

THE WORLD OF HOPS

Beyond Saaz

Whether punching up lagers or adding interest to IPAs, newer Czech hop varieties—little known outside their country—are an overlooked source of distinctive flavors. **By Evan Rail**

FANS OF OLD-WORLD LAGERS can be forgiven for mistakenly thinking that the list of Czech hop cultivars starts and ends with Saaz. The most famous of the Continent's four Noble hop varieties, Saaz plays a key role in storied beers from Plzeň to Leuven, hailed by brewers across Europe for a millennium or more and considered a key part of the traditional Czech flavor profile.

Even today, the legendary cultivar that locals call *žatecký poloraný červeňák*, or ŽPC, represents about 82 percent of the Czech Republic's total hop acreage. (And "legendary" is hardly an exaggeration: Holy Roman Emperor Charles IV is said to have banned the export of Bohemian hop rhizomes—under penalty of death—sometime in the 14th century.)

Yet if Saaz represents the Czech Republic's hop-growing history, the other 18 percent just might be its future. The country's significant hop industry—the world's third-largest, by acreage—currently includes 28 registered varieties of *chmel*. Almost all of those are Saaz descendants, which often showcase some of its characteristics as well as compelling qualities of their own.

From unusual decoction schedules to open fermentation, long lagering, heirloom barleys, and floor malting, the Czechs are infamous for an array of brewing tricks. According to Zdeněk Rosa, chairman of the Hop Growers Union of the Czech Republic, those 27 other hop

cultivars are among those tricks, despite flying under the radar internationally.

"Even though we've got Sládek, Premiant, Agnus, and other great varieties," he says, "in a lot of other countries, they still associate the Czech Republic only with Saaz."

That may be the case in general, but among those who know Czech beer, those other cultivars can be important players. Because of Saaz's low alpha acids (typically 2.5 to 4.5 percent) and relatively high price, many Czech brewers reserve it for later aroma additions. Instead, for bittering, they employ the more efficient Saaz-descended cultivars Sládek (5 to 7 percent alpha acids), Premiant (7 to 10 percent), and Agnus (9 to 12 percent). Sometimes, they even skip Saaz entirely.

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“I wanted to prove that we could use all Czech hops that people have never heard of ... and show that you could get that flavor without using your typical American hops.”

At Sacred Profane in Biddeford, Maine, head brewer Brienne Allan takes that approach with her Czech-inspired lagers, generally sticking with Sládek throughout the process.

“Personally, I don’t really like working with Saaz,” she says. In part, that has to do with the wide variations she’s found among Saaz lots, which can swing from spicy and cedary to floral and citrusy. “They are so dramatically different. It’s hard to get a consistent flavor.”

Of course, Sládek can have its own variations, too. But it has another big plus: It doesn’t taste like everyone else’s idea of a *světlý ležák*. “Sládek is so much more citrusy and unique,” Allan says. “I really hate the idea that everyone thinks that a Czech pale lager has to be so rigid.”

Those preconceptions might be firm outside the country, but Sládek has been a go-to for Czech brewers since becoming a registered cultivar in 1994. Its popularity is growing—a 10 percent increase in acreage last year put it in second place by a country mile, making up almost 13 percent of the total Czech hop production in 2024.

When you get to third and fourth place, however, the figures get smaller fast: Premiant makes up about 5.4 percent of the total Czech hop crop, while Agnus accounts for just 1.8 percent—and, at that point, you’ve still got 24 officially registered Czech hop cultivars to go.

Overlooked Flavors

Many of those other 24 cultivars are variations on classic Saaz but bred for higher yields, greater disease resistance, and the ability to cope with the changing climate conditions that have hit landrace hops particularly hard in recent years.

Development takes place at the Hop Research Institute in Žatec, the ancient city once widely known by its German name: Saaz. There, soaring brick chimneys of old hop kilns still pierce the skyline, and historic mansions and grandiose villas testify to the immense wealth created during the 19th-century lager boom.

