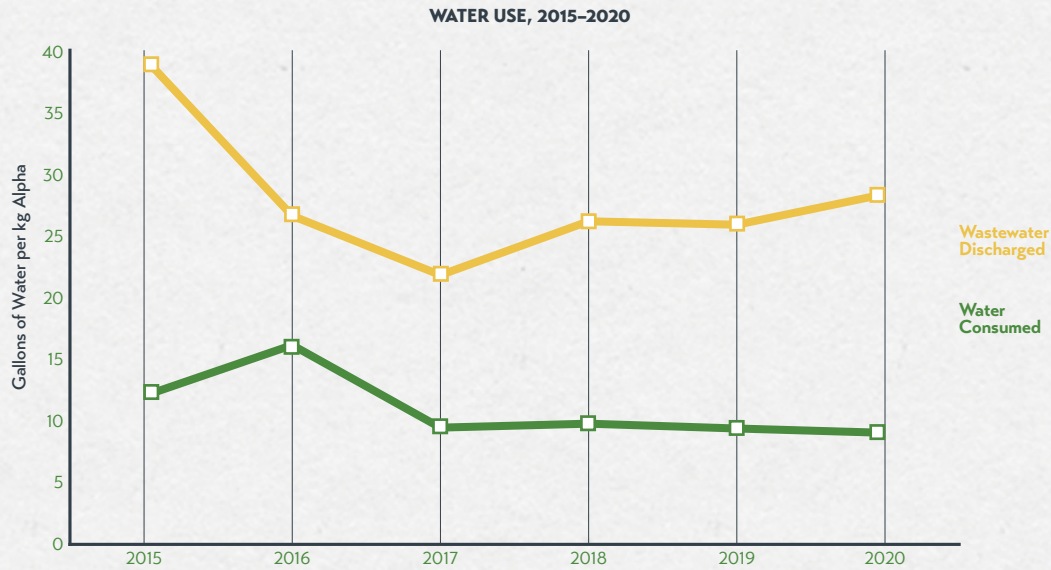
Near-infrared spectroscopy (NIRS) supplies several benefits over existing chemical methods of analysis: no reagent/chemicals are required, consequently eliminating hazardous waste, and a rapid analysis with little sample preparation is needed. We are currently developing methods for use at our farm and in our plants.

HAZARDOUS WASTE

HAAS® understands the responsibility that comes with being a hazardous waste generator. We have implemented pollution prevention plans to monitor the management of these materials.

RECYCLE POLYPROPYLENE BALE WRAPS AND CARDBOARD

An agreement is in development with a plastic washing company to take, wash, and send bale wraps to be recycled. An estimated annual weight of 247,500 lbs of polypropylene will be recycled.



WATER MANAGEMENT PROJECTS

Access to water is a necessity embedded within our industry. From the hop fields, warehouses, packaging lines, and brewery, water runs through every step of our supply chain. Our business depends on the accessibility and availability of clean, fresh water as does the community we are a part of. Therefore, we continue to stay focused on seeking innovative, sustainable methods to decrease our water consumption and recycle whenever possible.

PROCESS WATER RECYCLE

Waste reduction and responsible recycling are some of our most important strategies in promoting a sustainable agenda. In August 2015, we began recycling processed water in our Advanced Products Plant. As a result, we have been able to save 25% of water usage while producing one kilogram of alpha.

WASTEWATER MANAGEMENT

Before any water is discharged from our processing plants, we test the quality to ensure we are within regulatory compliance for acceptable ranges related to temperature and pH. The water is monitored and automatic pH adjustments are made to ensure acceptability for discharge to the City of Yakima. Since emplacing a water recycling process, discharged water per kilogram alpha has decreased by 27% in 2020 as compared to 2015.

REMODELING BATHROOMS AND REPLACEMENT OF PLUMBING

To improve water usage efficiencies, we remodeled the bathrooms at our Pellet Plant, Advanced Products Plant, and Warehousing facilities. We also replaced all plumbing that feeds water to the Pellet Plant.

DOUBLE DRIPLINE IRRIGATION

We have been using drip irrigation on all existing and new hop acreage. We are currently exploring the efficiency benefits of the double drip line irrigation system in comparison to the single drip tube. A double drip line may increase fertilizer and water efficiency, ultimately increasing hop yields. This project commenced in 2020 and enough data will be acquired by 2022 to draw conclusions.

