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American IPA, and more!

Farmhouse Cider Embracing the F-Word

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American IPA Remastered,
Building Character in Hazy IPA,
Developing Your Hop Sense,
21st Century IPAs with 20th
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121 IPA Reviews:
Hazy, West Coast,
Black, Session,
Fruited & Imperial





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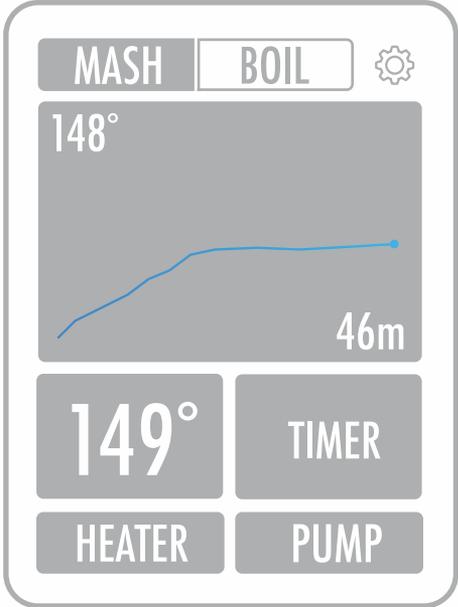


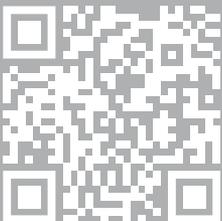
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“The early movement in American IPA was ‘100 percent brewer-driven. The consumers weren’t asking for hops. That was just brewers making what we wanted to drink. And then, in time, consumers picked up on it, and off it went.”

SOME LINES FROM STORIES JUST STICK WITH ME. The one above—from Vinnie Cilurzo, as quoted by Joe Stange in his feature on the evolution of American IPA—feels particularly poignant now as craft beer retrenches and figures out its next move. The actual numbers don’t look as bad as things may feel right now, going by 2023 volume as tracked by Bart Watson of the Brewer’s Association; it’s off only 1 percent from the previous year, and brewery closures are only up a point or so over the historical average. Yet what we’re feeling now is something like that pre-millennial tension. We know a big shift is afoot, we’re not entirely sure what the impacts will look like in the coming years, and that uncertainty



is driving an outsized amount of soul-searching among brewers and those running brewing businesses today.

In some ways, we’re our own worst enemies. It’s easy to seek out scapegoats, and in many conversations with brewers or longtime enthusiasts, you’d easily get the idea that every new trend has precipitated the end of craft beer—barrel-aged dessert beers, hazy IPAs, kettle sours, and now even lager. But those critiques lose sight of the prime driving force behind every new beer trend—brewers. Breweries where the marketing department is calling all the shots are rare. What we see are brewers driven by the need to experiment and to make beers for themselves and the people around them. Every day, we talk to brewers intrigued by the potential in flavor and process, and that curiosity drives them to take risks and find the edges of what’s possible.

That, to me, is the true essence of craft, and it’s rooted in the creative community of brewers—including all the ones doing it at home. It’s in the nature of creative people to never be satisfied with what they create—that’s what drives us to keep working at it, to keep honing our craft—but we should never confuse this dissatisfaction with failure or finality. As long as brewers keep brewing for themselves, drinkers will continue to find the beer.

I may joke about it, but over many years of tasting and writing about beer, I’ve become more and more attuned to tasting the love in it. It’s also evident when beer is being brewed to hit some marketing or sales goal, or when a CFO has more say in the recipe than the head brewer. Those circumstances will exist in anything that goes from “passion” to “industry,” but their mere existence doesn’t negate the bigger reality—that the creative soul of craft beer is being driven by brewers, making beer for themselves that they also want to share with others. That’s the way it has been, and that’s the way it should be.

As you read this issue, I hope you get a sense for the passion and drive that pushes brewers to create these beers for themselves, for other brewers, and for fellow beer lovers. Because, once again, we made it for you.

Jamie Bogner

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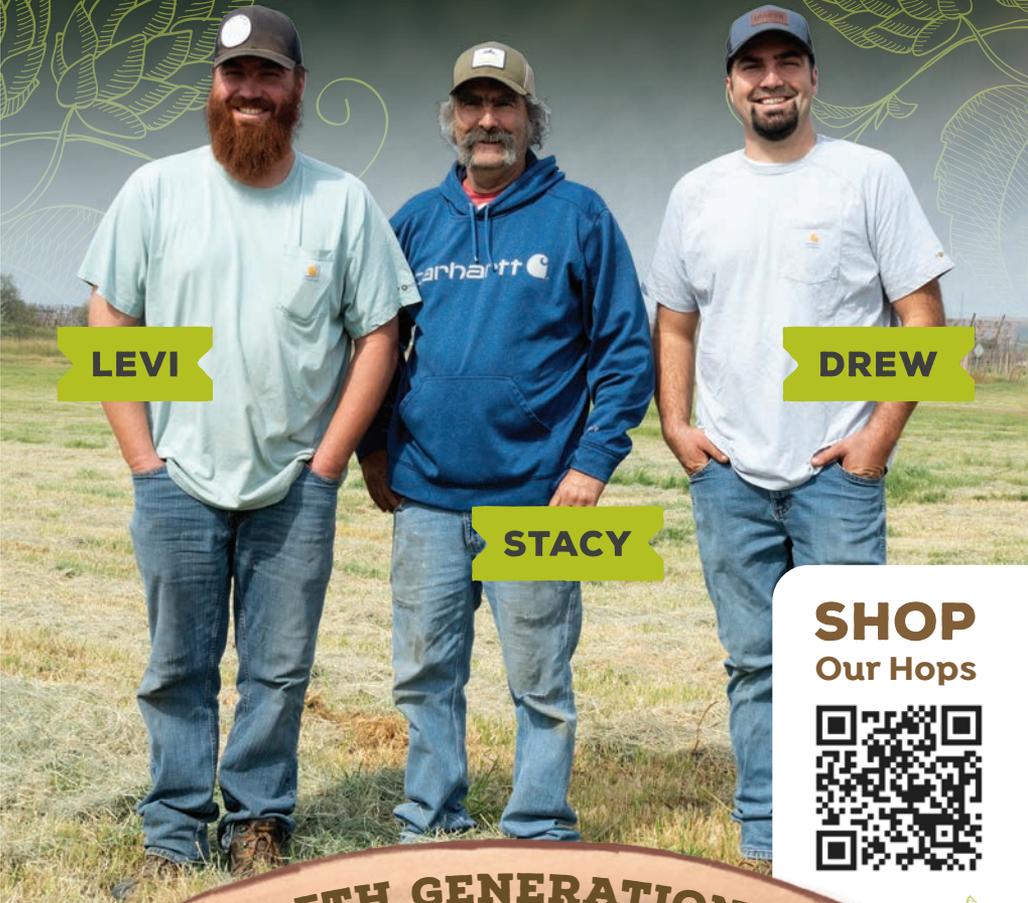
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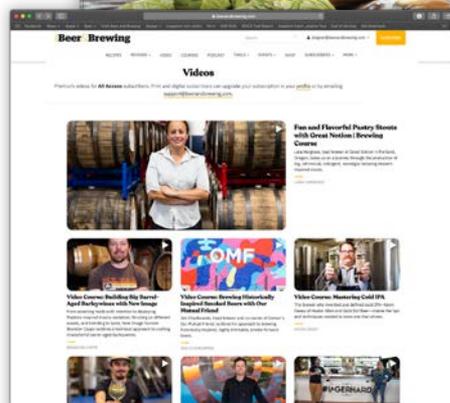
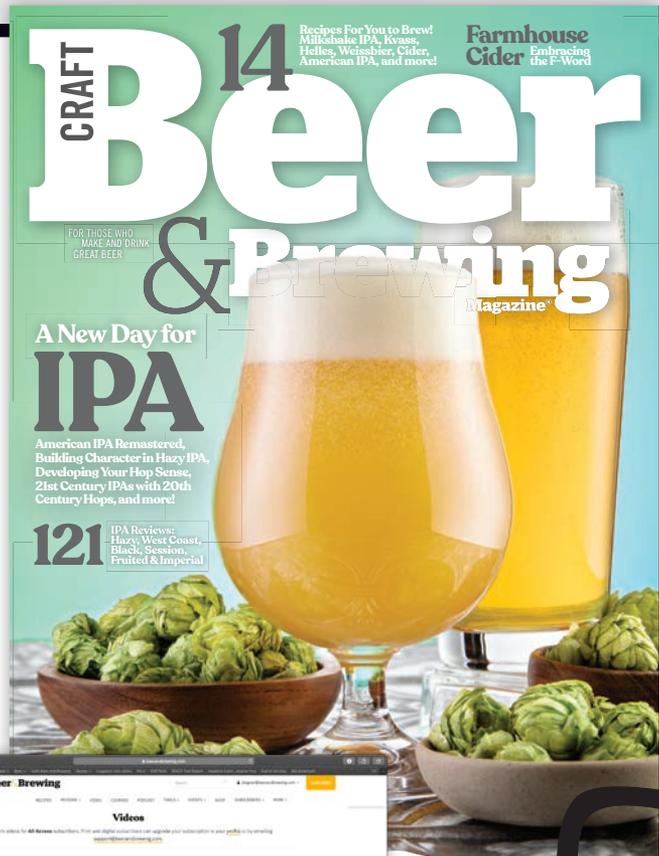
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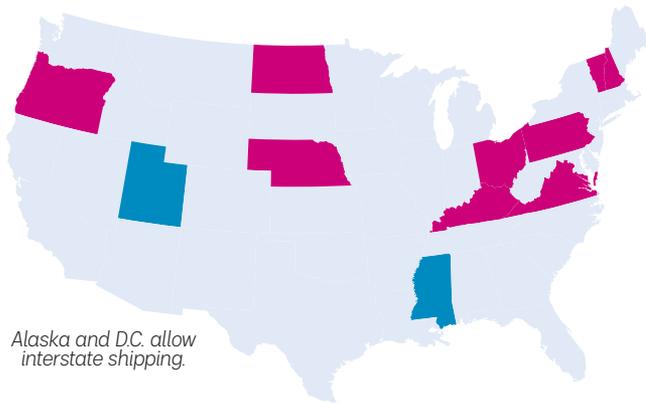
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Shipment Status Pending

The double standard around shipping alcohol across state lines continues unabated in 2024, as breweries have yet to find parity with wineries in regard to state laws that limit interstate shipments. Could 2024 finally be the year that Congress changes the antiquated law prohibiting the U.S. Postal Service from delivering alcohol to adults? A new report from SOVOS ShipCompliant sheds light on the gap between consumer wishes and state and federal policy.

States that Allow Brewery-Direct Shipments



Alaska and D.C. allow interstate shipping.

- Interstate shipments permitted
- Interstate shipments not permitted
- DTC shipments prohibited even in-state

"Each state that permits interstate DTC beer shipping maintains its own varying rules governing the practice. As of March 2024, the only states that provide clear, statutory authority for brewers to legally solicit and fulfill sales remotely and across state borders are Alaska, Kentucky, Nebraska, New Hampshire, North Dakota, Ohio, Oregon, Vermont, and Virginia, as well as the District of Columbia."

States that Allow Winery-Direct Shipments



Alaska, D.C., and Hawaii also allow shipping.
Source: [wineinstitute.org/our-work/compliance/dtc](https://www.wineinstitute.org/our-work/compliance/dtc)

- Open but limited
- Open with permit
- Prohibited

77%

of regular craft-beer drinkers say they would increase purchasing if DTC shipping were legally available.

83%

of regular craft-beer drinkers would be likely to purchase more frequently from a brewery that had the option for customers to purchase beer via DTC shipping.

85%

of regular craft-beer drinkers believe current beer shipping laws in the United States should be updated to make it legal to ship beer direct-to-consumer in more states than the 12 U.S. locales where it is currently allowed.

Source: 2024 Direct-to-Consumer Beer Shipping Report. Download the full report at dctbeerreport.com

Editors' Picks

Fresh Finds From CBC

The Craft Brewers Conference always provides a glimpse of where brewing is going. These finds from the trade-show floor have us excited about what's next.



Abstrax Hop Terpenes and Extracts.

Hop extract and terpene technology continues to make leaps year after year, and Abstrax, which first made its name in the cannabis world, is helping to lead that charge. We've played with terpene additions and dosing in beers before, and we've tasted along as brewers have tested terpene blends—including hop-derived, cannabis-derived, and those derived from non-hop natural sources—in their own beers. Still, it's always felt like a technology in progress. This year, the tech has taken bigger leaps. Abstrax is not only offering highly soluble and incredibly efficient terpene extracts—priced below actual hops for equivalent dosage—but they're also offering opportunities for professional brewers to map out the flavors and aromas of their favorite selected hops and “bank” that profile, which could then be re-created via terpenes in the future. Wish you had some of last year's Mosaic? Now you can order up a reasonable facsimile whenever you need it. Or, if you'd like to get more bang for the bucks you spend on hops, send your pellets their way, and they'll get five times as much dosage in soluble extract as you'd get from dry hopping with the pellets themselves. We're not ready to say this is the future of hoppy brewing, but the possibilities are intriguing, and every brewer should be paying attention.

YCH DynaBoost. Yakima Chief Hops' 702 Trial now has its own brand name, DynaBoost, and this new product in the flowable, cold-side addition space provides

a unique way to pack more hop saturation into dry-hopped beer. Dry hopping with pellets—even those that have been cryogenically concentrated—means physical matter in your beer that can drag hop compounds back out of solution. Flowable liquids such as DynaBoost have no such limitations, so if your goal is to melt faces with a dry-hop equivalent of 10-pounds-per-barrel in a triple IPA, they're an efficient way to get there. More interesting, however, is how the processing can soften some of the harsher edges in hops themselves. We tried a test brew from San Diego's North Park featuring Nelson Sauvin DynaBoost, and that West Coast lager expressed the softest character for that hop we've tasted, with all the gorgeous gooseberry and vinous notes but almost none of the sharper, white-floral edge.

Haas HopKick & Euphorics.

Brewers have been telling us their Haas HopKick stories, as it's a particularly effective way to make hop water. The soluble extracts definitely give Abstrax a run for their money in the quality department, and now Haas is leaning in and growing the range with Euphorics—blends of hops and botanicals that do a bang-up job of creating fruit flavors and aromas without the fruit itself. The flavors are uncanny, with a touch of herbal-hop depth and huge fruit notes that deliver as promised. If you're looking for a single-hop variety, then HopKick may be your go-to. Or, if you're looking for all the flavor in one existing blend, Euphorics has you covered with flavors such as Peachy Keen and Cosmic Guava.

PHOTOS: JAMIE BOGNER

The Rundown

The latest events, podcasts, and more from the *Craft Beer & Brewing Magazine*® team

Berkeley Yeast. It feels a bit like mad science at Berkeley Yeast, with a constant stream of genre-bending strain releases that may force you to rethink everything you thought you knew about how fermentations work. A Chico strain that produces stable haze? Check. A Chico that produces lactic acid, finishes at a palate-pleasing 3.5 pH, and is repitchable for a handful of generations? Check. Lager and ale strains that don't produce acetolactate, the precursor to diacetyl? Check. The innovation gene at Berkeley is switched on, and we can't wait to see what brewers do with more of these tools in their toolboxes.

Hopsteiner's focus on sustainability.

The carbon footprint of specific hop varieties may not be the sexiest subject in brewing, but the sustainability of hops agronomics is something that deserves more attention. Kudos to Hopsteiner for bringing focus to the issue, with bold graphics showing just how inefficient some older, beloved hops really are, and how much better some newer varieties are. Hops that yield more per acre, require far less fertilizer, produce more oil per cone, and need less irrigation are every bit as important to the future of beer as the hottest new aromas and flavors. —J.B.



Upcoming Craft Beer & Brewing Events and Dates to Know

Sign up at newsletter.beerandbrewing.com for timely updates.

- Aug 17** All new in 2024, it's the summer edition of the **Minnesota Craft Beer Fest**, out in the sunshine at CHS Field in St. Paul. Enjoy an inclusive, craft-centric experience with some of the best brewers from Minnesota and across the country. Get tickets at minnesotacraftbeerfestival.com.
- Sept 3–6** Submission week for the *Craft Beer & Brewing Magazine*® annual **Best in Beer** issue!
- Sept 24–27** Launching a brewery or distillery? The **New Brewery & Distillery Workshop** will help you build a successful business from the ground up. Learn through panel Q&As, technical tours, hands-on demonstrations, and working sessions. Learn more at breweryworkshop.com.
- Oct 27–30** The **Brewer's Retreat** returns in 2024 for what promises to be a unique and memorable event on the East Coast. Don't miss what we colloquially refer to as "fantasy homebrew camp." For upcoming details and ticket sales, keep an eye on brewersretreat.com.

The Latest from the Craft Beer & Brewing Podcast



- Ep.343** Natalie Rose Baldwin of Wayfinder Paints Hoppy Pictures with a Broad Palette
- Ep.344** Marble's Josh Trujillo Finds Success at the Intersection of Hops and Lager
- Ep.345** Arizona Wilderness Explores Terroir Through Mobile Coolships, Regenerative Local Grain, and More
- Ep.346** 12 West Finds Success in Simplicity with West Coast Pils and IPA
- Ep.347** Preston Theory of Wren House Embraces Change as a Constant and Flavor over Style
- Ep.348** Keys to Successful Beer Fermentation with White Labs, Russian River, and Beachwood
- Ep.349** Ryan Speyrer of Parish is Building the Future of Hazy IPA on a Foundation of Classic Hops
- Ep.350** Kelly McKnight of New Belgium Highlights the R&D Behind Some of Craft's Biggest Beers
- Ep.351** The Big Friendly Takes a Down-to-Earth Approach to Award-Winning Saisons and Barrel-Aged Stouts
- Ep.352** Chris Lohring of Notch Wants You to Brew More Distinctive Lager
- Ep.353** Viva Las Vegas! Able Baker's Matt Marino Goes All-In on Modern West Coast-Style IPA
- Ep.354** No Limits! Dave Pascual of Big Dogs Plays His Medal-Winning Cards Close to the Vest
- Ep.355** RipeLocker Enables a Fresh Approach to Brewing with Wet Hops

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Whalez, Bro.