When you have a plant that defines its region the way Saaz does Žatec, you quickly see the benefit of having crops

that ripen at different times—such as Saaz Late, registered as an official cultivar in 2010. Otherwise, you’d have roughly one week a year when there is way too much work for farmers and processors, and suddenly way too many tractors, trucks, and harvesters on the roads for locals.

Even among the cultivars that are meant to imitate Saaz, it’s possible to find differences. Rosa says that two of the best new varieties for heat- and drought-resistance—Saaz Shine (2 to 5 percent alpha acids) and Saaz Comfort (4 to 7 percent)—each have their own character.

“Both varieties are very close to Saaz and descend from Saaz, but Saaz Shine has more floral notes, and Saaz Comfort has more bitter notes,” he says.

If the Planets Align...

Other new Czech hops go even further, including a drought-resistant line of flavor hops named after planetary bodies.

Just north of Prague, at Pivovar Chroust—a well-regarded brewery known

for its hop-forward ales—brewer Karolína Chroustovská says she was struck by the unusual fruitiness of Juno (4.5 to 6 percent alpha acids) and Eris (6 to 8.5 percent) when she recently used them to dry hop her hazy Union Czech IPA.

“I was pretty surprised how amazing the beer turned out,” she says. “[Juno and Eris] are very sweet, like berries, with a lot of floral notes, lemon zest, and mandarin zest. But they are very delicate, so in my experience, I prefer them in very light beers.”

For now, the Czech planetary lineup is more obscure than the band on a hipster’s T-shirt. The most widely planted, Saturn (6 to 8.5 percent alpha acids), covered just 0.014 percent of the country’s total hop acreage in 2024. (If you happen to come across Juno, Ceres, or Eris in person, buy a lottery ticket.)

While those numbers should increase in the next few years, Rosa acknowledges that the global market for flavor is already “overcrowded.” As such, those cultivars’ success and availability are far from guaranteed.

Bohemian Aromatherapy

What has seen clear success is Kazbek (5 to 8 percent alpha acids), created when the Hop Research Institute crossed traditional Saaz with a wild Russian hop from its collection—an origin story not unlike the Fuggle-Serebrianka liaison that produced Cascade, to which Kazbek is sometimes compared.

Officially registered in 2008, Kazbek is now the country’s seventh-most planted cultivar—though it still makes up only 0.7

Kazbek hops on a sample table in Žatec



PHOTO: JAMIE BOGNER

percent of total Czech hop production. Only 47 metric tons (about 52 U.S. tons) of it hit the market in 2024.

Despite the small numbers, Kazbek has found an audience both at home and abroad. Since 2019, Czech brewers compete in the annual Kazbek Cup, a style-agnostic spring competition with only two basic rules: Use at least 50 percent Kazbek on the hot side and use only Czech varieties on the cold side.

Because of its Old World connection, brewers outside the Czech lands often use Kazbek in bottom-fermented beers. At Olfactory Brewing in San Francisco, brewer Phil Emerson highlights Kazbek in their dark lager, The Lamp Industry is Booming During These Dark Days.

"We love it," he says. "It's like Saaz, but more citrusy, in my mind."

A fan of mash hopping, Emerson says he adds 11 pounds (5 kilos) of Kazbek to about 661 pounds (300 kilos) of grain—about half as much Saaz as he typically adds to the mash. He compares the experience to aromatherapy and says it leads to a complex, richly malty lager with layers of flavors. "It just smells great—the whole experience is lovely," he says. "It's a slight citrus note on this very silky, chocolate, ever-so-roasty dark lager."

While lagers seem like a natural fit, it's worth noting that the Kazbek Cup has two categories: bottom-fermented *and* top-fermented, with new-school Czech brewers regularly using Kazbek in their IPAs. Besides Juno and Eris on the cold side, Chroustovská used Kazbek for the kettle additions in Chroust's Union Czech IPA.

"It's spicy, raw, herbal, piney, green," she says. "It's like a forest, basically."

