



BarthHaas®

# HOPS ACADEMY

WE SHARE  
KNOW  
LEDGE  
& LOVE

WORKSHOPS  
SEMINARS



BarthHaas®  
**HOPS  
ACADEMY**

**WELCOME  
TO THE FAMILY**  
OF FLAVOR MAVENS, HOP JUNKIES,  
INSPIRERS, BREWING PROS,  
HOP GROWERS, WORLD CHANGERS,  
BEER COMPOSERS AND ANYONE WHO  
IS FASCINATED BY THE UNIVERSE OF  
HOPS AND FLAVOR

The BarthHaas Hops Academy is a source of inspiration for people with a thirst for knowledge about our shared passion: the wonderful natural hop.



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# HOP SELECTION

*ASSESS HOPS AND HOP AROMAS PROFESSIONALLY*

Providing selected tools for hop assessment, practical examples and aroma training, this course gives you all you need to assess hop harvests professionally and create your own hop portfolio.

**1-DAY SEMINAR**

## **DEVELOP YOUR NOSE FOR HOPS:**

Theory and background of the BarthHaas quality system

Recognizing pests and diseases in the field

Introduction to HOPSESSED® - The language of hops

Assessing hops: Identifying varietal differences using three examples

Assessing hops: Creating an aroma profile based on whole cone hops or pellets and cold extracts



**1-DAY  
SEMINAR**



## **HOP FLAVOR IMPACT DAY**

*EVALUATE AND CREATE HOP  
FLAVORS IN YOUR BEER*

The BarthHaas Brewing Solutions Team spill the beans on how they brew characterful beers, by combining their knowledge of varieties, feel for quality and brewing expertise to achieve the perfect flavor.

### ***THE FLAVOR EXPLOSION:***

An overview of the planet's most flavorful hop varieties

Update on breeding and market developments and information on the latest, new hop products from primary sources

HOPSESSED® - The language of hops. An effective sensory tool for evaluating hops

Sensory training using cones and pellets from powerfully flavored hop varieties

Selecting varieties and building your own personal flavor profile

Hints and tips for using hops in the brewing process

Tasting and assessing hop flavors in cold extracts and single-hop beers

Includes the final certificate and course materials

Your personal Hop Aroma Standards Kit to take home



## FIELD TRIP TO THE HALLERTAU

*EXPERIENCE CULTIVATION, HARVESTING  
AND BOTANICAL SCIENCE*

Active field research, key hop knowledge, valuable tasting tools and much more await you on our one-and-a-half day harvest expedition through the Hallertau, one of the largest hop-growing areas in the world.

### 1.5-DAY SEMINAR

Harvest expedition  
to the Hallertau

The ideal practical  
follow-on  
to the Hop  
Flavorist Course!