By Ansis Puriņš



The Brewer's Library: Quick Hits on New Beery Reads

Modern Lager Beer

By Jack Hendler & Joe Connolly, Brewers Publications, \$24.99

What it is: From some of the oldest traditions and techniques to newfangled ways to use lager yeast in hop-forward beers, this is a wide-ranging guide from the founder and the sales director at Jack's Abby in Massachusetts. At times it dives deep and gets academic, as with the examination of the debates about decoctions, zooming in on numerous mash regimes and aspects such as malt modification, cereal mashes, and hot-side aeration. While giving more space to traditional German and Czech approaches, the book also considers American adjunct-lager brewing and

new directions in hop-forward beers. Another selling point: It includes 60 pages of recipes contributed by some of the most respected lager brewers in Europe and North America. **Who it's for:** Whether brewing professionally or at home, longtime lager enthusiasts will still find plenty of new things to learn in this book, which also serves as a handy reference on a number of technical topics. However, those who will benefit the most are brewers who are most comfortable making ales but want to take their lager game to the next level, backing up the what-to-do with plenty of how and why. —J.S.

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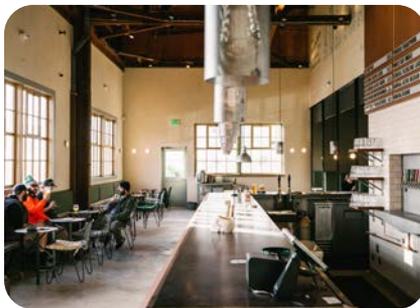
Auckland, New Zealand

Free house featuring the best beers from all over New Zealand

What it is: In this country known for its remoteness, hops, and breweries, visiting them all would be impossible because of the distances between them. Meanwhile, New Zealand's pubs follow a British-style system of tied and free houses—and only in the latter can you experience beer from many different breweries under one roof. One of the finest you'll find is 16 Tun, found among the fishmongers at the port in Auckland's Wynyard Quarter.

Why it's great: Between the 19 taps, (including one nitro) and more than 100 bottles and cans, there's plenty to give you a sampling from across the country—and to keep you coming back for multiple visits. Their eight-beer tasting flight is so heavy it comes in a wooden crate with a handle. Just a minute from the waterfront and a block from Auckland Fish Market, their kitchen offers fish and chips, fish burgers, and smashburgers made from local beef. Large tables indoors and out provide comfortable places to sit with friends no matter the weather. Knowledgeable staff are ready with tasting notes about the beers and information on the breweries from whence they come, no matter how distant. —*Alexander Gates*

Hours: 11:30 a.m.–late, daily
Address: 10-26 Jellicoe St., Auckland, New Zealand
Web: 16tun.co.nz
IG: @16tun



The Rake

Alameda, California

A celebration of malt

What it is: The Rake is the taproom and barbecue smokehouse of Admiral Maltings, a craft malthouse. It features 22 taps, including cask ales on beer engine, from breweries in California and beyond—but they all feature craft malt. The Rake supports Admiral's fellow craft maltsters, so the beers might be made from grains malted on Admiral's own floors, or they might come from another craft maltster. In keeping with the theme, the Rake also features an extensive spirits list—again, all made with craft malt.

Why it's great: Love malt? Here is where beer lovers can see and smell the raw materials while drinking the beautiful things made with them. The beer list names the brewery, the malt, and the malthouse behind each beer. Huge windows overlook Admiral's three malting floors, inviting guests to ask questions about where their beer comes from, but the Rake also boasts a large, sunny outdoor space. It's a great place to enjoy beer, spirits, cocktails, and barbecue, inside and out, all while appreciating the craft behind the craft. —*Don Tse*

Hours: noon–7 p.m., Monday; noon–8 p.m., Tuesday–Thursday; noon–9 p.m., Friday; 11:30 a.m.–9 p.m., Saturday; 11:30 a.m.–7 p.m., Sunday
Address: 651A W. Tower Ave., Alameda, California
Web: therake.admiralmaltings.com



Bungalow

Kyoto, Japan

Taproom meets izakaya in the cultural capital

What it is: For Western tourists who need a bigger challenge than Japanese craft-beer bars that feel more like Kansas than Kansai, this neighborhood barroom in central Kyoto is the answer. Smartly dressed working people flock to izakayas—typical Japanese pubs—at happy hour, and Bungalow is no different in that regard. What makes it stand out is the beer—instead of Asahi or Sapporo, its 10 taps pour craft from several of the country's smaller and more interesting breweries—plus the food, featuring a selection of small plates that nobody will mistake for American pub grub.

Why it's great: The Japanese love beer, but their craft taprooms often emulate experiences from North America or Europe (albeit with their own refined, quirky spin). Bungalow, on the other hand, doesn't pretend to be anything but a Kyoto locals' pub that just happens to have an exceptional beer selection and tasty, seafood-centric nibbles. Maybe it's a pair of huge tempura-fried oysters with an oyster stout from Hokkaido's Brasserie Knot, or maybe it's grilled octopus skewers with a hoppy light lager from Yorocco Beer in Kamakura ... but be warned: The chalkboard menus are almost entirely in Japanese, so study up, prep your translator app—or ask a local. —*Joe Stange*

Hours: 3–10 p.m., Monday–Friday; noon–10 p.m., Saturday & Sunday
Address: 15 Kashiwaya-Cho, Shimogyo-Ku, Kyoto, Japan
Web: bungalow.jp
IG: @bungalow_kyoto

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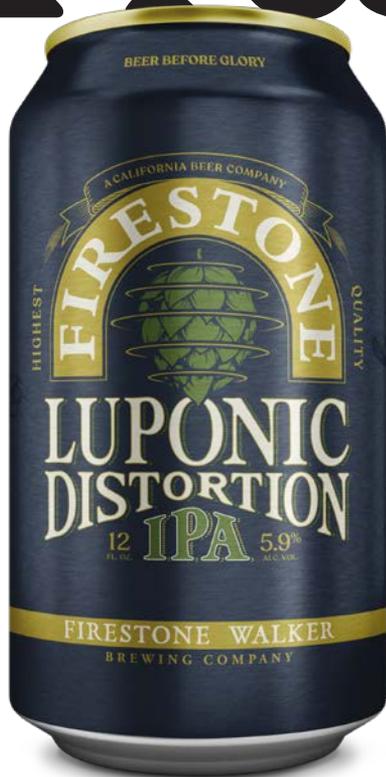


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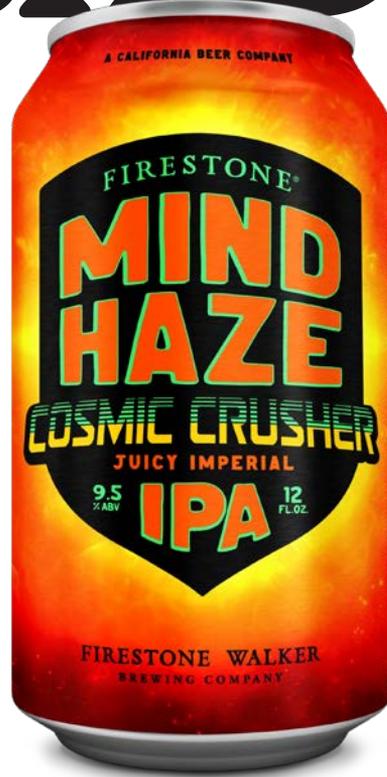
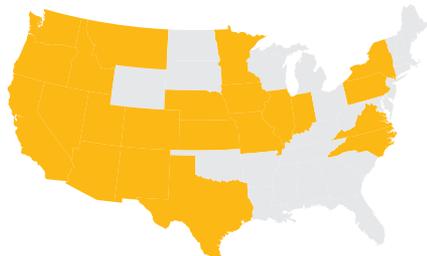
Fresh Beers



Firestone Walker Luponik Distortion IPA | 5.9%

Luponik Distortion is the Firestone Walker trailblazer that continues to break the rules, back for the first time since 2021. The classic Luponik Distortion base recipe returns with an all-new hop blend to deliver a fresh blast from the past. Brewed with a secret blend of new-age hops, the 2024 edition of Luponik Distortion turns up the volume with mind-bending flavors of lychee, peach, nectarine, and strawberry. Available exclusively in the Beer Before Glory IPA Mixed Pack.

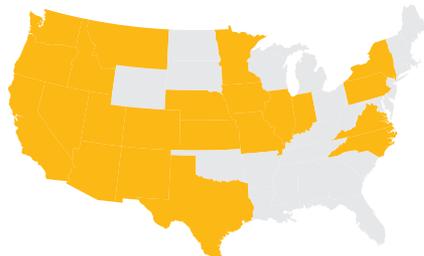
firestonewalker.com/beer/luponik-distortion-ipa



Firestone Walker Cosmic Crusher Juicy Imperial IPA | 9.5%

Out-of-this-world flavor that packs a punch—take a journey with Cosmic Crusher. “Cosmic Crusher is our crazy adventure into the realm of imperial juicy IPAs,” says brewmaster Matt Brynildson. Cosmic Crusher is built around two ultra-tropical hops—Galaxy and Strata. The result is a level of flavor, aroma, and mouthfeel that can only materialize at high strength, crossing the line into a whole new cosmos of punchy mango and pineapple character. SKUs available: 12 oz six-pack cans, 19.2 oz single serve, and Mind Haze Variety Pack.

firestonewalker.com/beer/mind-haze-cosmic-crusher



Sierra Nevada Cosmic Little Thing Hazy Double IPA | 8%

For the latest in the Hazy IPA series, ride Sierra Nevada's interstellar wave of tropical flavor in this Cosmic Little Thing, a hazy nebula glowing with Comet, Strata, and Helios hops for notes of citrus, berries, and lychee. Head into orbit with this 8 percent ABV hazy double IPA before the next Hazy IPA rotator hits. Look for Cosmic Little Thing in six-packs and 19.2 oz singles.

sierranevada.com/brews/cosmic-little-thing



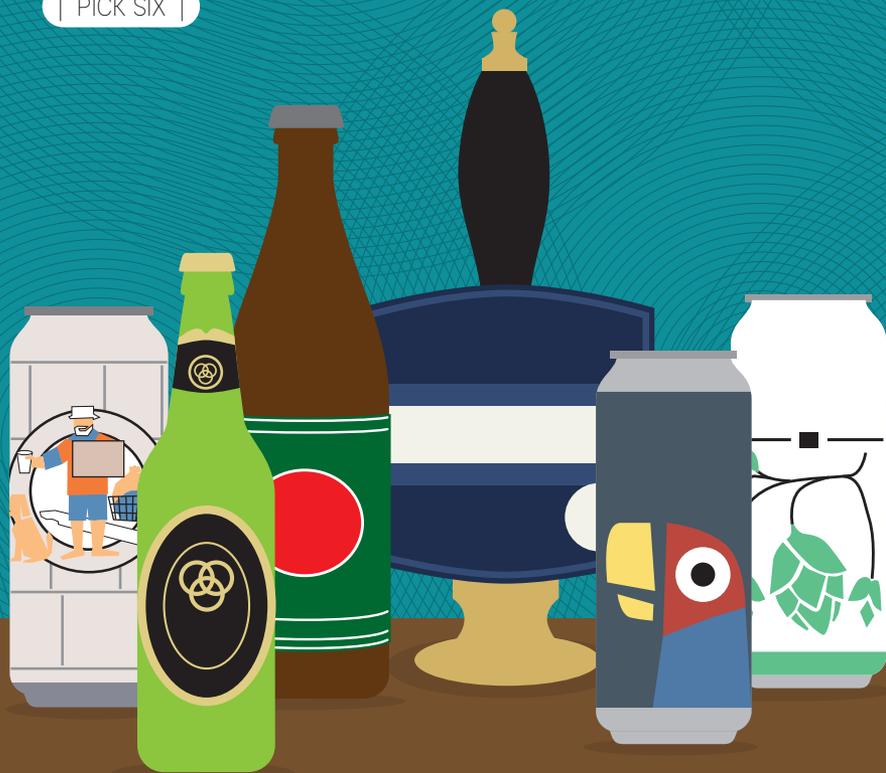


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PICK SIX

Kelsey McNair's IPA Time Machine

North Park founder Kelsey McNair has become one of the country's most influential brewers, thanks to his process-oriented approach to saturating beer with hop flavors while maintaining drinkability. Here, he goes back in time to different eras for a sixer of IPAs that still inform how he brews them today. **As told to Jamie Bogner**

THE EVOLUTION OF IPA in the United States is partly shaped by consumer demand, but it's also been supercharged by new hop varieties and products developed by breeders, growers, and hop companies. And that evolution also reflects innovations in how American brewers have tackled the style—especially as they've learned more from each other about how to squeeze the most from those hops.

Kelsey McNair, founder and head brewer at North Park Beer in San Diego, is a locus in that evolution—a longtime sponge of brewing knowhow, freely sharing his own award-winning methods with others. For his chosen six-pack, he's opted to pick IPAs from different eras that all had an influence on how he brews them today—"whether it was the information that I took in without even having an actual touchpoint," he says,

"to just experiencing and thinking about the pieces and parts of what I wanted to do, and to continue to evolve."

Ballantine IPA Newark, New Jersey/Milwaukee

"The first beer is a beer that I've never had. In my early homebrew research phase, when I was scouring the Internet for whatever I could find—we're talking early 2000s—it seemed that there was a sort of predecessor to a lot of what modern IPAs were. All signs pointed to that beer, as if it was so much hoppier, and more in tune ... Maybe not as much crystal malt as we might have found as a trend through the mid-'00s, but it was interesting.

"I was so infatuated with the history of this beer, and I got it wrong out of the gate. I was like, 'Oh, they aged it in wood casks.

So, there must be an oak-aged element to what made Ballantine a special beer.' But, no, those casks were pitched, so there was no wood contact—it was just a conditioning vessel. It was, I believe, hopped with Bullion. At one point, I was trying to find good-quality Bullion, just to see if it was worth the chase. I was so obsessed, my wife [Amanda McNair], girlfriend then, bought me a taphandle of Ballantine IPA as a gift. It's just a nostalgic thing that I never got to try in its actual form.

"I did get to try it when it was re-released by Pabst, at GABF. But the hop schedule, based on the hops used, didn't align with what the original recipe was. So, I didn't feel like I was getting the true interpretation of what that beer might have been. On the BeerAdvocate forums, back in early 2000s, there were always reference points—'Oh, I used to drink Ballantine IPA.' 'My dad drank Ballantine IPA.' It's like there was layer on layer of people who had some connection to this beer and loved it ... and then it just disappeared. I never quite figured out what it was supposed to be, other than just reading the history of it. It had some guidelines to it that seemed interesting and became a theoretical chase."

Russian River Pliny the Elder Windsor, California

"This is an easy one. This was sort of in my learning-how-to-brew phase—going all-grain brewing, infatuated with West Coast IPA. Pliny started to show up on tap at O'Briens in San Diego, so it was somewhat available. I emailed Vinnie [Cilurzo] and asked if there was some way that I could get a keg of Pliny for my house and have on tap on my kegerator. And he said, 'No,' but then chased it with, 'Well, there is this self-distributor, O'Shea's homebrew supply, that works with Stone. They do get our beer from time to time. Maybe if you call them on the right day, they'll have a keg.'

"And, sure enough, I called them the next day when I got up. 'Do you guys have a keg of Pliny?'

"Yes, we do."

"Save it for me. I'll be right there.' Took an extra-long lunch break at work, drove up there, grabbed this keg, took it to my house, dropped it off, went back to work. And that sat on tap at my house for about a month, where my roommates and I enjoyed it—I brewed three consecutive double IPAs while this was going on. I loved the balance

of that beer. Just its form, even at that time, was something that was so very different and a cut above anything else that you could get. I thought it was perfection in a double IPA, and that was my favorite style at the time.”

Caledonian Deuchars IPA **Edinburgh, Scotland**

“I’ve only been to Europe once, and that was in 2005. I bounced around to several countries, was there for a friend’s wedding in Sweden. But on one of our stops, we went to Scotland. We were in Edinburgh. I had heard of this beer—which I learned was pronounced differently. It reads, ‘du-CARS,’ but it’s pronounced by the Scots, ‘JU-kers.’ At this point in time, [it was] usually found ubiquitously on a handpump in virtually any bar that you went into that had more than Stella or Guinness or some more macro beers.

“The first pull I had of it—it’s like 4.2 or 4.3 percent—must have been a fresh cask because it was just popping with so much vibrant, bright citrus-lemon. It was so easy to drink and crushable. That kind of framed my mind that there was this style of beer that didn’t really exist in the States—but needed to.

“I got to brew a beer with Stone after winning their homebrew competition in 2010—we made a session IPA, and a lot of the dots connect back to Caledonian Deuchars IPA because it just had that sort of ... It wasn’t rich with malts, it was just this clean platform and lots of hops. It was just something different, very special. There were some local beers that might have meandered in that direction—AleSmith X Extra Pale Ale, I would say Ballast Point Even Keel—but that was the one that really was like, whoa. I’d even say that those ideas have now come back to be how we approach things like West Coast PILS—lower ABV, very easy to drink, lots of hops.”

Julian Shrago’s **Melrose IPA**

Long Beach, California

“This isn’t the one that Beachwood releases now—that could be very much the same recipe, but the beer on my list would be the version circa 2008 when Julian [Shrago, owner and brewmaster at Beachwood Brewing] was not yet associated with Beachwood.

“Having that beer was kind of a light-bulb moment at the time. I’m like, ‘I get it.’ This beer is what is now West Coast IPA—this leaner, more intense fruit-forward expression of hops that’s very rich and saturated. The Mosaic was just popping, and it was just an amazing beer.”

Julian was homebrewing at the time. He would make fanciful labels for his bottles, and his brewery at the time was called Bellwether Brewing—it was his garage brewery—and he and I became good friends. In 2007, we met at a homebrew fest, and he would always show up to events with growlers of Melrose. At the time, I’d be bringing growlers of Hop-Fu, or whatever, and we’d share those with whoever [from the] industry was around, or other homebrew friends.