PEOPLE



Employees

Attracting the Best Employees

Society

Our company's advancements depend on the achievements of our customers, employees, and communities. We attribute our company's success to the unique contribution of every member of the HAAS® team. We accomplish our goals when our employees flourish, business thrives, and the community prospers. For this reason, we continue to contribute to the health and wellbeing of our people.



OUR PARTICIPATION

We give back to our communities through our active participation in local charities. Recently, we donated hops to our local brewers to provide beer for the fire victims in California.

We have provided our employees with dependable insurance programs, vaccination services, and built a playground for kids in our farming community. We have been providing financial support and donations to our local community through our community service projects such as: Junior League, the American Hop Museum, Capitol Theater, Central Washington Hispanic Chamber of Commerce, and Rotary Club.

EMPLOYEES

We are proud of our dedicated employees that continue to integrate sustainability into their work. Their efforts allow us to maintain a century-old company reputation of providing exceptional quality and productivity. We value maintaining a safe, inclusive, and engaging work environment that promotes the development of our employees' careers and ideas to meet our customers' demands for today, as well as into the future.

EQUAL OPPORTUNITY

We provide equal employment opportunities to all qualified individuals regardless of race, color, creed, religion, national origin, sex, age, disability, veteran status, genetic information, family medical history, sexual orientation, gender identity, or other status protected by law. We have zero-tolerance for harassment. We provide reasonable accommodations, if needed, in adherence with the Americans with Disabilities Act (ADA).

SAFETY

Keeping the workplace safe is the most important responsibility of an employer. It is our obligation to provide our employees with a working environment that promotes confidence and productivity for our workers. For this reason, we have made it a priority to be proactive and provide a workplace free of any identifiable hazards. We require all employees to report any accidents, injuries and near misses immediately to their supervisors as it helps us identify the root cause of the issues, preventing them from reoccurring. Investigative forms are filled out and reviewed by our safety committee and facility-specific teams, who then proceed with appropriate corrective actions.

COMPANY CULTURE

Continuous exploration, creation, and adoption of new sustainable ideas and technologies to serve our customers is the essence of our company culture. We have been integrating digital technology into our supply chain management to minimize carbon footprint, access data efficiently and effectively, and strengthen document security and confidentiality.

DIGITALIZATION IN THE WORKPLACE

We have adopted cloud-based video tools for conferences, collaborations, chats, and webinars. These tools have become very helpful, especially during the pandemic where remote work is essential. Similarly, we used electronic learning platforms to access extensive training content. We use this platform to train our employees and provide a collaborative working space for our company. Likewise, we use the cloud-based technology to store our information and resources. We encourage our employees to use this podium for document collaboration as it enhances the amalgamation of resources, putting everything in one easy-to-access location. This interface ensures transparency when we collaborate remotely. We use the data manager program to enter and access our daily operations information. This system enables us to retrieve historical data to examine trends and activities which allows us to make informed decisions.





TRAINING AND DEVELOPMENT

We recognize the benefits of enhancing the skill and knowledge of our employees. Training and development programs strengthen our employees' skills, knowledge, and competencies while simultaneously delivering a positive impact on employee satisfaction, performance, and retention. As a result, we require our employees to achieve a defined number of training and development hours every fiscal year, depending on whether they are an individual contributor, supervisor/manager, director, or executive. We spent over \$100,000 in the fiscal year of 2020 on companywide training and development programs.

ACCREDITED COURSE/ CERTIFICATE REIMBURSEMENT POLICY

We have financial assistance policies for those who wish to take courses and/or pursue an academic degree to enhance current skills and improve organizational effectiveness.

EMPLOYEE COMPENSATION AND BENEFITS

We use a market-based pay-for-performance compensation structure to ensure a competitive and equitable program for all non-union employees. A competitive salary range for each pay grade is established based on knowledge (know-how), problem-solving (complexity), and accountabilities (output).

HEALTH AND WELLNESS

Our employee health and wellbeing programs provide a great work environment that encourages a healthy work-life balance. Our employees are passionate about their work; finding ways to promote their mental and physical well-being is a top priority. We currently enhance our employee wellness through onsite bicycles, Fitbit® challenges, wellbeing newsletters, health webinars, on-site COVID/flu vaccine clinics, etc.