#### **HOP EXPEDITION:**

Excursion to the Hallertau: Live field research during the harvest

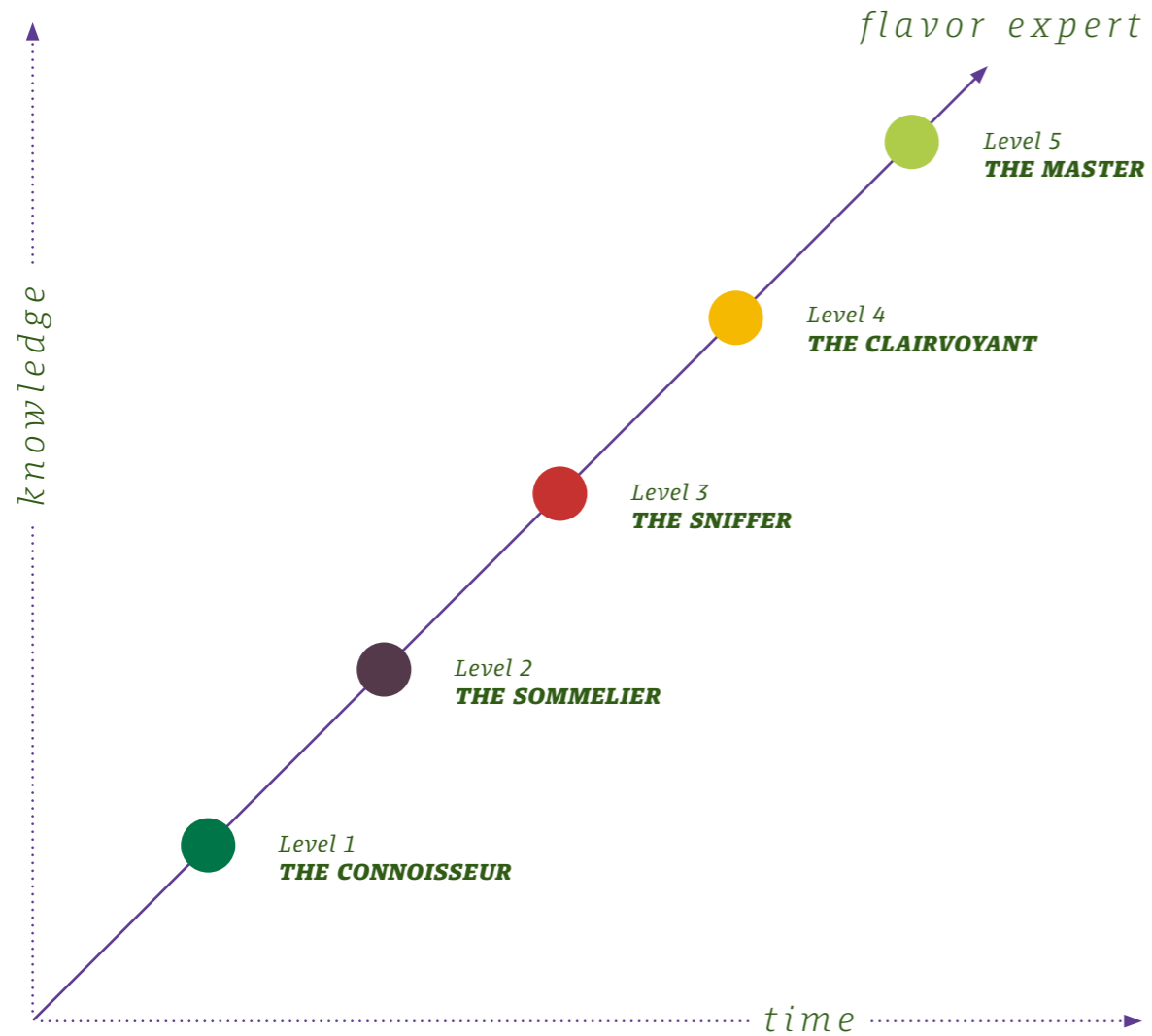
Theory and science behind growing, harvesting and botanical science from the BarthHaas Brewing Solutions Team

First-hand advice directly from hop growers in the field

Overview of the current market situation for varieties and products

Introduction to using the BarthHaas HOPSESSED® flavor guide

Hop tasting with cones and various pellet types plus cold extraction in beer



# **HOP FLAVORIST COURSE**

This course is unique – the world’s most comprehensive course for training true professionals in the flavors of hops. Immerse yourself in the universe of hops and follow a structured syllabus covering the language and secrets of experiencing hops through taste and other senses.



# PURE HOP EXPERTISE

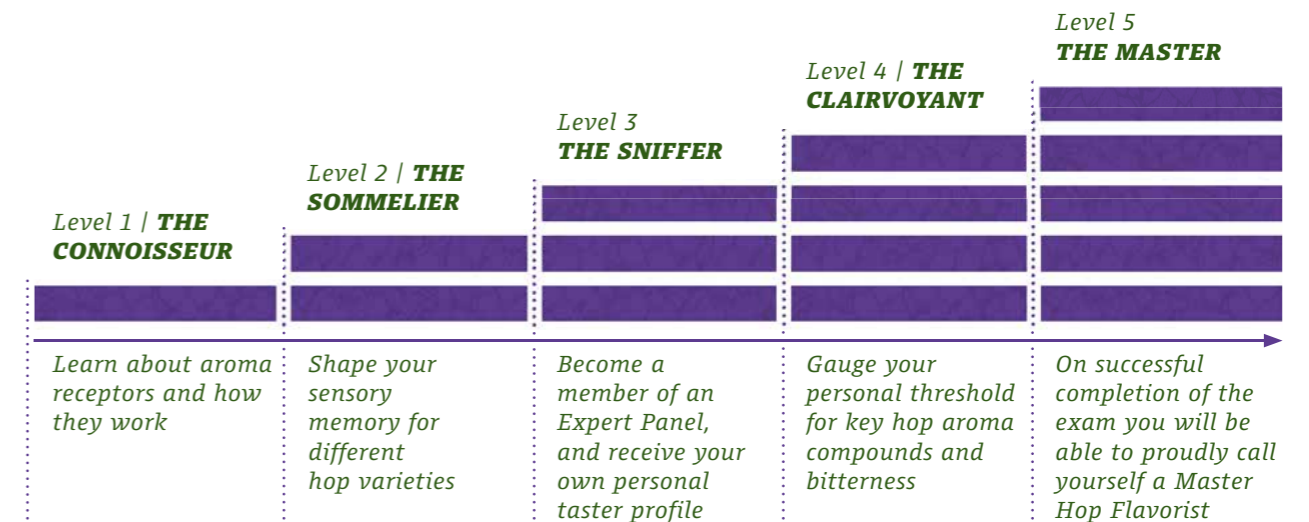
If you want to assess hops and create your own sensational flavors, you need the background knowledge:

The five levels of the HOP FLAVORIST COURSE will teach you how cultivation, breeding, varieties, analysis and the brewing process affect the flavor of hops.

## HOP FLAVORIST COURSE THE 5 LEVELS

*BECOME A FLAVOR PRO IN 5 LEVELS*

Level by level, you will develop your hop flavor expertise producing an individual taster profile, with expert knowledge and professional tools for unique flavor design.







# HOP FLAVORIST COURSE LEVEL 1 THE CONNOISSEUR

*THE BASICS OF EVALUATING  
FLAVOR BY SENSE*

The task of training your senses starts with an extended warm-up for your sensory receptors and your brain. It is not easy to express in words what your senses are telling your brain. Fruits, herbs and other natural aromas give us the building blocks for learning how to work with a range of well-known hop varieties.

### **THE A-Z OF AROMA:**

HOPSESSED® - The language of hops

Training: Recognize aromas, differentiate and describe 6 hop varieties

Theory: Reading and understanding analyses

Aromas and their properties

The physiology of aroma and flavor perception

Sensory test: Recognizing aromas

Exercise: Categorizing and identifying hop varieties

- 5
- 4
- 3
- 2
- 1**



**2-DAY  
SEMINAR**



## HOP FLAVORIST COURSE LEVEL 2

### THE SOMMELIER

*HOW BOTANY AND BREEDING  
INFLUENCE HOP FLAVORS*

Hop flavor is determined by many factors. In level 2 of the Hop Flavorist Course, we shed light on how the different varieties, growing regions and breeding techniques affect hop aroma.

#### **AROUND THE HOP WORLD AND BACK:**

Theory: History of hop breeding and botany

Varietal categories: National varieties, bitter/aroma varieties and how flavor and aroma interact

Identifying individual aromas

Training: Describe and differentiate the aroma of 6 hop varieties from a range of growing regions

Sensory test: Recognizing aromas

Exercise: Categorizing and identifying hop varieties



**2-DAY  
SEMINAR**



## HOP FLAVORIST COURSE LEVEL 3

### THE SNIFFER

*PRODUCTION AND CREATION OF  
AROMAS IN THE BREWING PROCESS*

The aroma of unique, characteristically flavored beers is predominantly produced and adjusted in the brewing process. Train your sensory skills so that we can help you identify your personal tasting profile at the end of the course.

**If you successfully pass the Level 3 course, you are qualified for our BarthHaas Expert Panel! We will invite you to sample and evaluate freshly harvested hop samples comprising 40 different varieties!**

#### **SNIFFING OUT THE AROMA:**

Theory: Hops and brewing – how aroma substances are produced and transformed

Hop products and their effect on the flavor/aroma of beer

Training: Identifying individual aromas

Training: Recall already recognized hop varieties in pellet form and in beer

Sensory test: Identifying aromas

Exercise: Identify and categorize hop varieties in the form of cones/pellets and in beer

Create your personal tasting profile

5

4

3

2

1

**2-DAY  
SEMINAR**



## HOP FLAVORIST COURSE LEVEL 4

### THE CLAIRVOYANT

*HOW THE MICROCLIMATE  
AFFECTS HOP FLAVORS*

Even small changes in the climate can influence the flavor of hops. Knowing how this happens allows us to evaluate aroma and train our sensory skills with regard to the growing region, harvest time and drying method.