“That beer was perfection at the time—and Melrose was just crushing competitions. He got a Best of Show at the America’s Finest City competition, which is a highly contested homebrew competition in San Diego. The beer was just a harmonious match of Amarillo and Simcoe hops and just embodied everything that I liked in a West Coast IPA. It was another touchpoint to the things that I liked, that I wanted to brew. He was several steps ahead of me in going pro, but that beer was really remarkable. You could put it side-by-side with any of the commercial IPAs out there, and it was probably better. It was just an amazing beer.”

Pizza Port Poor Man’s **Double IPA**

Carlsbad, California

“I’ve got to put in Jeff Bagby in the Alpha King era. I’d make it up to Pizza Port Carlsbad when I could, and sometimes this beer would end up on tap at Toronado in North Park. Where Pliny was this super fine-tuned thing that was like perfection in its truest form, and something where you said, ‘That is double IPA,’ Poor Man’s was *intensity*. It was like you took the double IPA, and you just cranked it up to 11. The hops are so intense.

“From my understanding, this beer was basically in a serving tank that had body bags full of whole-cone hops stuffed into it. So, it was very leafy and raw and intense, and just powerful. You drink that, and it’s like you’re so saturated with fresh-

hop intensity. There was nothing else you could drink like that. You could have a pint of it at Toronado, but if you went to the source and had it straight off the serving tank, it was like, wow, just amazing. There weren’t a lot of beers that did that at that point at the time.”

Green Cheek ‘Member IPA? **Orange, California**

“This would have been at the L.A. IPA fest. And the L.A. IPA fest is cool because you get 10-ounce pours of beers. My beer is in the competition. I’m grabbing a pour of my beer, a pour of someone else’s beer. I’m hanging on to mine, and I’m taking sips of others and kind of seeing the differences. Then, at the end of it, when they’re announcing the winners and I’ve had some of those beers, I’m starting to collect the data and have an understanding of what the judges are really wanting in this category. Because we had some duds in that competition for a couple of years in a row. Tasting the beer side-by-side, I could tell why.

“We were kind of stuck in the old-school West Coast IPA mode, which were the homebrew beers that I was making before opening North Park. Well, the Green Cheek keg kicked before I could even get to it, but Green Cheek in Orange wasn’t too far out of the way on my drive home, so I had to stop by and try a pint. Having that beer was kind of a light-bulb moment at the time. I’m like, ‘I get it.’ This beer is what is now West Coast IPA—this leaner, more intense fruit-forward expression of hops that’s very rich and saturated. The Mosaic was just popping, and it was just an amazing beer.

“I literally went back to the brewery after having that one and retooled our whole approach to West Coast IPAs and folded in the changes to Hop-Fu. Our steps forward paid off, and the next year at L.A. IPA fest, we won it. It felt like that was gratifying to learn some lessons from all those things.”



SPECIAL INGREDIENT

Ube

It's sweet, it's purple, it's trendy, and many folks from the Philippines will be delighted when you make beer with it. **By Joe Stange**

EITHER UBE IS GETTING *really* popular in the United States or it has an incredibly effective PR team.

Ube—pronounced OO-beh—has been having a moment for quite a few moments now:

- The Food Network's website was raving about ube as an Instagram-driven trend back in 2017.
- Trader Joe's introduced an ube ice cream in 2019, and *oh* how people talked.
- In late 2022, a *Forbes* contributor declared ube to be the “*uber* ingredient of 2023.” (Get it?)
- *Paste* last year wrote that “ube just keeps getting more popular.”
- A more recent *Salon* feature about ube asks, “What does it mean when a traditional food becomes a trend?” (The answer, as we know, is that brewers will put it into beer.)
- More authoritatively, the respected flavor house T. Hasegawa USA recently declared ube to be “the flavor trend of the year” for 2024.

If you're not from certain parts of Asia and you've never heard of ube, don't feel bad.

You're still cool. It just takes a while for these trends to bubble up into the mainstream (if they ever do). After all—as we know well at the Special Ingredient labs—the exotic ingredients competing for our attention these days are more numerous than ever. It's nice to have options.

So, what is ube?

It's a tuber—specifically, it's a type of yam (*Dioscorea alata*, because we like how Latin names sound like magic words). People from the more tropical parts of Asia and the Pacific Islands have grown and eaten it since ancient times, but it's most widespread in the Philippines, where it's popular as a flavoring and dessert ingredient. It's in ice creams, pastry fillings, and *ube halaya*—a pudding-like treat made from mashed ube and condensed milk or coconut milk, and often topped with coconut.

Ube is not a sweet potato—those come from the Americas, and we should probably stop calling those “yams.” (But you can brew with them, too, obviously. See “Special Ingredient: Sweet Potato,” [beerandbrewing.com](#).) Ubes are, however, sweet; other frequent descriptors include nutty and earthy,

with comparisons to vanilla and coconut. It's easy to see how they end up in desserts.

This, however, is arguably the best thing about ube: It's purple—like, *really* purple. Not a lot of foods are purple, after all, and it's a pretty cool color—just ask Prince.

So, to sum up: It's sweet, tasty, and it looks good on camera. That's a recipe for social-media success, and now we know why it's trendy. Plus, while *other* Asian food cultures get plenty of attention, our friends in the Philippines were due to get some love.

Brewing with Ube

Harland Brewing in San Diego was still in its first year when its then-director of brewing operations, Nick Marron, was visiting family in Guam. That's where he and his wife Naomi Marron, the brewery's chief of staff, visited a local bakery and enjoyed a memorable (and presumably purple) ube donut.

“And Nick instantly knew he could make it into a beer,” says Jacob Hillier, Harland's current head brewer.

Marron and Ryan Alvarez, the head brewer at the time, developed the recipe that would become Harland's Ube Milkshake IPA. Its annual release has become a big enough deal locally that the brewery hosts an annual Ube Day party to celebrate.

The San Diego area is diverse, with many people of Asian and Pacific Island backgrounds, including a lot of Filipino Americans. “These communities lined up at our doors and spread the word about ube being in a beer,” Hillier says. “Selling out in less than an hour, we knew we were onto something. ... Ever since then, we have been [welcomed] into the surrounding community with love and support because of this beer.”

He describes the flavor that ube brings as “vanilla bean, sugar cookies, and cake batter,” for a “decadent pastry-like char-



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acteristic with slight earthy undertones.” The Harland team also uses ube in other beer styles—even a hard seltzer, once. They usually pair it with coconut, “to keep it true to the many ube pastries that are made,” Hillier says, “and to keep that tropical tradition alive.”

There are many processed forms of ube, and they’re increasingly available now that American bakeries and ice cream shops are catching on to the flavor and its popularity. There are powders, pastes, pastries—and at Harland, Hillier says, “we’ve done them all.”

If you’re ambitious, you could try processing your own ube—what is “craft,” anyway?—by peeling, boiling, mashing, and potentially even turning it into *ube halaya* before adding to secondary.

At Harland, however, Hillier says they’ve had the most success with ube flavor concentrate. “It can easily be used to control exactly how much ube flavor you want,” he says, “and even control the purple hue that it creates in beer.”

The beer’s vivid purple hue comes from that concentrate—only about two liters for a 30-barrel batch—and nothing else. “We’ve noticed that getting the perfect purple color is very dependent on beer style,” Hillier says. “We tend to stick with a hazy base beer. ... With this beer style, we are able to control getting a very vibrant but opaque color of purple.”

But it can be tricky—a little goes a long way, so dose with care. “We do tend to see when adding the ube [concentrate] that it will go from a weird gray color—from not having enough—to even having too much added and getting almost black,” Hillier says. “So, carefully adding the ube is a huge part in successfully getting the purple color we are looking for.”

Another San Diego brewer who dabbles in ube is Derek Gallanosa, founder of GOAL in North Park and the former head brewer at Moksa in Rocklin, California. The vividly purple Ube Haze IPA has become his most popular beer. Like the Harland team, Gallanosa says he uses a processed form for flavor and color—in this case, an ube powder. “I think what builds the flavor is also using complementary hops,” he says. “I’ve just been using Citra lately—at five pounds per barrel—but plan on introducing other varieties in future batches.”

Hillier’s advice for anyone who wants to try brewing with ube? Go eat some stuff with ube in it.

“The more you understand how this purple yam has been used, the easier it is to understand the big picture of what it should taste like,” he says. “It doesn’t go with everything, and it can’t be used on its own—don’t just start dosing dry-hopped hazy IPAs with ube. It won’t do it justice.”

MAKE IT

Harland Ube Milkshake IPA

The annual release of this beer in San Diego has become such an event that Harland Brewing now organizes an Ube Day party to mark the occasion in the fall. Head brewer Jacob Hillier shares this recipe with coconut sugar, raw coconut, a Sabro dry-hop addition, and an ube concentrate that lets you dial in the purple hue and flavor.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.079 (19°P)

FG: 1.025 (6.3°P)

IBUs: 1

ABV: 7%

MALT/GRAIN BILL

11.2 lb (5.1 kg) pale two-row

1.5 lb (680 g) malted oats

11 oz (312 g) unmalted wheat

10 oz (283 g) rolled oats

HOPS & ADDITIONS SCHEDULE

0.1 oz (3 g) any low-alpha hop at first wort [1 IBU]

1 tsp (5 ml) yeast nutrient at 15 minutes

3 oz (85 g) coconut sugar at 5 minutes

11 oz (312 g) lactose at flameout

2.8 oz (79 g) Sabro at dry hop

21 oz (595 g) raw flaked coconut at secondary

~0.4 fl oz (12 ml) ube concentrate at secondary

YEAST

Imperial A38 Juice

DIRECTIONS

Mill the grains and mash at 155°F (68°C) for 40 minutes, aiming for a mash thickness of about 1.15 quarts/pound. Recirculate until the runnings are free of particles, then run off into the kettle. Sparge and top up as needed to get about 6 gallons (23 liters) of wort, depending on your evaporation rate. Boil for 60 minutes, adding hops, nutrient, and sugars according to the schedule. After the boil, chill the wort to about 65°F (18°C), aerate, and pitch yeast. Ferment at 67°F (19°C) until complete and gravity has stabilized. Drop the temperature to 60°F (16°C) and add the dry hops. After a few days, remove or drop the hops and add the coconut in a muslin bag. Taste daily until the flavor is where you like it, then remove the coconut and add the ube concentrate—start with a bit less, add a few drops more until the color and flavor are where you like it. Crash to 32°F (0°C), package, and carbonate to about 2.6 volumes of CO₂.

BREWER'S NOTES

Mash: We add calcium chloride to soften the profile, and we aim for a mash pH of 5.35–5.5. We also add some beta-glucanase to make lautering easier.

Ube: After experimenting with ube in various forms, we’ve found that a concentrate works best for the recognizable ube flavor and for adjusting the purple color. We use the Butterfly brand, and it’s available on Amazon. A little goes a long way—start with “less is more,” and dial it in from there.



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Building Big Barrel-Aged Barleywines with New Image

From selecting malts with intention to deploying Madeira-inspired macro-oxidation, finishing on different woods, and blending to taste, New Image founder Brandon Capps outlines a technical approach to crafting characterful barrel-aged barleywines.

STYLE SCHOOL: KVASS

The True Liquid Bread

Technically, kvass isn't beer—but it's delicious, fermented, easy to make, and a long-standing tradition in Eastern Europe.

By Lars Marius Garshol

OUT IN THE LITHUANIAN countryside, I'm sitting outside a barn that's been converted into a small brewery. We've come to visit the legendary farmhouse brewer Ramūnas Čižas—but before serving us beer, he brings his *gira*, which is Lithuanian for *kvass*.

The first sip immediately transports me to my childhood home in Norway—not because I grew up drinking kvass, but because it tastes precisely like my mother's home-baked bread. Stunned, I sip the drink and explore its flavor nuances: It's faintly sweet, and the aromas are so transparent, bright, and fresh that it really is like drinking a still-steaming, freshly baked loaf of bread.

"Now you know what real kvass is," my guide says.

As simple to brew as it is delicious, kvass is a marvel of a drink—even if it doesn't get

you drunk. Unfortunately, outside most of Eastern Europe, it's little known and even less understood. Most of those who've heard of it may think of it as a Russian beer style made from bread. That's not right, but it's not completely wrong, either.

What Kvass Is (and Isn't)

Kvass is not beer because it's not mashed, and the fermentation is lactic rather than alcoholic. In fact, the root of the word *kvass* refers to souring. In Eastern Europe, it's generally considered nonalcoholic, although there can be a little alcohol in it. The Russian national standard for kvass describes it as up to 1.2 percent ABV, "a result of incomplete alcohol and lactic fermentation."

People sometimes confuse

kvass with Lithuanian *keptinis*, but the two are radically different. Typically, you would make kvass from bread and then sour it. Lithuanian brewers make *keptinis* wort from a malt mash that's been baked—which is very much *not* bread—and then yeast ferments the wort into beer.

However, kvass does not have to be made from bread. Some recipes make it from flour or, to some extent, even malt. More exotic ingredients can include apples, beetroot, horseradish, honey, and so on. (You might think that apple kvass and honey kvass should be considered cider and mead, respectively, but remember: Kvass is about lactic fermentation, not alcoholic fermentation.)

The typical way to make kvass is to simply steep bread in hot liquid for an hour or two, to draw out as much flavor as possible. The bread is usually rye, but wheat bread also works fine. The bread is then sieved out and the liquid cooled until it is ready to receive the culture of lactic-acid bacteria and yeast. You can also use just yeast, if you don't want it sour; over the past century adding some sugar also has become increasingly common. Then, just let it ferment in the usual way.

You might wonder why anyone would make kvass from bread or flour at all when they could just make beer from the grain instead. The answer is that to make beer,





Left: Street vendor with the classic yellow kvass tank, Yoshkar-Ola, Russia

you need quite a lot of grain, but with kvass you can get away with very little. That must have been an easy choice for poor farmers.

Generally speaking, rye—in one form or another—has always been the most important kvass ingredient. There are two likely reasons: First, it's long been one of the most important grains in Eastern Europe; second, it provides a lot of flavor, which is an important consideration when you're not using much grain in the first place.

Whose Kvass?

Another way that people often misunderstand kvass is when they describe it as a Russian drink. The reality is more complicated. It's popular in several countries, and nobody knows who invented it, where, or when.

The first known reference to kvass is in the so-called *Tale of Bygone Years*, a quasi-historical medieval chronicle. However, the writing of that chronicle dates to 12th-century Kyiv, in what is today Ukraine—and the reference itself is a description of a 10th-century feast there. Moscow didn't exist yet, and the region where it is now was a backwater province of a large realm with its capital in Kyiv.

Kvass as a drink, however, is assumed to be far older than that document, but nothing more is known about its early history. So, ultimately, we don't know what ethnicity first came up with the idea. They may well have been Slavs, but not necessarily. There is a closely related drink farther south, stretching into the Middle East.

This is *bouza*, a sweet-sour drink made from flour. It's possible that *bouza*—also a very old drink—is the origin of kvass. But, again, it's uncertain.

Today, kvass is popular in Belarus, Russia, and Ukraine, but also in other places. The Finns and Estonians drink it, but under different names: *kalja* and *kali*. It's also popular in Latvia and Lithuania, to the extent that its name in each country simply means “drink”—in Lithuania it's *gira*, and in Latvia it's *dzeršis*.

Zooming out a bit, it becomes clear that kvass is a key part of the cuisines in large chunks of Eastern Europe, and it would be fair to describe it as the national drink of several of these countries. Historically, it was made on most farms. Later, it was made in hospitals, in army camps—in fact, people made it pretty much anywhere there was a large household that needed something to drink.

The motivation for making kvass was the need to have something besides water to drink. Many people in Eastern Europe chose to make a lot of nonintoxicating kvass rather than a little bit of beer, so that they could have kvass as an everyday drink. It's unclear whether that was because people thought water wasn't safe to drink, or simply because they got tired of drinking water all the time.

The Daily Liquid Bread

My research on this is incomplete, but it appears as if you could divide

grain-growing Northern Europe into three zones, each with a different daily drink, historically: In the eastern zone, it was kvass; in the west, beer; and in the north, a strange, milky, sour drink called *blaand*.

Modernization changed all that, of course, and suddenly drinks such as tea, coffee, milk, and fruit juice became widely available. That transformed modern people's relationships with drinks, to the extent that people today find it almost impossible to fathom the situation in the late 19th century. In many ways it's as if our own relationship with drink—alcoholic and nonalcoholic—still hasn't settled into a stable pattern.

However, kvass hung on, and factories in the Soviet Union made vast amounts of it on an industrial scale. Unfortunately, that type of kvass was sweet—sometimes cloying—and mostly artificial, something like a rye-flavored Coca-Cola. You can still find that kind of kvass in supermarkets all over Eastern Europe, and that's led many people to think of it as a kind of soft drink.

The classic way to sell this kvass was from little yellow tank wagons towed by a car, dispensing cheap kvass in the street to anyone who was thirsty. Those street vendors were once ubiquitous in the summertime all over the Soviet Union, but they are now becoming rare.

You can find better stuff in cafés, brew-pubs, and restaurants where the staff make it themselves. However, the real kvass is what's made out in the countryside, usually by old grandmothers. They have lactic kvass cultures that they maintain from one batch to the next, and they tend their fermentors almost as they would living pets, moving them from room to room to keep the fermentation temperature just right. For Eastern Europeans, kvass has strong associations with the countryside, home, and family. It's a world that's hard to access for Westerners, which of course is one reason kvass is so little known here.

The Present and Future of Kvass

Kvass really ought to be in fashion because it combines several trends that are popular right now, such as no- or low-alcohol drinks and the sustainable use of food waste (i.e., discarded bread). Done right, it's also as traditional and authentic as you can get.

Breweries that use leftover bread as an ingredient in beer often make the news, but it's rare to see one of these stories mention kvass as a related product. (Ours did; see “Special Ingredient: Brewing with Bread,” beerandbrewing.com.) The reason kvass remains out of fashion in the West is that

Kvass combines several trends that are popular right now, such as no- or low-alcohol drinks and the sustainable use of food waste. Done right, it's also as traditional and authentic as you can get.

few know much about it—and of those who *do* know about it, very few have tried a genuine kvass because it's mainly been made in Eastern Europe.