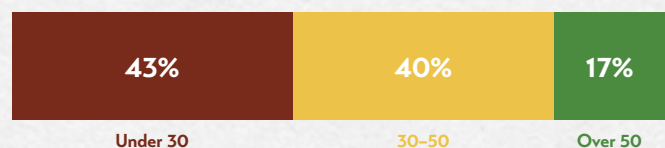
ATTRACTING THE BEST EMPLOYEES

We recognize the value of attracting and retaining the most talented workers in our workforce. We advance our company's values by offering more than attractive compensations and benefits. We explicitly link employee career and professional growth to overall business sustainability and success by setting annual SMART goals to heighten our employee's efficiency and achievements.

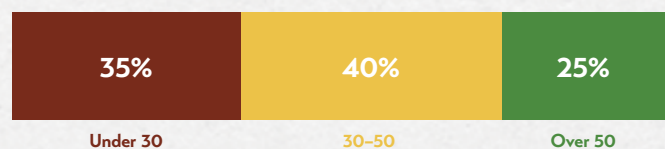
EMPLOYEE RETENTION

We are delighted to report that our retention rate of salaried employees for the fiscal year of 2020 was 97.87%. Not only does our employee retention allow us to develop industry experts, but it also ensures that new talent coming into our organization will have great mentors. In the fiscal year of 2020, our new hire percentage was highest for those under 30 and lowest for those over 50. Our turnover was the highest for the ages of 30 to 50 and lowest for ages over 50.

AGE DISTRIBUTION OF NEW HIRES



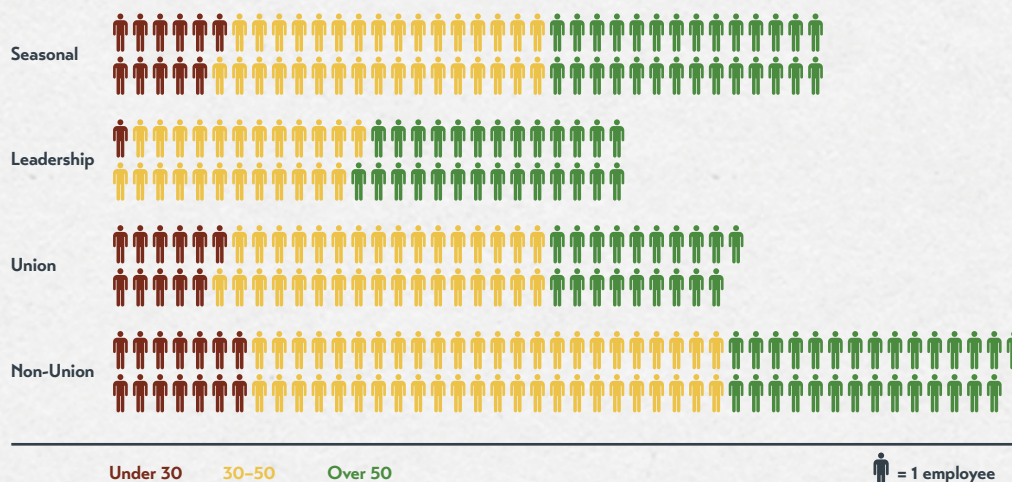
AGE DISTRIBUTION OF TURNOVER



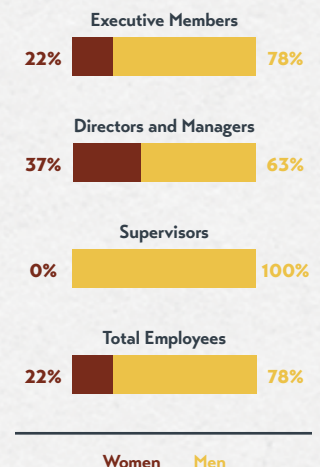
DISTRIBUTION OF EMPLOYEES BY AGE AND GENDER

As of the fiscal year of 2020, we employed 278 employees. Of these employees, 33% were non-union, 23% union, 26% seasonal, and 19% leadership (managers, directors, executives). Of these total employees, almost 50% were of the ages of 30-50, 37% over 50, and 13% below 30.