#### **FLAVOR: IT'S ALL IN THE DETAILS**

Theory: Growing regions, cultivation methods, climate, weather, soil, harvest time, and their effect on flavor

Training: Describe, differentiate and identify known hop varieties from large and small growing regions

Identifying individual aromas

Sensory test: Identifying aromas

Exercise: Identify growing regions/hop varieties

Gauge your personal threshold for key hop aroma compounds and bitterness

5

4

3

2

1

**2-DAY  
SEMINAR**



**2-DAY  
SEMINAR**



## **HOP FLAVORIST COURSE LEVEL 5**

### **THE MASTER**

*TOOLS FOR INNOVATIVE FLAVOR  
DESIGN & FINAL ASSESSMENT*

In the final course, you will learn about professional flavor design and the tools you need to create innovative flavor combinations. Once you have demonstrated your skills in the final exam, we will prepare your personal taster profile. You will then be a real hop expert and flavor professional



#### **THE FINAL STEPS TO BECOMING A HOP PRO:**

Designing flavor with hops

Tools for creating innovative flavor combinations in beer with hops and hop products

The use of dry hopping in the Campus Brewery

Theoretical and practical exam

Practical assessment: Identify 12 aromas and 3 hop varieties from 9 samples

Compusense: Create your taster profile on the basis of 3 hop varieties



# ***WE GROW TOGETHER***



# ***CUSTOM WORK- SHOPS***

Hop experts need continuous professional development to keep up with the latest in agriculture, running a business, legal aspects, sustainability and brewing trends. Therefore, BarthHaas HOPS ACADEMY offers tailored courses with specific content for flavor professionals, groups, institutions, schools and universities.

# CUSTOM WORKSHOPS

What topics are relevant to you?  
We are happy to put together tailored training with our hop experts and flavor professionals.

## HOPS IN BREWING

*Learn why hops are the most important detail in brewing, and how bitterness and hop oils affect flavor and aroma.*

Traditional and modern hopping

The chemistry of hops in brewing

Dry hopping

Hops and hop products

Assessing hops to prevent foam production in the brew house and during fermentation

Calculating yield in the brewing process

Using hops and hop products for non-alcoholic and reduced alcohol beers

New hop products



## HOPS

*It's all about hops: We are keen to explore this exciting plant from A to Z.*

All about the hop

Cultivation and Harvest

Hop processing

Handling and storing hops

Hop breeding

Hop selection

The chemistry of hops

Characterizing hop varieties

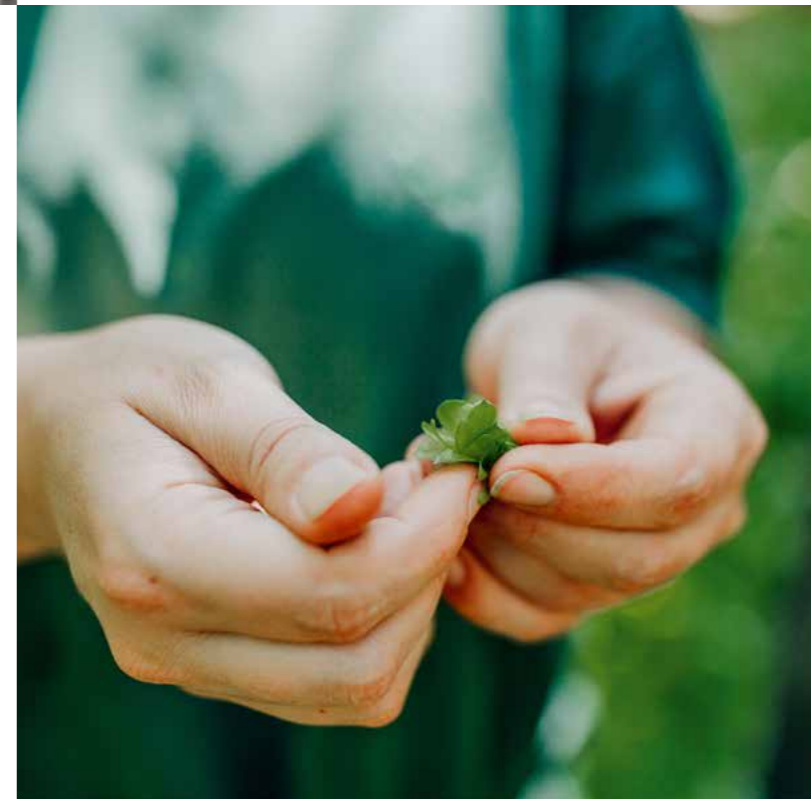
## ANALYSIS

*We take a close look at these wonderful climbing plants and learn how to analyze hops and hop products.*