Tasting real kvass in Eastern Europe requires some dedicated hunting, but it's not that hard with a little effort—under normal conditions. Tragically, today, much of the drink's heartland is locked in the grip of imperialist war and fascist dictatorship.

Still, authentic kvass can be found if you're willing to stray from the well-trodden path. However, unlike beer, its presence tends to be low-key and little advertised. You have to go into unlikely places and really seek it out. Persistence will pay off, eventually, often in unexpected places.

Twenty years ago, for example, I used to drink it in the lunch canteen at Nokia headquarters outside Helsinki—but I didn't quite realize what it was. Later, I discovered that Finnish gas stations and roadside tavernas often have it. Restaurants serving traditional Finnish food are another good place to look.

It's a similar story in Lithuania. Some brewpubs have it, but don't expect to find it in modern craft brewpubs or beer bars. In old-town Vilnius there's an old-fashioned café that looks like it's from the 1930s, and a good homemade kvass hides in plain sight at the bottom of the drink menu. Soviet-era milk bars, old-fashioned brewpubs, vintage cafés, university canteens, and family homes in the countryside—those are the sorts of places where you can hope to find a good kvass.

Kvass is still very much alive, but it's such an everyday drink, so much taken for granted, that it blends into the background. It's a shame, because at its best it's magnificent—the perfect summer tippie for when you want to stay clear-headed after a pint or two. My hope is that, one day, Eastern Europeans will understand what a treasure this drink is, so they can bring it back into fashion.

And—who knows?—maybe one day it will catch on here in the West, too. 🍷



MAKE IT

Homemade Kvass 1913

With thanks to Ukrainian beer writer Lana Svitankova for sharing the translated text, this recipe is based on one found in Zenovia Klinovetska's 1913 book *Food and Drinks in Ukraine*, which features 1,000 folk recipes. Here are the original instructions for "Zaporozhky kvas," translated from Ukrainian:

Pour 4 buckets of boiling water over 16 pounds of dried rye bread and let sit for 8 hours. Transfer to another tub, add 1.5 glasses of good yeast, 4 pounds of sugar, 1 sliced and deseeded lemon, and let sit for another 8 hours. Afterward, strain through a fine cloth and bottle. Add a raisin to each bottle, cork tight, and keep at room temperature for 8–10 hours, until kvass ferments.

Aiming to turn this into a batch fit for a five-gallon (19-liter) corny keg, we used the following conversion rates for the antiquated measurements: 1 bucket = 3.2 gallons (12.1 liters); 1 "pound" = 0.88 U.S. pounds (400 g); and 1 glass = 0.8 cups (200 ml).

KVASS

Batch size: 5 gallons (19 liters)
OG: 1.017 (4.3°P)
FG: 1.000 (0°P)
ABV: 2.2%

INGREDIENTS

7 lb (3.2 kg) dried rye bread, torn into pieces
1.8 lb (816 g) table sugar
1 lemon, slice and deseeded
A handful of raisins

YEAST

Homemade rye sourdough starter, or co-pitch baker's yeast and *Lactobacillus*

DIRECTIONS

Boil about 6.5 gallons (25 liters) of water and pour over the bread in a heat-safe vessel. Cover loosely and allow to sit for 8 hours or until it's cooled to room temperature. Transfer off the bread into another vessel, and add sugar, lemon, and yeast. Cover loosely and let sit another 8 hours. Strain liquid through a fine cloth, rack to a keg, add raisins in a mesh hop bag, and condition 8–10 hours at room temperature before chilling and tapping. (Alternatively, package in sanitized PET bottles, adding 1 raisin to each bottle, storing in the fridge after 8–10 hours. Drink within a few days, occasionally loosening the caps to off-gas.)

STYLE SCHOOL Hard-Earned Indulgence

From cocoa to coconuts via lactose and long boils, brewers are shaping today's dessert stouts for easy appeal. Just don't say they're easy to make. **By Jeff Alworth**

UNTIL 1880, BRITISH BREWERS paid taxes based on how much malted barley they used—so, they had to use malted barley. That made British ales relatively straightforward affairs, as far as fermentables were concerned.

That year, however, Great Britain passed a law called the Free Mash-Tun Act, which decreed that brewers would be taxed on beer instead of malt. It liberated brewers when it came to their choice of raw materials. Freed of that constraint, it took all of about five minutes for them to start throwing everything plus the kitchen sink into their kettles.

At the time, dark ales were still ascendant in British brewing, and those beers—more forgiving than paler ones, in some ways—saw the most experimentation. Brewers added sugars, lactose, and oatmeal to their stouts, aiming to strengthen, sweeten, or add body or a marketing hook. (They also added meat solids, but that's a different article.) The point is this: Once you have a base liquid that tastes chocolatey, sooner or later brewers are going to riff on that and turn their beers into liquid desserts.

Today, dessert stouts can annoy a certain kind of beer nerd because they seem like a cheat code or just too gimmicky. You brew up a thick, boozy stout, you add sweets, spices, maybe some fruit, *et voilà*, tiramisu in a glass. It sounds simple. All you have to do is dump in a bunch of sweet ingredients, right? Big stout + cinnamon + coconut = 25 bucks a bottle. Where's the art in that?

Here's the thing: That's not how the best of these beers are made. In fact, the truth is almost the opposite—brewers go to mind-bending lengths and considerable cost to make them. They spend entirely too much time in the brewhouse creating thick, luscious worts; they use fresh, expensive ingredients; and they often age them for months or years in barrels. They're typically expensive to make, expensive to buy, and—even when the concept sounds simple—the flavors can be as complex as the process involved in producing them.

If you're still a skeptic, read on. Whether you end up enjoying the style or not, it's hard to hear more about how these beers are made without at least developing a sense of respect.

First, however, let's consider where they came from.

Charlie and the Chocolate Factories

Modern dessert stouts have evolved into their own category, distinct from the sweet stouts of the 19th and 20th centuries—but they share similar inspiration.

After their heyday, those sweet stouts, milk stouts, and oatmeal stouts all faded into relative obscurity as milds supplanted them in Britain. Dark ales in general were in serious decline by the 1970s. From those ashes rose a phoenix—but it first happened across the pond. Beginning in the 1970s with homebrew kits—and later on five- and 10-barrel systems—brewers started to re-ignite interest in porters and stouts. And, like those who came before, they saw potential for some other flavors.



Inventive homebrewers were probably the first to start tinkering. By the time his landmark book, *The Complete Joy of Homebrewing*, arrived in 1984, Charlie Papazian had been brewing for 14 years. He'd already self-published two brewing pamphlets, and in the book he included his favorite recipes—including the memorable Cherry Fever Stout.

"The complex blend of sweetness, bitterness, and cherry tang is euphorically pursued with a fragrance of hops and cherry fever," Papazian writes. The idea enchanted a generation of brewers who may not have understood what he was talking about, but they definitely wanted to give it a shot.

The porous line between home- and microbrewing ensured that unconventionally flavored beers would soon appear on brewpub taps. Oregon's Rogue Ales would eventually become known for its Chocolate Stout (and, later, its infamous Voodoo Doughnut collaborations), but brewmaster John Maier already was dabbling in flavor. "I did some crazy stuff back in the old days," he says, chuckling. He recalls a garlic-and-oregano beer as an early foray into exotica. Rogue also made beers with marionberries and chocolate, among other things—and Hazelnut Brown Nectar is still in the core lineup. First brewed by Rogue in 1993, that recipe originally came from another homebrewer and friend of Maier's, Chris Studach.

Experiments with sweeter flavor adjuncts were well established by the time another pivotal moment came in the mid-'90s—when Goose Island brewed the first bourbon-barrel-aged stout in Chicago. Oak created another platform for hefty stouts flavored by wood-vanillin and whiskey—they weren't dessert stouts, exactly, but they offered compatible flavors and pushed a conceptual envelope.

Southern Tier in Lakewood, New York, was among the breweries to pick up that envelope and run with it. Their Imperial Stout debuted 20 years ago, followed by the Blackwater series of stouts flavored by coffee, chocolate, and more. These were among the first that truly fit the description of "dessert" stouts, made with lactose for a thicker, sweeter palate, and with ingredients that evoked specific desserts—such as crème brûlée and s'mores.

You Boiled It How Long?

Imperial stouts should never be watery, but one of the defining features of dessert stouts today—whatever their strength—is density. There are multiple ways to build that body, including the use of higher

mash temperatures, specialty malts, lactose, and maltodextrin, and the brewers of big dessert stouts have been known to deploy all of them at once.

However, one of the main ways that they do it is with shockingly long boils.

Eighth State Brewing in Greenville, South Carolina, is known partly for beers such as Widdershins, a stout of 14.2 percent ABV brewed with Ecuadorian cacao nibs, toasted coconut, crushed Oreos, wild Thai bananas, and Tahitian vanilla. Co-founder and head brewer Cameron Owen started out by conducting massive 12-hour boils for these beers.

"The longer that we're boiling, the less fermentable the beer is going to become because we're converting [it] into more complex sugar chains," he says. Eventually, because it helped to rationalize the production schedule while still offering the mouthfeel they wanted, Eighth State dropped the time and now does "only" an eight-hour boil.

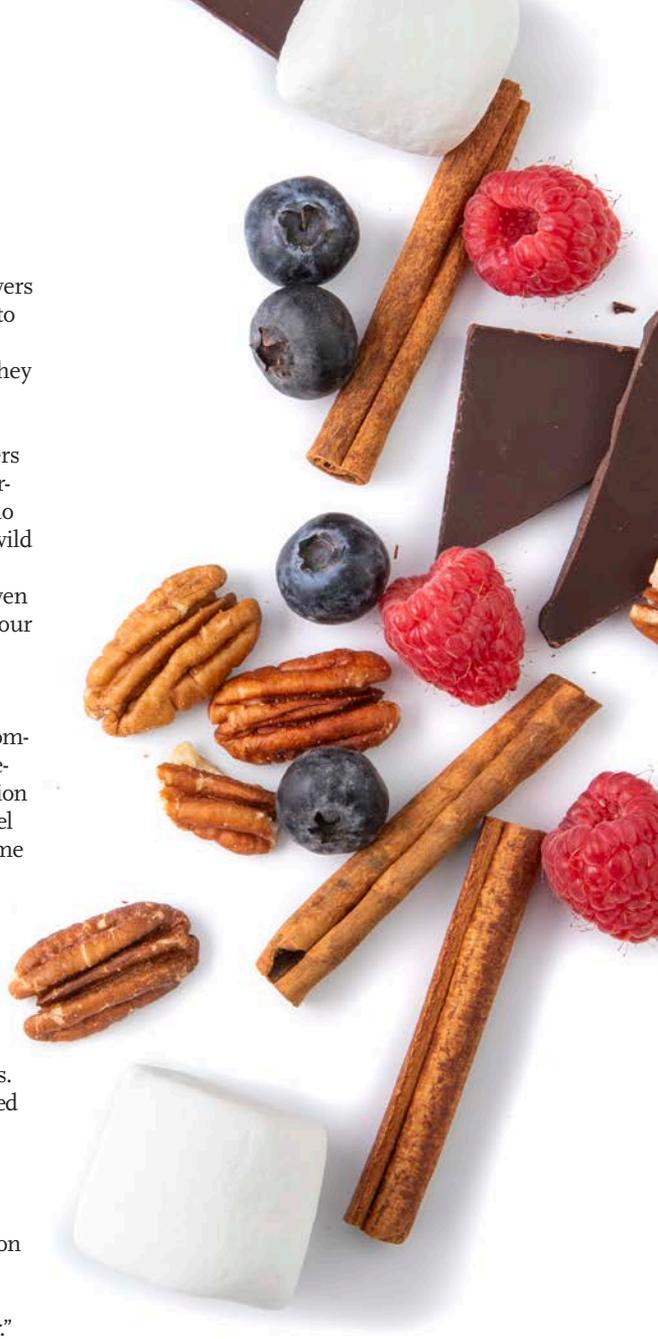
In beers with so much going on flavor-wise, brewers often want to avoid adding more sugar to the profile. Instead, to preserve balance, they're looking for more mouthfeel without the sweetness.

Even as a homebrewer, Marcus Baskerville was tinkering with big imperial stouts. As co-owner and head brewer at Weathered Souls in San Antonio, he aims to build a stout that "doesn't have all the residual sugars and calories behind it." The flavors he adds later—let's say coconut, brownie fudge, and peanut butter, as with PB Fusion Technique—will enhance the perception of sweetness, anyway. Baskerville says he doesn't want to "add sugar on top of sugar."

In terms of boil times, though, Weathered Souls takes it to another level. Baskerville starts out with the first runnings off "basically a no-sparge mash." He can get that gravity up to 1.120 (28°P) or higher, but then he begins a full day of boiling—as in, 24 hours or more. Seriously. The wort starts at a rolling boil but spends much of the time simmering, gradually reducing to a syrup-like consistency. The next day, the team adds a second wort made from an identical mash, to rehydrate the beer.

"Generally," Baskerville says, describing the brew day, "we'll start to boil it around 11 a.m. The brewer will come in the next morning, start the second batch, and then mash in on top of that, and then boil for a few more hours until we hit the gravity that we're looking for."

He says they go through all that trouble for a characteristic mouthfeel that only long boils can deliver and a texture that lands very differently from that of lactose.



Put Your Chef Hat On

There's a notion that brewers just "dump in a bunch of flavorings" for these beers. In fact, it's not that easy to get the bang-on flavors of specific desserts or to achieve harmony among all the various ingredients.

Eighth State has an ambitious stout program that alternates between barrel-aged and "fresh" versions. In either case, "this whole area is just very 'cheffy,'" Owen says. "It's like understanding food and really trying to create a balance."

At Weathered Souls, Baskerville also reaches for the analogy: "When we get into these types of beers, I like to put my chef hat on."

Baskerville layers his flavorings in as if he's making a sauce. Using a pecan pie-flavored beer as an example, he ticks off ingredients such as vanilla, maple syrup, cinnamon, allspice, and nutmeg, along with toasted pecans. "People want to taste the pecan, but pecan extract to me tastes



like cherry, and that's not what pecans taste like." To get that pecan-pie flavor, Weathered Souls toasts whole pecans.

In shooting for a particular flavor profile, whether it's a specific dessert or just a mélange of flavors, Owen emphasizes the importance of flavor-building.

"There's a lot less science involved and more feeling," Owen says. "And so, for me, it was always, 'Get the beer to where you want it.'" That often means adding the ingredients in smaller amounts and building them up, observing the interactions, and hitting a balance.

For example, Baskerville says, "If we're adding any additional spices to the beer, then we tend to add those last, being that those typically have shorter extract points."

Finally, Owen and Baskerville prefer whole ingredients to extracts or other processed flavorings, partly because the flavors come across as more natural in the beer. But it's also because the brewers can process these ingredients in-house, giving them a lot more control over the outcome.

Baskerville spends several minutes describing how he processes coconut to create different flavors. Later, he points out how vanilla beans provide different flavors depending on where they were grown—and he uses different varieties, depending on the beer.

The Proof Is in the Pudding

As with any style, dessert stouts aren't always good. They can cloy or taste artificial. However, when they're *really* good, they have a certain "wow" factor that simpler beers lack.

Last year, the *Craft Beer & Brewing Magazine*® editors named Weathered Souls' Gud Mawnin' Mon—featuring cacao nibs, coconut, hazelnuts, Jamaican Blue Mountain coffee, and maple syrup—one of their Best 20 Beers in 2023 (see beerandbrewing.com). "Among many blockbuster barrel-aged dessert stouts in our blind tasting, this was the clear standout," they write. "Viscous and leggy in the glass, it's of that modern style that maximizes body and character."

Everyone focuses on the headline flavors in dessert stouts, but these beers aren't just gimmicks. Ultimately, they're also process beers. Without creating the right canvas on which those flavors will play, they lack depth and fall apart.

They're also a good deal more sophisticated than their detractors acknowledge. I sometimes wish we could magically bring one of those old brewers from England into our time to taste these beers. They may have thought their milk stouts were radical. What would they make of today's Black Forest cake stouts? 

MAKE IT

Weathered Souls Gud Mawnin' Mon

Marcus Baskerville, head brewer and co-owner at Weathered Souls in San Antonio, shares this recipe for the richly layered, Caribbean-accented imperial stout—featuring toasted coconut, Jamaican Blue Mountain coffee, hazelnuts, vanilla, and maple syrup—whose barrel-aged version was one of our Best 20 Beers in 2023.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 68%

OG: 1.110 (25.9°P)

FG: 1.035 (8.8°P)

IBUs: 50

ABV: 10.7%

MALT/GRAIN BILL

15.6 lb (7.1 kg) pale two-row

2.5 lb (1.1 kg) black patent

1.7 lb (771 g) pale chocolate malt

1.2 lb (544 g) flaked oats

9.2 oz (261 g) dark chocolate malt

7.1 oz (201 g) Special B

6.2 oz (176 g) Briess Carapils

HOPS & ADDITIONS SCHEDULE

4.2 oz (119 g) Cascade at 60 minutes [50 IBUs]

1 lb (454 g) maltodextrin at 10 minutes

8 oz (227 g) dark brown sugar at 10 minutes

5 oz (142 g) maple syrup at primary

5 lb (2.3 kg) toasted coconut at secondary

8 oz (227 g) Jamaican Blue Mountain coffee, coarse-ground, at secondary

0.5 oz (14 g) vanilla bean, chopped, at secondary

0.3 oz (9 g) toasted hazelnuts at secondary

YEAST

White Labs WLP001 California Ale

DIRECTIONS

Mill the grains and mash at 156°F (69°C) for 70 minutes. Recirculate until the runnings are clear, then run off into the kettle. Sparge and top up as necessary to get about 6 gallons (23 liters) of wort, depending on your evaporation rate. Boil for 90 minutes, adding hops and sugars according to the schedule. (Optionally, boil for as long as it takes to hit higher gravity, for more body at the expense of volume.) After the boil, chill to about 64°F (18°C). Aerate well and pitch a large, healthy yeast starter. Ferment at 67°F (19°C), adding maple syrup toward the end of fermentation. Once fermentation is complete and gravity has stabilized, add flavor adjuncts in sanitized mesh/muslin bags, tasting daily until desired flavor profile is achieved. Then rack, crash, package, and carbonate.