BY AGE



BY GENDER



SOCIETY

Since our company's strength relies on the health of the community in which we operate, we have been actively involved in our local communities for more than 100 years. We anticipate maintaining strong ties with our community by purchasing from multiple local suppliers who can meet our high-quality standards. Additionally, we have been providing financial support, charity, and donations to our local community through community service projects.



ORGANIZATIONS AND PROJECTS HAAS SUPPORTS

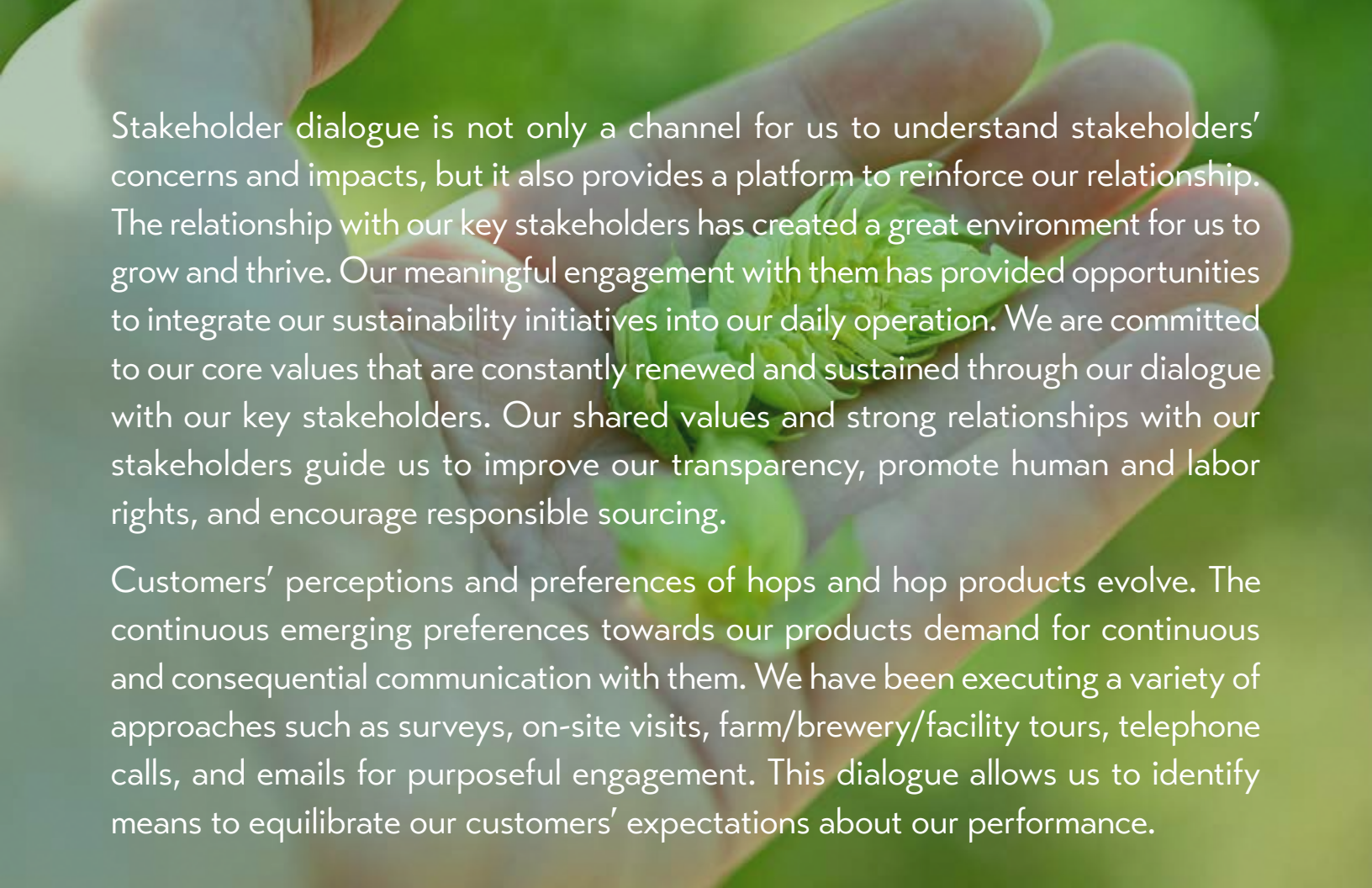
- Donation of hops to make beer for fire victims in California
- Capitol Theatre
- Central Washington Hispanic Chamber of Commerce
- Junior Achievement
- Junior League
- American Hop Museum
- Yakima Chamber of Commerce
- Madison House
- Children's Village
- Yakima County Development Association
- Heritage University
- Rotary Club of Yakima
- Pink Boots Society
- La Casa Hogar
- Sozo Soccer Complex
- Yakima Area Arboretum
- Petty Technical Institute
- Children's playground in our farming community