BarthHaas – product-specific analyses

Recognized analysis methods for hops

Specific analyses of relevant hops substances in beer







## **QUALITY MANAGEMENT/ FOOD SAFETY**

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*Anyone hoping to be a successful hop farmer has to ensure the continuous quality and safety of their raw materials.*

Quality management requirements for the EU hop industry

Quality management requirements for the US hop industry

International legislation

Maintaining quality during hop processing

Contaminants in hops - a critical view



## **SUSTAINABILITY**

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*As a traditional craft, hop farming is intrinsically linked to sustainability, fairness and social responsibility, aiming for a benefit for all.*

Sustainability in hop production

Sustainability in product safety

Social sustainability

Fair relationships between brewers and suppliers



## **COMMERCIAL ASPECTS OF HOPS**

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*The hop market is a niche market, so it is even more important to understand in detail the intricacies of hop production, hop growing regions and the structure of the hops industry.*

Hop supply chain

Demand for hops

Variables influencing the price of hops

Costs of hops in beer

Hop buying strategies



## **SENSORY**

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*Hops are the heart and soul of the beer. Understanding and expressing the aroma and flavors in words is an art form.*

Hop aroma in beer

Hop bitterness in beer

HOPSESSED® - the language of hops and hoppy beers

Guide for organizing a tasting panel

Hops and flavor stability



**HOPS ACADEMY CUSTOM WORKSHOPS**



# ***FOR OUR GROWERS***

As a grower, you provide the foundations for what all the best beers around the world need. We will tread the path to unique flavors and assured hop quality together with you, sharing our knowledge and experience to establish the best partnerships in the hop business.



## GROWER TRAINING

*EXPAND YOUR GROWING KNOWLEDGE WITH INFORMATION ON THE LATEST TRENDS, SUSTAINABILITY, ECONOMIC AND LEGAL TOPICS.*

### **SUSTAINABILITY**

*Learn all about sustainable production of the raw material hops, in tune with nature, the environment and your budget.*

- BarthHaas Grower Training
- Sustainability in hop production
- Social sustainability

### **ECONOMICS**

*When hops meet economics, it all comes down to planning and efficiency.*

- Hop market (supply, demand, alpha levels, key market trends, etc.)
- Selling (strategies, etc.)
- BarthHaas Grower Portal
- BarthHaas Tool Box
- Production and Profit

### **LEGAL**

*Essential details about hop cultivation, sale and regulations.*

- Hop supply contract and the General Agreements on the Hops Supply Contract (AVHLV)
- Types of contract and additional contracts
- Laws and regulations

### **HOP PRODUCTION**

*Hop production changes as quickly as the market itself. Stay up-to-date with us.*

- Irrigation workshop
- Pest control
- Fertilization (soil analysis, fertilizers)
- Harvest (drying, energy efficiency, etc.)
- Processing, logistics and hop shipping
- Sampling and troubleshooting
- Production methods in hop growing regions in other countries

### **HOP VARIETIES AND BREEDING**

*Be it cultivation methods, origin or aroma: get to know the great variety of hops.*

- Hop breeding
- Beer tasting
- Hop selection

### **HOP PRODUCTS**

*If you have the choice, use your new knowledge to select the correct hop products for every brewing application.*

- Client demands
- Quality assurance in hop production
- PHA and downstream products
- Products for use outside of brewing
- Production plant tours



BarthHaas'  
**HOPS  
ACADEMY**



***WE SHARE KNOWLEDGE & LOVE***



BarthHaas®

# HOPS ACADEMY

## We share knowledge & love

Quench your thirst for information about the potential and creative possibilities of this green gold. At the BarthHaas HOPS ACADEMY, we give inspiration and expertise to everyone who loves this wonderful natural product, hops.