BREWER'S NOTES

Flavor adjuncts: If you end up with less than 5 gallons (19 liters), adjust quantities accordingly. I like to chop the vanilla beans in a blender and soak them in whiskey in a small mason jar. I toast the coconut and hazelnut in the oven at 250°F (121°C) until golden-brown. Remove the hazelnuts every 5 minutes and pat dry to remove oils, until there are no more visible oils; crush the hazelnuts once toasted.

Barrel aging: Optionally, age in a bourbon barrel or on bourbon-soaked oak cubes before adding flavor adjuncts.



Ask the Pros...

Techniques, ingredients, and histories behind some of the world's most compelling beers, as shared by the brewers themselves. **By Ryan Pachmayer**

Enegren The Lightest One

Enegren Brewing, Moorpark, California

THE ENEGREN PRODUCTION TEAM specializes in lager, and their consensus favorite beer might well be the helles.

"We call it The Lightest One because it's the lightest beer we have," says Chris Enegren, cofounder and head brewer. There is also a bit of strategy behind it: At bars, people often ask for "the lightest one." When that happens, it's natural for the bartender to reach for this one—and that's by design, Enegren says.

He has a specific idea of what makes a great helles. "With German brewing in general, it's really asking yourself the question: With as much machinery and technology as you can, how can you take two basic ingredients and get the most amount of flavor out of them?" he says. "How do you [create] complexity without

making it overly sweet, to the point where you can't just constantly be drinking it?"

With those tenets to guide him, Enegren set out to build the perfect drinkable beer.

"Let's not put a whole bunch of caramel malt in it," he says. "Other things in the mash can give it that complexity. We do things like a decoction mash to get a little bit more of that Maillard reaction, a sweetness that isn't like a clean, sugary sweetness, but a body," he says.

Enegren points out that helles should have a bit more body than pils. "But it's not a heavy beer," he says. "Side by side, you don't have the hop bitterness in the helles, so it makes it feel a bit more malty.

"The result is that, to sour people, to double IPA people, they kind of look at it and say that it's just a lighter beer," he says. "But to someone brewing this style, we're looking at it like, that's freaking perfect. It's got everything, perfectly balanced together. You can drink a liter mug, and you're asking for more of it. You're not sick of a flavor or wanting something else. That's German brewing in a nutshell."

PHOTOS: COURTESY ENEGREN BREWING



Focusing on Process and Drinkability

Enegren was an engineering major in college and went on to be an engineer at a pharmaceutical company. That helped shape his approach to beer.

“Instead of making complex recipes with a whole bunch of malts and bacteria, the way I make things is to use machinery and work that side of it,” he says. Working on process controls made lager brewing appealing to him.

Enegren was working at Premier Stainless Systems in Escondido while his brewery, opened in 2011, had a three-barrel system. That allowed him to put his engineering background to use, simultaneously designing his own 15-barrel brewhouse from the ground up. Essentially customized to make lagers, that brewery went online in January 2015.

The beer that’s in the glass today didn’t just happen overnight. It was an evolution of learning about German brewing and trying new methods, techniques, and ingredients.

In 2014, Enegren was including some Munich malt in The Lightest One, trying to give it more “beefiness,” he says. The hopping was all over the place, too. “We had some whirlpool hops in the recipe,” he says. “I think we were overthinking it. ... In American craft brewing, we can kind of get ourselves caught [thinking] that a beer has to be complex. And over in Europe, they’re making it super easy and basic.”

Enegren says he has a practical, real-world way of evaluating his beer. “We’re tasting the beer off the tank, but the eval-

“These are all very subtle things. The masses may not see them. If you’re grabbing a six-pack and just having a beer outside, people may not be like, ‘Oh, it’s totally decocted! Dang, this is great.’ But it’s something that I’ll notice, and if I notice that, it’s worth every penny to chase that.”

uation doesn’t really come until you’re not thinking about beer,” he says. “You’re just sitting out in the beer garden, having some beer, talking to people, and you just kind of notice what’s going on. I’ll get to the point where I think, ‘Damn, this beer is perfect.’ That’s when I know it’s working.”

That moment isn’t always sublime. “Other times, I want something different,” he says. “If we’re sitting out on a nice, beautiful day, why do I need something different? There’s something wrong with this beer that makes me not want to have a second, third, or fourth.”

When he finds his beer less than perfect, it’s always because it’s not as drinkable as it should be. That’s what led Enegren to cut back the Munich I in The Lightest One over time and eventually eliminate it. Today, the beer is 100 percent pilsner malt.

The hopping also saw an adjustment over time. “We started looking at the hopping, and some of the flavors weren’t [right],” he says. “We started stepping back the hops in the whirlpool.” Now, the beer gets only two

hop additions—one at 60 minutes and one at 20 minutes left in the boil. The hops are all Hallertauer Mittelfrüh.

One of the original parts of the process that hasn’t changed is filtration. “We were always filtering our lagers because that was something we just always thought was the most important thing, and I still stand by that,” Enegren says.

It’s not things like horizontal lagering tanks that are the key to his process. “Start with filtration first, then work your way back,” he says. “With that delicate of a beer, you don’t want anything else in there to take from that. So, the yeast flavors, the haze particulates, you’ve got to get rid of that stuff. That’s why we filter it.”

The brewery uses a pressure-relief filter packed with Perlite. “It’s a super-fine grade,” Enegren says. He adds that he doesn’t use finings because they might interfere with desirable attributes such as head retention. “We filter out all those tiny things that go against all the work we’ve done on getting the most complexity out of that pilsner malt,” he says.



Brewing the Lagers They Want to Drink: An Anecdote

Other than drinking its beer, the best way to understand Enegren Brewing’s commitment to lager may be a story from about five years ago.

“Our distributor told us to stop making German-style beer because nobody likes it,” says cofounder and head brewer Chris Enegren. “They told us to make brut IPA because that’s what was popular.”

The suggestion threw him for a loop. “I was like, ‘Get the hell out of here,’” he says. “I don’t want to be in this industry anymore. I’m done! I’m going to go back to my job where the bullshit stops at five o’clock, when

I can go home and have a weekend. [Not] brewing beer for the masses and a distributor that just wants to sell what is easy to a bartender that has 50 IPA taps.”

For brewers like Enegren, there’s more to the business than chasing after sales or the latest trend. “This job is a nightmare if you don’t like what you’re doing,” he says.

Lucky for him, he wasn’t alone in that sentiment. One of the co-owners, John Bird, had a different idea. He said, “That’s it. From now on the distributor is only getting German lager,” Enegren says. Then, one of two things would

happen: Either it would break the company, and they could all move on with their lives ... or it might just work out, and the brewery could succeed by selling the beer they wanted to make and drink.

Fortunately, the latter scenario transpired. “Now that we’ve found a niche that we’re 100 percent focused on, it’s been wonderful,” Enegren says. “Brewers who make most of their money on hazy IPA will want to talk for hours about their pilsner. For us, that’s all we do. We’re having fun, our brewers love it, and we’re making all of the beers that we like to drink.” —Ryan Pachmayer

From Decoction to Spunding

Decoction mashing was another big step for the brewery.

“These are all very subtle things,” Enegren says. “The masses may not see them. If you’re grabbing a six-pack and just having a beer outside, people may not be like, ‘Oh, it’s totally decocted! Dang, this is great.’ But it’s something that I’ll notice, and if I notice that, it’s worth every penny to chase that.”

Enegren says it’s his and his team’s responsibility to make the beer as perfect as they can—and if he can find a way to make it better, they’re going to go for it.

At one point, after he decocted a pilot batch, his brother came in and was drinking a liter of the beer. “He says to me, ‘I can’t stop drinking this, there’s something different about it. What did you do?’” Enegren says he played dumb at first, pretending it was the same batch, while further quizzing his brother.

“He told me that it tasted like it had more body to it, but that there wasn’t really any sweetness in it.” Eventually he fessed up, and his brother’s response was, “Don’t ever *not* decoct a beer.” From that point forward, decoction mashing was standard at the brewery. “It takes a painfully long time to make any beer we have here,” Enegren says. “But you know, it’s worth it.”

He also gives credit to Ashleigh Carter and Bill Eye of Denver’s Bierstadt Lagerhaus as brewers focused on German styles, and as friends. “I learned a ton from them,” Enegren says.

Another important focus area for the brewery is healthy fermentation. The Enegrens’ dad is a retired biochemist who helped them set up an in-house lab, which is important for a brewery that uses the same yeast for up to 10 generations. “We use cell counts, we stain everything, we can tell if our harvests are good,” Enegren says.

Besides monitoring attenuation and pH, among other things, they pay close attention to diacetyl precursors as a guide for when it’s time for a fresh pitch. “A big teller of our yeast is the VDK,” Enegren says. “A good, healthy yeast is going to pull all that VDK back into itself and drop out of solution. So, if we see that we hit our numbers and our attenuation is perfect, but it took us an extra day or two to clear VDK, then we know with the next [generation], it might not work so well, so we’ll end up dumping that yeast.”

Going eight to 10 generations may be the norm, but there are exceptions—they won’t re-pitch from stronger bocks or dark lagers. The brewery also uses only fresh pitches for its hefeweizen, even though it’s more expensive; they don’t like the flavors as much when they re-pitch it. “It’s night and day,” Enegren says.

The brewery uses spunding valves to create natural carbonation for all its beers. Lager fermentation runs in the high 40s °F (8–9°C). In another change from the early days, the team no longer raises that toward the end of fermentation for a diacetyl rest. “Looking at some of the old—and even current—fermentation schedules in German brewing,” Enegren says, “we kind of thought, ‘Why don’t we just let the yeast clear up on its own?’”

Since that fateful decision to go all-in on lagers (plus a hefeweizen), the brewery has grown. A decade ago, it was producing fewer than 1,000 barrels. Last year it reached 5,500 barrels. In 2024, Enegren says he expects them to produce a bit more than 6,000.

That doesn’t mean the team is resting easy. “If you screw anything up in these beers, it’s just shining straight through the beer,” Enegren says. “You can’t hop your way out of DMS or diacetyl on these beers. You’re just screwed.” 

MAKE IT

Enegren The Lightest One

This German-style helles is a year-round beer for the lager specialists at Enegren Brewing in Moorpark, California, and a favorite of cofounder and head brewer Chris Enegren and his team.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.046 (11.4°P)

FG: 1.008 (2.1°P)

IBUs: 21

ABV: 4.8%

MALT/GRAIN BILL

8.6 lb (3.9 kg) Weyermann Barke Pilsner

HOPS SCHEDULE

1.2 oz (34 g) Hallertauer Mittelfrüh at 60 minutes [17 IBUs]

0.5 oz (14 g) Hallertauer Mittelfrüh at 20 minutes [4 IBUs]

YEAST

Ayinger strain, such as Omega OYL-111 German Bock, White Labs WLP833 German Bock, or Wyeast 2487 Hella Bock

DIRECTIONS

Mill the grains and prepare for a decoction. Mash in at 135°F (57°C) and rest 10 minutes, then raise to 145°F (63°C) and rest 45 minutes. Pull one-third of the mash to a kettle, slowly bring it to a boil, and boil for 20 minutes. Return the decoction to the main mash and mix, which should bring it to about 168°F (76°C) for mash out. Recirculate until the runnings are clear, then run off into the kettle. Sparge and top up as needed to get about 6.5 gallons (25 liters), depending on your evaporation rate. Boil for 90 minutes, adding hops according to the schedule. After the boil, chill to 46°F (8°C), aerate well, and pitch a healthy yeast starter. Ferment at 48°F (9°C). When the gravity has dropped to about 1.018 (4.6°P), connect a spunding valve (to a pressure-safe fermentor, or else rack to a corny keg), aiming for 2.6–2.7 volumes of CO₂. Once fermentation is complete and gravity has stabilized, gradually lower the temperature to about 32°F (0°C), lager for 6 weeks, then package or tap and serve.

BREWER’S NOTES

Malt: We prefer Barke to Weyermann’s other pilsner malt. The kernels are a little plumper; they lauter a little better. Side by side, we think the Barke tastes a bit better, too.

Water: Go very soft; we use reverse-osmosis (RO) water mixed with a bit of city water. We don’t go as soft as the Czechs, but more appropriate to Munich brewing.

Mash: We aim for a liquor-grist ratio of 1.68 quarts/pound, or 14.5 quarts (13.7 liters) for this size batch. We also aim for a mash pH of 5.4.

Yeast: The lager strain that many labs market as “Bock” is widely thought to be derived from the strain that the Privatbrauerei Ayinger in Aying, Bavaria, uses for all its lagers. Because of that marketing, the strain is underused; it makes a great helles, among other things.

Fat Head's Goggle Fogger

Fat Head's Brewery, Middleburg Heights, Ohio

THREE MAJOR GOLD MEDALS in the past four years—two at the Great American Beer Festival and one at the World Beer Cup—mark a recent run of success for Goggle Fogger, the German-style weissbier that's been in the Fat Head's lineup since the brewery opened in 2009. However, inspiration for the beer goes back to the early 1990s.

"My first exposure to hefeweizen was back in '93, at a beer festival at Stoudts Brewing," says Matt Cole, Fat Head's co-founder and brewmaster. That festival was where Cole first tried Baltimore Brewing's example of the style. A few years later, he would go on to apprentice at Baltimore Brewing. "Their version really stood out, and I figured the reason it's really special is because of the processes that they go through with open fermentation."

Some of that influence also came from Cole's travels to Bavaria. "As I traveled through Europe, I saw more and more breweries using open-top fermentation," Cole says. "I thought the flavor was just spectacular." The way he saw it, American breweries often were using the same high-quality German malts, they had access to the same yeast strains, and hops weren't really a factor. It had to be the open fermentation. He was intrigued, and he was determined to produce a world-class hefeweizen.

Although Cole knew that open fermentation was important to the style, Fat Head's fermented Goggle Fogger in closed tanks for almost a decade. It wasn't until they opened a new production brewery in 2018 that Cole was able to include open fermentation. That change plus a few tweaks to the malt bill, in his view, are what took the beer from good to great—and the first of those three gold medals came in 2020.

"Open fermentation reduced some of the sulfur in the beer," Cole says. "Open fermentation has the ability to off-gas and [create]



ester formation. It's just a big component of what makes [hefeweizen] so special."

Key Details

Other Bavarian weissbier breweries that have inspired Cole include Michael Plank, outside of Regensburg, and Müllerbräu in Pfaffenhofen, north of Munich. A few years before building Fat Head's, Cole noticed that some of the weizens that he loved had a little color to them.

"It wasn't just pale, you know?" he says. Diving in deeper, he learned that some breweries were using a bit of caramel wheat malt in their recipes. "It gives a bit of this nice creaminess," he says, while also adding a little body and some color. Goggle Fogger also includes a bit of Munich malt for some breadly sweetness.

Fat Head's uses a traditional mash schedule for the style, designed to create a "relatively dry beer," Cole says. It goes like this:

- They start with a ferulic-acid rest at 113°F (45°C) for 10 minutes.
- Protein rest at 122°F (50°C) for 15 minutes.
- Beta rest at 144°F (62°C) for 35 minutes.
- They touch 154°F (68°C) for just five minutes, "literally to just break those chains up a little bit," Cole says.
- Finally, mash out at 170°F (77°C).

Fat Head's uses a blend of weissbier yeast, with Weihenstephaner's strain as its core. (Commercially available versions of that strain include SafAle W-68, White Labs WLP300 Hefeweizen Ale, and Wyeast 3068 Weihenstephan Weizen.) Cole recommends blending different yeasts to create the complexity that works best for your specific brewing system and process.

The target for the water is about 1:1 chloride-to-sulfate. The Fat Head's team adds a bit of calcium chloride to the boil for some extra softness or roundness to the flavor profile. (The water comes in from Lake Erie and is fairly balanced, Cole says, but with some temporary hardness in it via a higher level of calcium carbonate.) Hopping here is for balance; Fat Head's uses Sterling.

One of the unusual things about the process at Fat Head's is that the brewery uses a flotation tank for its lagers as well as the hefeweizen. Much more common in Central Europe than the United States, the flotation tank is a way to separate some trub from the wort once fermentation has begun.

At Fat Head's, they knock out the first batch of Goggle Fogger at 62°F (17°C) into the float tank. "We float with sterile compressed air," Cole says. After six hours, it goes to the open fermentor. Then the second batch of beer goes into the float tank,

sans yeast, and after six hours it joins the first batch in the open fermentor. They set the temperature to 68°F (20°C) and allow it to free-rise.

The float tank, Cole says, “removes some of the sharper, harsher, bitter compounds from the trub. We’ve also found that the colder temperature associated with the free-rise gives us a little more dynamic phenolic profile. The brewery is also “grossly under-pitching,” he says, resulting in some yeast stress that helps build the ester and phenol flavors that so many drinkers appreciate.

Initially, the German installers tried to talk Fat Head’s out of using the flotation tank. “We [brewed] one batch without the float tank, and we didn’t like it as well,” Cole says. “It didn’t have the same dynamics as the beer that was made using the float tank.” So, the float tank stayed.

Fat Head’s also skims the kräusen from the open fermentor. They use a big ladle to help clean off some of the top layer. When the beer has dropped to about 3°P (or 1.012), they transfer the beer to a closed conical that’s been heavily purged with CO₂. They package the final beer at about 2.75 volumes of CO₂, a bit higher than most Fat Head’s beers.

They don’t filter or centrifuge Goggle Fogger. Over time, some of the yeast tends to fall out of suspension, Cole says, but he doesn’t necessarily recommend rousing the bottles, even for competitions. “I find that when we reintroduce yeast from the bottom, a lot of times it is just dead yeast, and we get some of these meaty autolyzed characteristics that I don’t particularly like,” he says. “You can maybe rouse a can a little bit, but I’m not pouring the stuff from the bottom. You know—stirred, but not shaken.”