STAKEHOLDER DIALOGUE



About This Report

GRI Index



Stakeholder dialogue is not only a channel for us to understand stakeholders' concerns and impacts, but it also provides a platform to reinforce our relationship. The relationship with our key stakeholders has created a great environment for us to grow and thrive. Our meaningful engagement with them has provided opportunities to integrate our sustainability initiatives into our daily operation. We are committed to our core values that are constantly renewed and sustained through our dialogue with our key stakeholders. Our shared values and strong relationships with our stakeholders guide us to improve our transparency, promote human and labor rights, and encourage responsible sourcing.

Customers' perceptions and preferences of hops and hop products evolve. The continuous emerging preferences towards our products demand for continuous and consequential communication with them. We have been executing a variety of approaches such as surveys, on-site visits, farm/brewery/facility tours, telephone calls, and emails for purposeful engagement. This dialogue allows us to identify means to equilibrate our customers' expectations about our performance.

PERFORMANCE EVALUATION

Performance evaluation is a great tool for providing employee feedback. We believe that performance reviews play a key role in helping align their efforts with our overall mission in solving strategic problems, and helping them to continuously evolve with our company. During the reporting fiscal year of 2020, we had a total of 141 active employees who received performance evaluations. Of all the active employees, 100% of women and almost 97% of men received performance evaluations.

MANUFACTURING SUMMIT

In January 2020, we organized a BarthHaas Group Manufacturing Summit to enhance our collaboration by sharing ideas, best practices, and projects related to improving efficiency, productivities, safety, and sustainability. The theme of the Summit was "Past, Present, and Future". During this Summit, the team was able to analyze past events to identify current and future opportunities. This Summit will occur every two years.

THE HAAS® HOPCAST®

We use the HAAS HopCast to announce new products, share expertise and customer insights, as well as other timely information about our company and the industry. Integrating the HAAS HopCast not only provides a means to create a stronger connection with our customers and farmers, but also offers us with a sustainable avenue to distribute information regarding our innovations and products.

THE HAAS EMAIL NEWSLETTER

The HAAS Email Newsletter is another tool we use to provide exclusive and valuable information about our events and products to our stakeholders. These newsletters are customized to increase engagement with our products, services, and people.

THE HAAS BLOG

We use the HAAS Blog to share our news, innovations, and products with our stakeholders. Shifting towards online information sharing is a constructive approach towards sustainability as it requires no travel and important information can be disseminated more widely and efficiently.

ABOUT THIS REPORT

REPORTING FRAMEWORK

This is our second HAAS® Sustainability Report following our original, published in 2016. This report provides a synopsis of the company's economic, social, and environmental activities and development to date, as well as the baseline for our future goals. In this report we have discussed the features and issues that matter the most to our business and stakeholders.

SCOPE AND APPLICATION LEVEL OF REPORT

This report was developed using an easy-to-understand section method which outlines sustainable economy, planet, and people. This report allows us to evaluate our sustainability initiatives and provide an industry-leading commitment to support and promote company-wide sustainable projects and programs. Concurrently, it also offers us an opportunity to improve our transparency and accountability with our valued stakeholders.

REPORTING FORM

We have used the Global Reporting Initiative (GRI), the most used reporting framework, to disclose company's positive and negative impacts on our sustainable economy, environment, and people.

DATA COLLECTION AND PRINCIPLES

Scope 1 and 2 emissions were collected in accordance with the Greenhouse Gas (GHG) Protocol. Emission factors for fossil fuels, transportation, and other gases were sourced from the EPA, and local energy companies.

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