



**YAKIMA CHIEF HOPS™**



# AGED HOPS

## PRODUCT OVERVIEW SHEET

### HISTORY OF LAMBIC BEERS & AGED HOPS

Lambic is a style of beer exclusive to Belgium where it has been brewed in an almost unchanged, rustic method for hundreds of years. This beer style is a living relic of a time when all beer was cooled after boiling in a wide, shallow pan overnight called a coolship (koelschip) and then fermented in wooden casks. Before the discovery of yeast, this process brought the miracle of wild fermentation with the unique character of airborne yeasts and local bacteria, creating a characteristically tart, dry and complex elixir.

Lambic brewers of Belgium traditionally use large quantities of aged hops (surannés) during the brewing process for their antimicrobial and low Alpha acid qualities. This helps to inhibit premature bacteria formation without producing unwanted Alpha bitterness. As the beer ages, the hop compounds drop out of solution and the bacteria can begin their work of souring the beer to make it tart and dry, creating the distinct Lambic flavors and feel.

### THE AGED HOPS PROCESS

Inspired by Belgian traditions, American brewers have sought to reproduce these wild beers, where aged hops are a critical component. When hops are aged, the compounds contained within oxidize and convert largely into other compounds which will provide a different character to the finished beer than properly processed and stored hops. In this way, aged hops provide some of the unique tannins and character of wild ales.

Historically, brewers have acquired aged hops by purchasing forgotten or excess inventory from growers, or they have produced their own. Brewers produce aged hops by placing whole cone hops in burlap sacks and storing them in the warm attics of their breweries for three or more years to reduce hop character and alter the bitterness.

Yakima Chief Hops recognized the need for consistent, quality aged hops with reliable analytics and supply. After years of research and experimentation, YCH created aging chambers, seeking to replicate the environment and conditions of a Belgian “hop loft.” Utilizing temperature and humidity trackers along with enhanced airflows, this process creates a reliable and consistent product that honors tradition while meeting the standards of food safety and good manufacturing processes. The hops are closely monitored to ensure quality and meet aged hop specifications.

### PREMIUM AGED HOPS

While the concept of aged hops is as old as brewing itself, the YCH Aged Hops program combines tradition with innovation. The brewing industry has evolved to require more consistency, quality, and transparency than ever before. With a robust Quality Control team, YCH offers Aged Hops along with reliable Certification of Analysis documentation supported by in-house laboratory testing. Only specific hop varieties are selected for the Aged Hops program, based on their characteristics and aging abilities. YCH's Quality Control department works in tandem with experienced sensory experts from the Technical Solutions team, creating a validated product that brewers can use with surety.

### BREWING APPLICATION

Aged Hops retain the vast majority of their bittering capacity even with a 0.0% Alpha Acid analysis by UV. Combined with the increased solubility of oxidized bittering compounds, Aged Hops perform much like the day they came out of the kiln, in terms of sensory, lab verified bitterness and IBU calculations along with the most critical piece, bacteriostatic effect. If bittering without keeping in mind the original AA% analysis, this will result in a bitter beer that may take longer to sour than expected, or not at all depending on bacterial cultures being utilized. YCH recommends being mindful of both Alpha Acid analysis data from before and after aging, when utilizing Aged Hops.



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CURRENT AVAILABILITY	AGED HOPS PELLETS		AGED HOPS WHOLE LEAF		TYPICAL ANALYSIS ALPHA BY UV SPECTROSCOPY & OIL BY DISTILLATION		
	1 X 5 KG (1 x 11 LB)	4 X 5 KG (4 x 11 LB)	1 X 5 KG (1 x 11 LB)	1 X 22.6 KG (1 x 50 LB)	STARTING ALPHA	CURRENT ALPHA	OIL (mL/g)
AHTANUM® BRAND YCR 1			⊙	⊙	4.0%	< 1%	< 1
BRAMLING CROSS UK			⊙		7.4%	< 1%	< 1
BOBEK SI	⊙				4.0%	< 1%	< 1
CASCADE				⊙	5.6%	< 1%	< 1
CELEIA SI			⊙	⊙	5.75%	< 1%	< 1
CRYSTAL	⊙	⊙			3.4%	< 1%	< 1
HERSBRUCKER SPÄT GR	⊙	⊙			6.0%	< 1%	< 1
NORTHERN BREWER US			⊙	⊙	9.4%	< 1%	< 1
PALISADE® BRAND YCR 4			⊙	⊙	8.0%	< 1%	< 1