Tried-and-True

Fat Head’s didn’t enter Goggle Fogger into competition until after its new production brewery came online in 2018. Obviously, the results since then have been impressive.

“It’s been on somewhat of a roll,” Cole says. “There’s really no secret. I think our process is very unique to us.” He says he hopes the information shared here can help others improve their own wheat beers.

Discussing the wider beer market, Cole says his expectation is that the strong will get stronger. “I think people are gravitating toward tried-and-true brands and experimenting a little bit less because they’re afraid of getting burned. I’m hoping that as long as we keep our quality up and keep it affordable, we’ll be around for another 50 years.”



MAKE IT

Fat Head’s Goggle Fogger

From cofounder and brewmaster Matt Cole and his team at Fat Head’s in Ohio, here’s a recipe for the Bavarian-style weissbier that’s won three gold medals in the past four years.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.052 (12.8°P)

FG: 1.011 (2.7°P)

IBUs: 12

ABV: 5.4%

MALT/GRAIN BILL

5.25 lb (2.4 kg) German wheat malt

3.2 lb (1.5 kg) pale two-row

11 oz (312 g) Munich

4.5 oz (128 g) Weyermann CaraWheat

3 oz (85 g) acidulated malt

HOPS SCHEDULE

0.25 oz (7 g) Sterling at 80 minutes [6 IBUs]

3 oz (85 g) Sterling at 2 minutes [6 IBUs]

YEAST

SafAle W-68, White Labs WLP300 Hefeweizen Ale, or Wyeast 3068 Weihenstephan Weizen, or your preferred blend of hefeweizen yeasts

DIRECTIONS

Mill the grains and prepare for a multistep mash: Mash in at 113°F (45°C), rest 10 minutes; raise to 122°F (50°C), rest 15 minutes; raise to 144°F (62°C), rest 35 minutes; slowly raise to 154°F (68°C), rest 5 minutes; then slowly raise to 170°F (77°C) and mash out. Recirculate until the runnings are clear, then run off into the kettle. Sparge and top up as needed to get about 6 gallons (23 liters), depending on your evaporation rate. Boil for 90 minutes, adding hops according to the schedule. After the boil, chill to about 62°F (17°C), aerate the wort, and pitch the yeast. After 1 day, raise to 68°F (20°C) until fermentation is complete—about 7 days, or until the beer passes a forced VDK test (see “Hunting for Diacetyl,” beerandbrewing.com). Then crash to 30°F (–1°C) and condition 2 weeks. Package and carbonate to about 2.75 volumes of CO₂.

BREWER’S NOTES

Mash pH: It’s around 5.5, with knockout pH at 5.4.

Yeast: We use a blend of strains and under-pitch. The pitch rate is close to 0.333 million cells/mL/°P.

Fermentation: We use a floatation tank and open fermentation to achieve the classic phenolic and ester profile. While floatation might not be feasible for homebrewers, open fermentation is! The dimensions of a five-gallon bucket or carboy resemble that of our open fermentors. Just loosely set the lid on the bucket without snapping it into place, or place cheesecloth or sanitized aluminum foil over the top of the bucket or carboy. Close up the vessel once fermentation is complete. If open fermentation scares you, another option is fermenting in a vessel twice the size of your batch. All these options help reduce the barometric and hydrostatic pressure on the yeast, allowing full expression of their esters and phenolics.



Make Your Best...

Get to the heart of every beer style, as **Josh Weikert** shares tips and philosophies for brewing the very best.

Grodziskie

Don't get me wrong, I love a classic German-style rauchbier—but if I'm at a bar and see a grodziskie, I'm going straight for it. A style that had disappeared before homebrewers and then craft brewers resurrected it, grodziskie (or grätzer, in German) was one of the first beers that really fired my imagination. One fall afternoon, my brother-in-law pulled out a bottle of it as we sat on his back deck, enjoying the cool autumn weather and leaves. I took a sip, looked with widening eyes at the glass, then went back for more. This is a style that any smoked-beer enthusiast should know how to make. It also happens to be pleasantly simple to brew and wonderfully sessionable.

Style: Grodziskie is a low-ABV beer made from oak-smoked wheat. It has a lot of character for such a light beer, including noticeable wheat and hop flavors, ample smoke, and an elevated carbonation level that adds a nice, crisp bite. Given the wheat and carbonation, it should have a dense, long-lasting, bright white head atop a pale body. It should also be quite clear, despite the wheat. The IBUs are modest in absolute terms, yet the bitterness should be firm given the low gravity. Also worth noting: I've consumed a fair few of these beers since my first, and I've found that they're not monolithic in color, strength, or level of smoke. What they are, however, is consistently drinkable.

Ingredients: This is a simple grist: oak-smoked wheat malt—as much of it as you want to hit your target gravity. (Style guidelines often top out at 1.032–1.036, but I like mine at 1.040.) Hops are also simple: 25–35 IBUs of Noble hops, which I add at 20 minutes left in the boil. That's it. Some prefer the more herbal notes of Saaz or Tettnanger, but I like leaning into floral Hallertauer Mittelfrüh, which I find to be a better complement to the smoke and wheat. Finally: Pick your favorite clean ale yeast. Here I go with trusty German Ale.

Now, a note on variations: This is a great session beer for seasonal adaptation. The recipe here is my warm-weather grodziskie—simple, clean, pale. For the “shoulder seasons,” I might sub in a pound (454 grams) of light Munich for a subtle level of rich toast. For winter, I swap out a quarter of the grist for cherrywood-smoked malt for a richer, more assertive smoke character. Everything else stays the same. Voilà: three recipes for the price of one.

Process: The wheat can get sticky, so I include a nice portion of rice hulls in a mash that is otherwise pretty standard. Fermentation should go pretty quickly, but don't rush it off the yeast: I once had a batch of this with some residual acetaldehyde—it was minimal, but more than enough to wreck the flavor. Let it sit a week to 10 days, then crash and carbonate on the higher side.

Brew this one, especially if you're new to all-grain. This is one of those beers that's going to make you look like a better brewer—no need to tell them the recipe is so simple. Impress your friends, confound your enemies. *Na zdrowie!*



MAKE IT

Pora Roku Grodziskie

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.040 (10°P)

FG: 1.010 (2.6°P)

IBUs: 27

ABV: 3.9%

MALT/GRAIN BILL

7.5 lb (3.4 kg) oak-smoked wheat malt

11 oz (312 g) rice hulls

HOPS SCHEDULE

3 oz (85 g) Hallertauer Mittelfrüh at 20 minutes [27 IBUs]

YEAST

Wyeast 1007 German Ale

DIRECTIONS

Mill the grains, mix with the rice hulls, and mash at 152°F (67°C) for 75 minutes. Recirculate until the runnings are clear, then run off into the kettle. Sparge and top up as needed to get about 6 gallons (23 liters) of wort, depending on your evaporation rate. Boil for 60 minutes, adding hops according to the schedule. After the boil, chill to about 67°F (19°C), aerate the wort, and pitch the yeast. Ferment at 67°F (19°C) for 7 days, then allow a free-raise to ambient temperature until fermentation is complete and gravity has stabilized. Then crash, package, and carbonate to about 2.6 volumes of CO₂—or higher, depending on your comfort level. (Known as “Polish champagne,” grodziskie traditionally was bottle-conditioned; with sturdy bottles, you could take the carbonation north of 3 volumes.)

BREWER'S NOTES

Finings: Grodziskie is known for its clarity. Kettle finings (such as Irish moss or Whirlfloc) or tank finings (such as Biofine) are worth considering. **Variations:** This recipe is delicious, highly drinkable, and highly adaptable for any smoked-beer fans who want to tinker. Toy around with the grist by exchanging a pound (454 grams) of the oak-smoked wheat with something else you like or seasonally appropriate. I recommend sticking with low-Lovibond malts such as light Munich, Vienna, or various smoked malts. It may be blasphemy, but I've even swapped in rye malt with interesting results. The key is to keep the emphasis on smoke in a session-strength beer with noticeable Noble-hop aromatics and a nice, clean fermentation.

Extra Stout

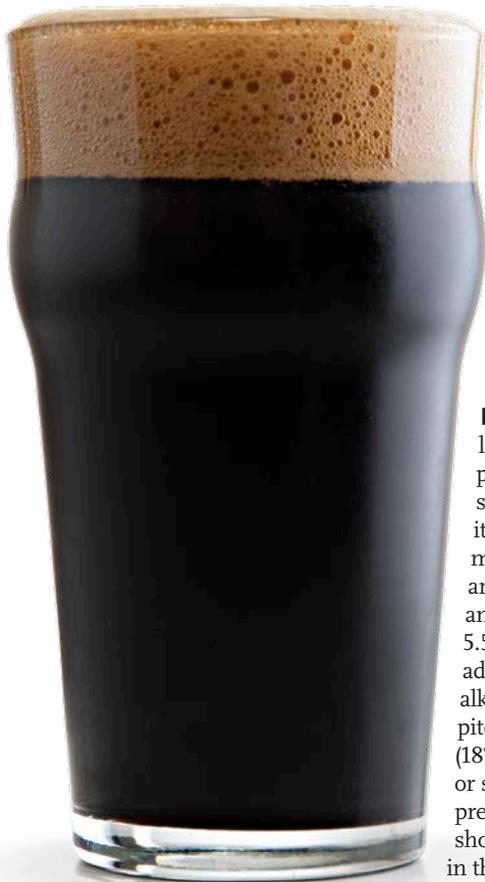
Well before autumn is here, I like to start brewing my fall “party” beers—and that brings us to one of my favorite styles: Irish-style extra stout. It shares a lot of DNA with its lighter cousin (see “Make Your Best Dry Irish Stout,” [beerandbrewing.com](#)), but this one gets an extra bump of strength, with deeper coffee and dark-chocolate flavors that make it a great seasonal beer. However, there’s more to it than just increasing your gravity, and there is a roasty pitfall to avoid.

Style: Some might say that dividing stouts into all these subcategories goes a bit too far, but despite their commonalities—yes, they’re all black and roasty—there are some prominent differences. In this case, we’re looking at mid-range ABV—more than dry stout, but much less than imperial. We should also be tasting more coffee and chocolate than we get in the dry stout—yet it shouldn’t be as sweet as milk stouts or as full-bodied as oatmeal stouts. We’ll also rely mainly on our malt flavors and not on our hops—let’s leave that to American stout—except for a balancing bitterness. Dark? Yes. Roasty? Sure. Yet those baseline similarities are far less important than the differences. A horse isn’t a zebra.

Ingredients: Let’s start with a big dose of Maris Otter for a nice breadly background. (If you’re more of a “biscuit” fan, I wouldn’t see the harm in splitting this 50/50 with pilsner.) Atop the base, we’ll add modest layers of crystal, at 40° and 80°L, and (of course) roasted barley. If you have access to the British crystal malts, I wholeheartedly recommend them—don’t worry if the Lovibond numbers are a little different. Finally, instead of a pale or traditional chocolate malt, I use a bit of chocolate rye. It sits better on the palate—we want to avoid excessive roast, which this malt seems to avoid thanks to its lack of husk. It also adds some pleasant spicy notes with a nice cocoa flavor, adding interesting depth. Plus, we’re already getting plenty of coffee flavor from the roasted barley. Hops are simple: any you like, at the top of the boil, starting around

30 IBUs. You can increase that in subsequent batches if the beer seems too sweet, but you want to avoid sharp bitterness—we want soft, refined roast with good balancing bitterness, not something that is teeth-rippingly bitter. Finally, I use the same German Ale yeast as I do in my lighter stout, and for the same reason: good attenuation, light esters in an otherwise clean fermentation, and a good background for the roast flavors.

Process: Despite the chocolate flavors, the process itself is pretty vanilla. You can go with a standard 152°F (67°C) mash—but it’s not a bad idea to watch your mash pH because roasted malts are acidic. (Know your water and aim for a mash pH of about 5.5–5.6 if possible; if you need to adjust upward, slaked lime can add alkalinity.) Boil, chill, aerate, and pitch as usual. Fermenting at 65°F (18°C) then an uptick to 68°F (20°C) or so will help clean up diacetyl precursors. All told, fermentation should go quickly; I’ve had this beer in the keg in fewer than 10 days. 



MAKE IT

Ulysses Extra Stout

One of the things I love about this beer is its stability. The roast continues to shine even after a few months in the keg or bottle. Some sweetness can build over time—but by then, we may be deep into winter, and that sweetness may be just the thing.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.060 (14.7°P)

FG: 1.015 (3.8°P)

IBUs: 33

ABV: 6.1%

MALT/GRAIN BILL

9.1 lb (4.1 kg) Maris Otter

12 oz (340 g) chocolate rye

8 oz (227 g) crystal 40°L

8 oz (227 g) crystal 80°L

8 oz (227 g) roasted barley 500°L

HOPS SCHEDULE

0.85 oz (24 g) Magnum at 60 minutes [33 IBUs]

YEAST

Wyeast 1007 German Ale

DIRECTIONS

Mill the grains and mash at 152°F (67°C) for 75 minutes. Recirculate until the runnings are free of particles, then run off into the kettle. Sparge and top up as needed to get about 6 gallons (23 liters) of wort, depending on your evaporation rate. Boil for 60 minutes, adding hops at the start of the boil. After the boil, chill to about 65°F (18°C), aerate the wort, and pitch the yeast. Ferment at 65°F (18°C) for 7 days, or until fermentation is complete and gravity has stabilized, then allow a free-rise to ambient temperature for 2–3 more days. Crash, package, and carbonate to about 2 volumes of CO₂.

BREWER'S NOTES

Avoid the temptation to make this beer too strong, too roasty, or too complicated—though one augmentation to consider would be some flaked barley to soften the edges and improve head retention a bit. Otherwise, keep it clean and simple, and you should be very happy with the results.

CIDERMAKING

The F-W-Word

What's It Mean to Be a Farmhouse Cider?

As with farmhouse ales, not every farmhouse cider is made on the farm. Yet the word tends to evoke an image and accompany certain traits—and there is plenty to appeal to drinkers looking for old-fashioned flavors with a sense of place. **By Beth Demmon**

RUSTIC. FUNKY. TRADITIONAL.

These are the kinds of words often used to describe farmhouse-style beverages. Much like the word “farmhouse” itself when applied to drinks, they’re evocative but lack clear definition. In brewing, farmhouse is more state-of-mind than specific designation, applied to styles as varied as saisons, wood-aged, mixed-culture beers, and kveik-fermented raw ales.

It’s not so different with cider. Even without concrete guidelines, “farmhouse” has appeal—and it just seems to work. When producers use it, certain characteristics—and consumer expectations—tend to emerge.

“When you say the word ‘farmhouse,’ a lot of experienced drinkers know exactly what that means to them,” says Brian Wing, cofounder and cidemaker at Green Bench Mead & Cider in St. Petersburg, Florida. “A lot of people think funk. ... Funky flavors, barnyard, farmhouse—exactly what it says.”

Farmhouse ciders tend to be dry but balanced, with an easy drinkability and distinct fermentation profile. From there, forks in the road proliferate. There may be funk (or not). They might be fermented with wild or native yeasts, or strategically inoculated with specific strains. Alcohol content varies. *Brettanomyces* may or may not be present.

“What’s ‘farmhouse’ for one person is not ‘farmhouse’ for someone else,” says Brian Fairfield, head of quality assurance at Graft Cider in Newburgh, New York.

Graft is known for applying a craft-beer sensibility to their ciders, aiming to bridge the appeal of both. One of Graft’s core products is Farm Flor, which they describe as a “dry and tart oak-aged farmhouse cider.” Fairfield says they modeled it after Spanish ciders—which tend to be very tart, if not sour—while softening its acidity for American drinkers.

While farmhouse ales tend to be inspired to some degree by European brewing traditions, cider’s somewhat looser interpretation lets Graft and other cideries play with the verbiage. “A lot of times with beer, it’s like, ‘Here’s the category, this is what this style is,’” Fairfield says. “And for a lot of cideries, it’s like, ‘Well, this is what we say it is.’”

Using words familiar to beer enthusiasts is one way to help them decide whether they’d like to try a new beverage. “That’s really the only reason we’re using the term ‘farmhouse,’ ... to identify a character that hopefully the customer can start to narrow down,” says Khris Johnson, head brewer and co-owner at Green Bench Brewing, the beer side of the business. “It’s trying to build an expectation for what they’re getting into

when they order that specific thing.”

Some cider styles hark back to beer in ways that relate to the senses, as with similar mouthfeels, carbonation, or finishes. However, at Graft, Fairfield says “farmhouse” is a more direct avenue between the two beverages because of fermentation profiles as well as certain flavors.

So, if farmhouse beer remains open-ended, what makes a farmhouse cider?

Product Versus Place

There are at least two schools of thought when it comes to farmhouse ciders.

To some, “farmhouse” is literal—it should denote a beverage made on a farm. Apples, after all, grow on trees, and those trees tend to be on farms. Cider-makers aligned with a more traditional approach may consider only ciders made with apples grown, pressed, processed, and packaged in one place—sometimes labeled as “estate” ciders—to be worthy of the farmhouse designation. Also, there’s an argument to be made that a typical consumer would expect that meaning.

A second perspective is less about where it’s made than about how the final product is perceived. Can a cider that captures the rustic character associated with farmhouse ales qualify as a farmhouse cider, no matter how or where it’s made?

Johnson says that he has had—and will continue to have—many debates about the virtues and pitfalls of each viewpoint with other producers. “Is the setting what we’re talking about?” he asks. “Or is it the



“If I bring in great heirloom juice, put it in a barrel, and let it naturally ferment, I’m doing the same thing that you would be doing on a farm. I can use modern techniques and processes to end up with a beverage ... that tastes like it could have been made in those same old-fashioned ways.”

character? We could have philosophical debates forever.”

As an urban brewery and cidery, Green Bench occupies a unique space. Situated well below most viable hardiness zones for commercial orchards in the United States, Green Bench sources their juice from hundreds of miles away. Yet they ferment it naturally—the farmhouse way.