At Sacred Profane, Allan used Kazbek to dry hop a collab with Prague's Dva Kohouti. Both breweries made the bottom-fermented beer for their own markets, and Dva Kohouti labeled theirs as an IPL. Sacred Profane labeled its version as an "IPA" because of its flavor profile.

"It was definitely a lager, but it tasted exactly like your favorite West Coast IPA," Allan says. "I wanted to prove that we could use all Czech hops that people have never heard of ... and show that you could get that flavor without using your typical American hops."

High-alpha Agnus in the kettle gave the beer plenty of bitterness, while dry hopping with Kazbek added significant piney and resinous notes despite using just 11 pounds (5 kilos) in a 15-barrel batch. Allan says a few brewers had trouble believing that Czech hops could be solely responsible for what they were tasting.

That's practically the stuff of legends. (At press time, there were no threats from any emperors.)

PHOTO: COURTESY SACRED PROFANE

MAKE IT

Sacred Profane IPA

Lager specialists Brienne Allan and Michael Fava at Sacred Profane in Biddeford, Maine, regularly brew iterations of this hop-forward in collaboration with Prague's Dva Kohouti. A decocted lager with expressive Czech aroma hops, it nonetheless drinks like an IPA—so that's what they call it.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.065 (16°P)

FG: 1.019 (4.7°P)

IBUs: 50

ABV: 6%

MALT/GRAIN BILL

9.25 lb (4.2 kg) Bohemian floor-malted pilsner

2.5 lb (1.1 kg) Munich I

8 oz (227 g) Weyermann Carafoam

HOPS SCHEDULE

0.4 oz (11 g) Agnus at first wort [15 IBUs]

0.85 oz (24 g) Agnus at 15 minutes [20 IBUs]

1.3 oz (37 g) Agnus at whirlpool [15 IBUs]

2.6 oz (74 g) Kazbek at dry hop

YEAST

Any relatively low-attenuating Czech lager yeast, such as Wyeast 2278 Czech Pils

DIRECTIONS

Mill the grains, mash in at 144°F (62°C), and rest 10 minutes. Prepare for a double decoction: Move about one-third of the mash to a separate kettle, raise it to about 160°F (71°C), then bring it to a boil and boil for 20 minutes. Reunite with the main mash to bring it to about 163°F (73°C) and rest 10 minutes. Again, remove about one-third of the mash to a separate kettle and boil it for 20 minutes. Reunite with the main mash to bring it to about 169°F (76°C), then mash out. Recirculate until the runnings are clear, then run off into the kettle, adding the first-wort hops. Sparge and top up as needed to get about 6.5 gallons (25 liters) of wort, depending on your evaporation rate. Boil for 75 minutes, adding hops according to the schedule. After the boil, do a whirlpool step: Stir or recirculate to create a vortex, add the whirlpool hops, spin for 10 more minutes, then allow 15 minutes to steep and settle. Chill to about 52°F (11°C), aerate the wort, and pitch the yeast.

Ferment at 54°F (12°C). At first, don't ferment under pressure—leave the valve open. (If using a carboy or similar vessel, loosely cover the top with a piece of sanitized foil.) Once the gravity has dropped to about 1.040 (10°P), add the airlock; once it's dropped to about 1.024 (6°P), seal the tank (and add a spunding valve, if you have one) and add the dry hops. Once fermentation is complete, gravity has stabilized, and the beer has passed a VDK test (see "Hunting for Diacetyl," beerandbrewing.com), gradually drop the temperature over 8 days (2°F/1°C per day) to 40°F (4°C). Hold there for a week, then crash to 32°F (0°C) and transfer to a lagering vessel. Lager for 3–4 weeks, or it until it tastes great, then package and serve.

BREWER'S NOTES

pH: We adjust the mash to 5.2 pH.

Yeast: Any good Czech lager yeast is fine—something low-diacetyl, low-attenuation, high-flocculation.