Wing says he expects some pushback when he uses the term, but he wonders: If his ciders meet the same quality standards as those made on a farm, and they act as a conduit for curious consumers to continue exploring cider, then what’s the problem?

“If I bring in great heirloom juice from New York, put it in a barrel, and let it naturally ferment, I’m doing the same thing that you would be doing on a farm,” he says. “I can use modern techniques and processes to end up with a beverage that I think fits in that category—that tastes like it could have been made in those same old-fashioned ways.”

Unpacking Rusticity, Funk, and Terroir

Not all farmhouse beverages are funky, but almost all get described as “rustic.” In cidermaking as in brewing, there are specific ways to evoke that less-than-specific impression. (For a deeper dive into that on the beer side, see “Brewing Saison: A Taste of Rustic,” beerandbrewing.com.)

“‘Rustic’ is an interesting word because it suggests some sort of primitive process,” Wing says.

Brewing farmhouse beer can be more hands-on, with countless opportunities for a brewer to intervene—including ingredient selection, mash, boil, and fermentation—to achieve a specific, desired outcome. However, if a cidemaker’s goal is to make a similarly “rustic” drink, the natural elements and apple variety play larger roles in the end product than technique.

Cider apples—another loosely defined and debated term, incidentally—often contain elevated levels of tannin, differentiating them from sweeter and more palatable eating apples. Like bitterness in a hop-forward beer, those tannins can contribute a more rustic character to cider.

“I think tannins when I think of farmhouse,” Fairfield says. That balance between acid and tannin, coupled with a dominant fermentation signature, is what he believes defines the soul of farmhouse ciders.

Wing goes further. He says that while farmhouse is “barely defined for cider ... there’s sort of a general idea out there. Generally, you’re talking naturally fermented with wild yeasts and bacteria—whatever’s on the apples when

you press. Minimal intervention, usually long fermentation, long aging, no pasteurization. Usually no filtration in those cases, either.”

Farmhouse doesn’t necessarily mean funky, and vice versa, but these terms both tend to emerge when cidemakers ferment using wild yeasts on the fruit rather than pitching. As with “rustic,” the word “funky” is vague—but it at least hints at what consumers can expect while communicating another typical trait of a farmhouse-cider experience.

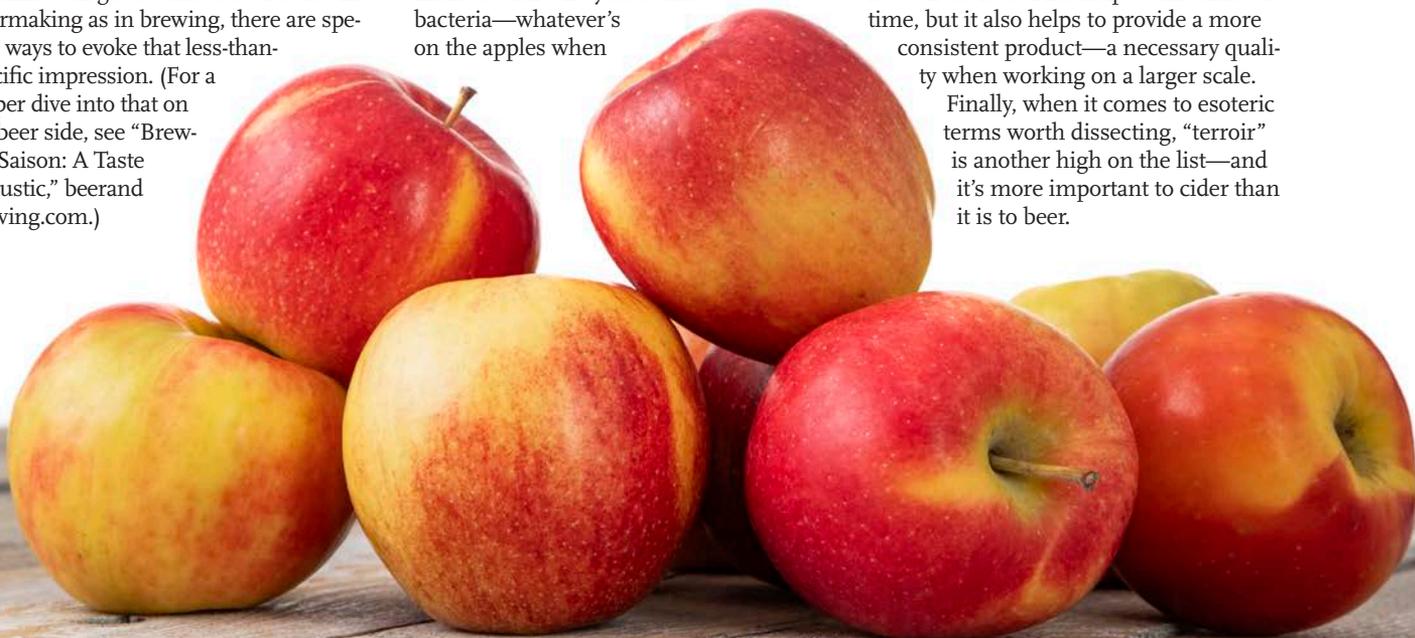
Descriptions from cidemakers can be telling. On its website, traditional estate cidery South Hill in Ithaca, New York, describes its Farmhouse as “rustic, complex. Bone-dry, unfiltered, unrefined, low or no sulfur. Natural wine. Not for everyone! Funky—a love-it-or-hate-it cider.”

ANXO Cider in Washington, D.C., makes Happy Trees, a “dry, tart, and funky cider,” using the native yeast found on Albemarle Pippin apples grown nearby in Virginia.

Drawing even nearer to beer parallels, Potter’s Craft Cider in Charlottesville, Virginia, bottles a product called Farmhouse Saison. It’s a cider made from Rome and York apples, the juice inoculated with a Belgian abbey yeast strain—rather than wild-fermented—to produce a fruity ester profile. It’s another variance in the seemingly infinite range of farmhouse possibilities.

At Graft, Fairfield says that Farm Flor gets what they call a “hybrid pitch”—they allow the natural yeast and bacteria to propagate, but they also pitch a wine yeast. By adding that yeast, they can complete fermentation in about two weeks, or about half the time it would take if left to its own devices. That helps with turnover time, but it also helps to provide a more consistent product—a necessary quality when working on a larger scale.

Finally, when it comes to esoteric terms worth dissecting, “terroir” is another high on the list—and it’s more important to cider than it is to beer.



Precious few brewers can source all the raw materials they need from one locale, let alone one farm. Cidermakers, on the other hand, can often source everything they need from one location. That gives them an advantage when it comes to creating geographically specific farmhouse ciders—even for urban producers who implement old-fashioned methods.

At Green Bench, Johnson says, they've been developing a house culture for years, using it on both the beer and cider sides of the business.

"In a lineup, you'll be able to drink our beer and be like, 'That's a Green Bench beer,' because we've developed a house rustic character," he says. "To me, that's the heart of 'farmhouse.' Everything we do is an agricultural product. So, no matter what, [even] if we didn't want to be, we are tied directly to terroir."

Capturing a sense of time and place cuts to the heart of a farmhouse-drink experience. Breweries such as Jester King in Austin and Scratch in Ava, Illinois, pride themselves on using as many local and foraged ingredients as possible. Cidermakers such as Left Bank in Catskill, New York, and Runcible in Mosier, Oregon, aim to do the same—just via different avenues.

Two Beverages Under One Farmhouse Roof?

There's no agreed-upon definition of what makes a farmhouse beverage, nor is there ever likely to be one.

However, Wing says that while beer and cider remain markedly different drinks, the farmhouse connection forms one of the clearest inroads between the two beverages. And given their closer connection to a primary ingredient, cider can actually encapsulate *more* of those variable farmhouse characteristics than beer can.

"In the right hands, apples can be super-delicate and super-complementary to all of that, and let that fermentation character really, really shine through in a way that sometimes doesn't happen as much in beer," Wing says.

Fairfield agrees, and he says he would encourage anyone who enjoys farmhouse ales to explore farmhouse ciders as well.

"There are enough similarities that people are attracted to [farmhouse cider], but there are enough differences that [keep people] coming back because they can't get that in beer," he says. Farmhouse cider can provide a perspective that's different enough to surprise and fascinate. "Just try a couple," he says.

No matter which camp you fall into—funky or clean, beer or cider, place or product—you might be surprised at what you find in the next barn over.

PHOTOS COURTESY OF RESPECTIVE CIDERMAKERS

FIVE ON FIVE

Cider & Perry

With more than 1,000 cideries in North America—most quite small—it can be hard to know where to start. Here are five recommendations from the pros.



Keepsake River Valley Reserve

Jeremy Pryes, founder and head brewer, Pryes Brewing in Minneapolis

"Visiting Keepsake Cidery in Minnesota is always a treat. Surrounded by 50-plus types of apples, it's a tranquil escape. River Valley Reserve is a blend of Ellis Bitter, Chisel Jersey, and Keepsake apples, and it offers a balanced mix of acidity and tannin with tropical and stone-fruit flavors, alongside hints of smoke, leather, and hayloft. It's a fusion of English and Minnesota styles, made through spontaneous fermentation with no additives—just pure cider, crafted over time."



Eden Heirloom Blend

James Maeger, director of special projects, Schramm's Mead in Ferndale, Michigan

"This is an ice cider that sets the bar for cidermakers around the world. At Schramm's Orchards, we grow over 50 varieties of heirloom cider apples, and every time I drink a cider from Eden it makes me want to quit. How can you compete with perfection? Every Eden cider is a master class in a bottle, with an insanely high [quality-price ratio]. Don't tell anyone—buy as much as you can get your hands on."



Eve's Ciders 2022 Sparkling Perry

Khris Johnson, head brewer and co-owner, Green Bench in St. Petersburg, Florida

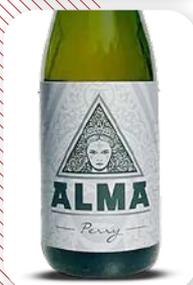
"One of my favorite ferments that I tried this year. ... Spritzy, clean, and so fresh, this perry is extremely fruity with incredible peach and refreshing smacked mint. There's such a nice minerality, almost slate and fresh river water. A wonderful expression of summer hikes and a gentle gulf-side breeze."



Son of Man Sagardo

David Coyne, cofounder, Obelisk Beer in Astoria, Oregon

"I think Sagardo, Son of Man's flagship cider, is the best. It's a Basque-style cider that's spontaneously fermented and aged in oak foeders. It's just funky enough and just hard enough. It's super-dry, but it's still full of apple and other fruit flavors. It's just great."



Alma Cider Perry

Monique Tribble, head cidemaker, Yonder Cider in Wenatchee, Washington

"Alma Cider holds a special place in my heart. Led by owner and passionate head cidemaker Dave [Klawer], their dedication to both the orchard and the art of cidemaking really shines through in everything they make. Spotting Alma at festivals is always exciting because I know they will be showcasing something exceptional. And while they make many great ciders, the Perry made with 100 percent perry pears is a real showstopper."

CIDERMAKER'S PERSPECTIVE

The Single Life

Christine Walter is owner and head cidemaker at Bauman's Cider, as well as a fifth-generation farmer living on land in Gervais, Oregon, that her family first homesteaded in 1895. Bauman's makes both traditional and modern ciders using apples and other fruits sourced as locally as possible. Here, she shares her process for transforming red-fleshed, acid-forward Mountain Rose apples into complex yet balanced heritage ciders. **As told to Beth Demmon**

CHRISTINE WALTER GREW UP pressing juice and selling fruit with her family. A decade ago, she realized they were missing an opportunity to ferment even a small percentage of the 40,000 or so gallons of apple juice they were pressing. She took it upon herself to read up on cidemaking and start making small batches on her own.

She had the fruit. She had the press. "I had nothing to lose," she says.

In 2016, Walter invested \$5,000 and started perfecting her recipes, selling at the farm store and soon moving into self-distribution. In 2023, Bauman's produced 140,000 gallons. After growing their business 50 percent every year over the past eight years, they opened their first taproom in the former Ecliptic Brewing space in Portland, Oregon, in April. That taproom will let them expand their output while keeping small-batch production on the farm.

Bauman's ciders fall into four different categories: year-round, harvest series,

seasonal, and limited release. Walter estimates their harvest-driven ciders make up about 13 percent of their overall volume, with most of their ciders falling under more modern styles. Even so, Bauman's has become one of the most respected producers of harvest-driven ciders in the United States. "Modern ciders pay your bills, so that you can afford to make the harvest-driven ciders that bring you so much joy," she says.

Here's how she does it.

Harvesting with Intention

"Unless there is impending disastrous weather conditions, [when] we're trying to get it off the trees in time to avoid something, then we are waiting until full starch conversion in the field. We're measuring, we're waiting for the right Brix, then we pick."

"If it's a high-tannin apple, you sweat it, which means you're letting it sit in the bins for a few days to weeks to get ideal pectin balance in the juice. Nothing that

doesn't have tannins gets sweated on purpose. We press it, and—partly driven by market forces and partly because I love to tell the story of a specific apple—I tend to always pick for single-varietal production. If I'm picking Golden Russet, I'm going to make a Golden Russet single-varietal unless I cannot—[if] we don't have the yield, we don't have the volume to fill a tank. Or, once it starts fermenting, if we're not loving the way it's going, we'll intervene and blend because some apples inherently have too high of a pH for fermenting on their own safely.

"But most of the time, when we're picking apples, we go into it intending to do single-varietals. If we get the single-varietal and it's finished cider, and then we taste it and we're like, 'Oh, it's missing something,' sometimes we can just stick it in barrels, or we can let it age for a minute. We've got an amphora we can stick it in, or we blend it with something else. So, that's kind of our mindset, to always go for the single-varietal. Because people love to buy single-varietals, even though it is a lot harder to make a fully balanced, well-rounded cider from a single-varietal than it is to do a blend. But it's always my goal."

Releasing Harvest-Driven Ciders Year-Round

"We want to sit on a lot of [harvest-driven ciders] for a while, to age the tannins and let them find themselves. If we do end up doing a blend rather than a single-varietal, we want to give it time to amalgamate the flavors so that it tastes like it belongs together. It's no problem to release it throughout the year—it's better. There's

"In [my] ideal world you would go to a bottle shop, and you would pick out three single-varietals of the same varietal by three different producers. You could put them side by side and say, 'How much of this difference [among them] is because of the maker? How much is because of the land? How much is because of the geographical location?'"



no way you would want to release all harvest-driven ciders in January, when they finish. Some of them want to sit around for a while. Some of them sit around for two or three years.”

Fermentation

“Ideally, we’re fermenting everything in stainless. That’s part of the reason we freeze some of our juice—even the harvest juices or high-tannin juices—because when we’re fermenting in stainless, we’ve got temperature control. It’s just such a more reliable ferment, and there’s no sense taking chances on a greater likelihood of malolactic fermentation and other crazy things happening.

“We do a lot of our co-ferments in macro bins. If we’ve got whole fruit—cherries or gooseberries or grapes, whatever—we’re punching down in macro bins for at least the first half of fermentation. But typically,

we’re doing that at the time of the year when it’s warm enough. It’s hard to catch them when they’re fermented and finished within a week. We have fermented in the amphora, but I’m a bigger fan of aging in the amphora just because it does such a crazy thing to the pH. The calcium and other minerals in the clay tend to shift the pH of the must upwards; until I have a little more experience with how this affects fermentation chemistry and kinetics, I prefer the amphora for post-fermentation time.”

Building a Harvest-Driven Cider

“We know what’s given us good stuff in years past. We take into consideration the way the apples are looking, the way the weather has been, the Brix as we’re picking them, and we make a decision right then: Are we going to pitch a yeast, or are we going to go spontaneous? Do we want

the yeast to struggle, or do we want to give them nutrition? The decision tree of a normal fermentation is complicated.

“Then you get it started fermenting. You’re tasting it every day, or every other day, just to make sure that it’s got what it needs—that it’s in a healthy spot that’s not going too fast. If you go too fast on a high-aroma apple, you’re blowing off aromatics. So, we’ll slow it down either with a partial filtration or we’ll rack it off the gross lees to reduce the big yeast load in there. We want to just bump along nicely, and sometimes we’ll control the temperature to do that, but then you risk making the yeast unhappy if you drop the temperature. It’s all of these subtle manipulations that you do when it’s in tank, in primary.

“We’re about half-and-half on harvest series, whether we pitch yeast or go spontaneous. We’re doing a little bit of *pied de cuve*, where you take a bottle from last year or even fresh juice, and you grow a yeast rather than letting it go spontaneous, in a really slow, slow, long lag phase. You’re much more likely to get *Kloeckera*, *Candida*—some of the funkier things will come in before the *Saccharomyces*. But if you do *pied de cuve*, you’re increasing the likelihood it’s just *Saccharomyces*, but it’s wild *Saccharomyces*.

“Once it finishes, we’re tasting it. Does it have the structure we want? Is it something that’s going to grow *into* the structure we want? We have a sense of how tannins develop in different apples, and you can bet that they go from being grippy and dry to becoming more juicy without gaining any sugar. They just taste juicy and have a perceived sweetness over time from those tannins.

“But I can tell [that] if it’s missing mid-palate, it’s never going to get mid-palate in aging unless it has time in oak or gets a little bit of oxidation. But controlled oxidation is best done in oak. Even if you take only a portion of the batch and put it in oak, so that we’re not taking up a ton of barrels for each batch, then you can blend it back in with this oak-aged stuff. We also have stuff that’s been [on] oak for years. We can always blend that back in. I have Porter’s Perfection from three

years ago in an oak barrel that I can pull into a Porter's Perfection blend if I want."

Single-Varietals Blended from Different Batches

"There are no laws surrounding single-varietal ciders. Each appellation in France or Italy has different rules about what a single-varietal wine is. It can be 80 percent, it can be 85 percent, it can be 100 percent in some places. Single-varietal does not mean it has to be 100 percent in the market.

"For us, that's the way we do it, primarily because it's an easy reminder. If it says SV, then I know it's 100 percent. If it doesn't say SV, but it says Porter's Perfection cider, then I know that we blended in something at some point. Under the rules, it's still a single-varietal, but we just don't say it. It's no high-horse thing. It's just so we know because different batches we do differently."

The Future of Single-Varietal Ciders

"In an ideal world, in my mind, you would go to a bottle shop that would have all kinds of 750 ml bottles, and you would pick out three single-varietals of the same varietal by three different producers. You could put them side by side and say, 'How much of this difference [among them] is because of the maker? How much is because of the land? How much is because of the geographical location?'

"The whole goal of harvest ciders is to have them tell a story. In cider, we are fighting so hard for harvest-driven ciders to be understood in the same way as wine, to have the same message that terroir matters, the weather matters. It all matters." 



MAKE IT

Bauman's Mountain Rose Single-Varietal Cider

At Bauman's Cider in Gervais, Oregon, owner and cidemaker Christine Walker prefers to bottle her ciders as single-varietals whenever the harvest makes it possible. This one uses the red-fleshed Mountain Rose apple, also known as Hidden Rose or Airlie Red Flesh apple, which is native to Airlie, Oregon, in the Willamette Valley.

"There are many red-fleshed apples grown around the world, and I have always found them to be high in aromatics and acid, which both lend to more interesting ciders," Walker says. "Mountain Rose apples don't have much by way of structural tannins, so they can be enjoyed within a week of finishing. The anthocyanins offer antioxidant protection, so it ages beautifully. I just drank a five-year-old bottle of Mountain Rose cider and couldn't have been happier with it."

CIDER

Batch size: 5 gallons (19 liters)
OG: 1.051 (12.6°P)
FG: 0.999 (-0.3°P)
ABV: 6.9%

INGREDIENTS

5 gallons (19 liters) Mountain Rose apple juice
 3 ml Pec5L pectic enzyme

YEAST

Lalvin EC-1118

DIRECTIONS

Add the enzyme and yeast to a sanitized fermentor, then pour the fresh juice on top. Aerate or oxygenate the juice, and then repeat after 12–24 hours. Patiently ferment at 54–58°F (12–14°C) until complete, then gently rack off the lees into a secondary fermentor. If the body isn't as hearty as you'd like, you can do a little *sur lie* aging: A day or two after specific gravity hits 1.000, gently stir to rouse the lees, then rack after allowing it to settle. Backsweeten if desired, package, and carbonate.

CIDERMAKER'S NOTES

Delicate Hue: Because this is a red-fleshed apple, we're careful not to use any sulfites around the juice or finished cider that might compromise the color. If you're cleaning any equipment or vessels with an oxidizing sanitizer or cleaner, do a citric-acid rinse before contact with juice or cider.

Fermentation: The EC1118 strain is straightforward, with a wide range of acceptable temperatures and relatively low nutrient needs. I add a small dose of pectic enzyme to help with clarity. I prefer to ferment red-flesh ciders (and most other ciders) a little cooler because a warmer, more vigorous ferment blows off a lot of those wonderful apple aromatics. I like to keep it cool and slow.

Backsweetening: I tend to backsweeten with a little organic cane sugar. I think the sweetness balances that gorgeous acid profile. To preference, obviously, but I typically like a final gravity sweetened to 2 points.

Tannin addition: Since sulfites are not a good option for antioxidant protection in this cider, you might try adding a scant 1/8 tsp of finishing tannins, such as Enartis Hideki.

Pét-Nat option: I will often bottle at about 1.005–1.007, for natural carbonation. This will take the cider to completely dry, but it's still lovely.



A New Day For IPA

No family of beers captures modern craft brewing's breakneck cycle of innovation, refinement, and more innovation quite like that of IPA. Here, we explore how brewers are still finding novel ways to push the flavor boundaries with new hop varieties, products, and techniques, while simultaneously making all those adjustments needed to increase drinkability and evoke the desire to have another—whether it's fresh takes on the theme or classics returned, better than ever.



IPA CHARACTER

Singular Haze

Brewing IPA with Its Own Kind of Juice

Now that hazy IPA is ubiquitous, brewers are working harder than ever to make novel examples that stand out in the crowd. From hopping to yeast selection, here's how a few of the pros are leaving their unique thumbprints on the style. **By Kate Bernot**

HOW MANY HAZY IPAS are out there? In a nation of roughly 9,700 breweries, the number surely stretches into quintuple digits.

At the start of 2024, hazy IPA represented 12.5 percent of all craft-beer dollars in chain retail. That was up from 10.7 percent the year before, according to data analyzed by 3 Tier Beverages, making it the No. 4 category behind standard IPA, seasonals, and imperial IPA. However, those numbers don't include the millions more soft, fruity pints poured at bars and taprooms across the country, or those sold to-go from breweries.

Hazy IPA is ubiquitous and widely enjoyed, and it is here to stay.

That means that quality is table stakes for the style—it's obligatory, or drinkers will look elsewhere. And as hazy IPA becomes commodified, these beers must have a point of view—a fingerprint that marks them as different from the sea of other (often less expensive) options that crowd the shelves and bar menus.

As recently as a few years ago, their haze—which telegraphed fruity aroma, fuller body, and a relative lack of bitterness—was the differentiator. Not anymore. Today, a brewer can purchase a commercial haze-making liquid that imparts no bitterness, no aroma, and no flavor to beer. In this era of haze for haze's sake, a hazy IPA must stand out from the

pack. Otherwise, it's just another permutation of a style that's become as commonplace in gas stations as it is in the coolest taprooms.

"With hazy IPAs, I would like to say that we're all attempting to achieve a certain level of the ideal," says Lauren Carter Grimm, who owns Grimm Artisanal Ales with her husband, Joe Grimm.

He finishes her thought: "Every brewer has an ideal," he says, "but it's not the same ideal for everyone."

Divergence

When brewers' visions of the platonic hazy IPA vary, their decisions related to ingredients, process, and equipment will vary as well. And it's a good thing they do.

In March, Seattle's Cloudburst said the quiet part out loud in an Instagram post announcing a new hazy IPA called Part of the Decoration. It reads, in part, "On one hand—it's pretty cool that a fairly new style of beer can take the world by storm in less than a decade, so much so that it's this inevitable, predictable, mundane option that everybody has access to all over the entire country. On the other—it could make a drinker unenthused, non-committal, fatigued, and jaded ... which is not cool ... because, uh, this is our jobs? AND OUR LIFE!"

The truth at the heart of the humor offers a challenge to brewers: Do your hazy IPAs have a signature? Could a drinker take a sip from an unbranded glass and recognize the beer as belonging to a particular brewery? If not, hazy IPA risks becoming a commodity like paper towels or pasta—brands don't matter, only cost and convenience.

"As hazy IPA becomes so ubiquitous, people are looking at the price and the packaging," says Steve Luke, Cloudburst's founder and head brewer. "Is it pretty? Is it cheap? Then I'll buy that one."

PHOTOS: MIAMI COURTESY/WWW.MIAMIACESPHOTO.COM



Luke brews his hazies to be drier—finishing around 1.8°P (1.007), hardly ever using wheat or oats in the grist—as well as more bitter—around 65 IBUs—than most others. That’s because he personally prefers that approach, but it’s also because it sets Cloudburst’s hazies apart. It gives the beers an angle in the market, too: Cloudburst’s hazy IPAs feature on many Seattle-area restaurant menus because their dryness makes them more food-friendly than sweeter versions.



“Because we don’t have a flagship ... people can make that educated guess” about a Cloudburst IPA, Luke says. “They know what 90 percent of one of our hazy IPAs is going to taste like.”

Among breweries that focus on hazy IPAs—such as Chicago’s Hop Butcher for the World—that kind of differentiation is a matter of existential necessity.

Jeremiah Zimmer, Hop Butcher’s owner and cofounder, says that creating a “house character” is paramount. He says he hopes that drinkers would describe Hop Butcher’s hazies as being characterized by “bright citrus, ripe tropical, and pleasant dankness.” Those are relatively universal descriptors, so—as with any brewing topic—the devil is in the details. Drinkers likely can’t see or explain it, but Zimmer says it’s his judicious approach to blending hops that offers a singular perspective on the style. (For more on that, see “Brewer’s Perspective: Blending Bangers,” beerandbrewing.com.)

“Not to put too much emphasis on Untappd, but we have people that will say, ‘I’ve never had better, hoppier beers,’ or ‘If you want hoppy beers in Chicago, you have to go here,’” Zimmer says. “And that is fulfilling every time I hear that.”

A unique take on hazy IPA is fulfilling and, amid a murky sea of turbid beers, an absolute necessity.

The Hops Have It

Because many brewers have access to the same fruit-forward, aroma-intensive hop varieties, each brewer’s own way of choosing and using them is what can create a thread that runs through a brewery’s IPAs. For Zimmer, hop selection is the most critical tool for creating the Hop Butcher thumbprint. He says all dry-hop blends need a “lead star,” which is the strong presence of a multifaceted hop that could stand alone in a dry hop. (And the ability to hand-select these hops is a major advantage.)

“There are almost tiers of hops, and I feel like hop suppliers know this, but they need to sell everything,” Zimmer says. “And some brewers are like, ‘I don’t care, that sounds good, let’s do these four [varieties].’ But if you don’t have a leading star, it might

be good, but it’s not going to be great.”

For example, he says he wouldn’t dry hop with a blend of Lotus and Denali because neither is a hop he’d use on its own. But Lotus with a heavier dose of Citra? Sure. Sabro-Ekuanot? Nope. But Sabro-Simcoe, heavier on the Simcoe? Yes.

“There are supporting cast members that need to be there if you’re going to make a bunch of hop blends,” he says, “but you’d never single out some of the supporting cast members ... because it wouldn’t be great.” He says the presence of a “lead”—that is, a dynamic and stand-alone hop variety—in a dry-hop blend is a major part of Hop Butcher’s hazy IPA *modus operandi*.

He also suggests a fresh, super-clean pitch of London Ale III yeast—he is particular about that detail. In the past, he says, Hop Butcher has brewed beers with an “absolutely insufficient” dry hop that still resulted in fruity, juicy, expressive flavors because of the high esters from that particular strain. Switching suppliers on the yeast, meanwhile, can create variance not only in the speed of fermentation but in the quality and intensity of ester production.

In Prescott, Arizona, Wren House also has a particular approach to hop selection that unifies its hazy IPAs—including the award-winning Spellbinder.

Head brewer Jake Ainsworth says brewers who can hand-select hops tend to select only for intensity—but that’s a mistake. In contrast, Wren House brewers approach hop selection not necessarily with varieties in mind, but with a desired set of sensory characteristics that define their hazy IPAs across batches and years.

During hop rubbings, they’re less concerned with whether a certain crop of Mosaic is the *most* Mosaic; instead, they’re asking whether that Mosaic contributes to Wren House’s desired flavor profile for hazies. If it doesn’t, they might select a different hop to create the desired sensory continuity. For example, if the brewers are evaluating Citra, but it doesn’t have the particular puzzle piece they were hoping it would bring to a blend, then they may substitute another hop that does.

“We like to take a qualitative approach during selection and not just check boxes,” Ainsworth says. “It becomes a balanced amalgamation of what we think our hazy IPAs should or could be.”

The Nature of Haze

Though Grimm released its first commercial hazy IPA a decade ago, the brewery still makes incremental improvements. The goal is to achieve what originally drew Joe and Lauren to the style when they tasted early batches of Hill Farmstead’s

Do your hazy IPAs have a signature? Could a drinker take a sip from an unbranded glass and recognize the beer as belonging to a particular brewery? If not, hazy IPA risks becoming a commodity like paper towels or pasta.

IPAs—what Joe refers to as a beautiful complexity. That’s what they hope defines Grimm’s hazies as well.

Some of their most critical lessons have been about the nature of haze itself. Working with Laura Burns, Omega Yeast’s R&D director, the Grimms are attempting to better understand what they refer to as the two types of haze: Type A and Type B.

Historically, technical brewing literature has considered haze to be a product of the grist, or a result of dry hops comingling with the grist to create a larger protein-polyphenol complex. That’s Type A haze. Omega and the Grimms have been digging into Type B haze, which occurs when specific yeasts encounter hops.

“It has a different appearance, and it’s not necessarily related to the grain bill in any way,” Joe says. “You can get a hazy appearance with a 100 percent base-malt beer.”

Joe says he believes the hazy IPAs that enchanted him more than a decade ago were brewed with yeasts that create this Type B haze. (Not all New England–style yeasts produce Type B haze; for example, Conan does not.) However, many brewers chasing that hazy appearance have achieved it with more adjuncts and flaked grains, producing Type A haze in a beer that’s more tannic and abrasively starchy.

Grimm’s hazy IPAs, meanwhile, go lighter on the wheat and oats in an effort to produce more of the Type B haze. Joe says that these tend to be slightly more translucent, despite high dry-hop loads, and that they’re less characterized by hop burn and astringency.

Still, it’s still not clear what Type B haze is, biophysically. It could be excreted by the yeast, or it could be activated by dry hopping. Omega Yeast has done sensory analysis to compare two otherwise identical beers—one brewed with yeast containing the gene that produces Type B haze, and the other brewed with yeast that doesn’t. It found little difference between the two. Joe’s conclusion is that Type B haze has no sensory effects beyond its visual presentation, while Type A tends to produce a beer with a more aggressive hop character.

Having their house yeast genetically sequenced has taught the Grimms a lot about its haze production, and that has informed how they brew. Grimm’s brewers serially repitch the house yeast from a top crop; it’s currently on generation 300-plus. At some point last year, however, Joe and Lauren noticed that their hazy IPAs appeared to be losing their haze more quickly than before. Genetic sequencing showed that the house yeast had stopped producing the gene responsible for Type B haze; as a result, the IPAs were displaying only Type A haze. So, last fall, they re-upped their house yeast from a banked supply, and *voilà*, it began producing the desired Type B haze again. This is important to the beers’ appearance as well as their attenuation: Grimm’s house yeast attenuates beers more fully and quickly as its generation count rises.

“Our yeast is adapting to our equipment and our processes, and in turn we are also adapting to our yeast,” Lauren says. She describes a “symbiotic loop” that wouldn’t be possible if the brewery were repitching fresh yeast every batch or two.

From Differentiation to Evolution

While there’s much still to be learned about haze, its chemical nature, and how it sensorially translates given the variables inherent in different beer recipes, what’s happening at Grimm, Hop Butcher, Cloudburst, and elsewhere signals exciting possibilities for the style.

It points to a future where yeast and other ingredients combine to form something greater than the sum of their parts: hazy IPAs that are products of specific breweries, bearing signatures that no one else could copy.



MAKE IT

Grimm Cloudbusting

Grimm Artisanal Ales is a name increasingly known among beer enthusiasts across the country and especially in its home state. Founded by Joe and Lauren Grimm in 2018, the Brooklyn-based brewery recently took home Brewery of the Year honors from the New York Craft Beer Competition for an unprecedented third time in the past four years. Hazy IPAs have been a particular area of refinement, featuring the use of a house yeast that’s evolved from a London ale strain by constant top-cropping and repitching.

One of their more popular beers—or, more accurately, series—is Cloudbusting. It’s always a hazy double IPA made with 100 percent New Zealand hops, but the hop blend varies from batch to batch. This is the blend from Cloudbusting #11, but you should feel free to make your own custom blend.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.077 (18.6°P)

FG: 1.020 (5°P)

IBUs: 14+

ABV: 8%

MALT/GRAIN BILL

11.2 lb (5.1 kg) pilsner

1.4 lb (635 g) white wheat malt

11 oz (312 g) chit malt

HOPS & ADDITIONS SCHEDULE

11 oz (312 g) dextrose at 60 minutes

0.5 oz (14 g) Rakau at 60 minutes [14 IBUs]

1.5 oz (43 g) each Nelson Sauvin and Rakau at whirlpool

3 oz (85 g) each Nelson Sauvin and Motueka at dry hop

1.5 oz (43 g) Nectarone at dry hop

1 oz (28 g) Rakau at dry hop

YEAST

Omega OYL-011 British Ale V or analogous London ale strain

DIRECTIONS

Mill the grains and mash at 155°F (68°C) for 45 minutes. Recirculate until the runnings are clear, then run off into the kettle. Sparge and top up as necessary to get about 7 gallons (26.5 liters) of wort, depending on your evaporation rate. Add dextrose and bittering hops, and boil for 60 minutes. After the boil, do a whirlpool step: Stir or recirculate to create a vortex, cooling the wort to 170°F (77°C) if possible. Add the whirlpool hops and steep for 30 minutes. Chill to about 68°F (20°C), aerate well, and pitch plenty of healthy yeast. Ferment at 72°F (22°C) until complete and the beer has passed a VDK test (see “Hunting for Diacetyl,” beerandbrewing.com), then drop to 65°F (18°C) add dry hops. Drop or remove hops after 3 days, then crash and cold-condition for about 5 days. Package and carbonate to about 2.6 volumes of CO₂.

BREWER’S NOTES

Yeast: We top-crop our yeast for repitching. For this beer, we pitch at a rate of 0.7 million cells per ml per degree Plato. On the homebrew level, making a big, healthy yeast starter may be the way to go.

FLAVOR FEVER

Develop Your

Hop Sense

For many of us, hop aromas are just about the most impenetrable of all smells. But some understanding of how the brain works with aromas can help you make and enjoy really delicious beers. **By Randy Mosher**

HUMANS HAVE KNOWN HOPS for millennia, but despite this long association—or romance, rather—they remain an enduring mystery, especially when trying to make sense of the complex sensations they evoke.

Let's start with the easy one: bitterness. This requires no special talent to perceive. We experience just a handful of tastes, each with its own mechanisms. Unlike aromas, these tastes don't blend together to create novel sensations. However, with 26 unique types of receptors, bitterness is by far the most biologically complex taste, essential for us to respond to a wide range of suspicious chemical types. Regardless, the brain tosses responses from all 26 receptors into the same bucket, simply labeled "bitter."

We all perceive bitterness somewhat differently. Because we have multiple

bitterness receptors and may have more than one copy of each, this opens the door to genetic variation, especially because our receptors vary in sensitivity. Most well known is the so-called "supertaster" phenomenon, but there are 93 other known genetic variations in at least 10 types of bitter receptor in humans. In short: Everyone's a bit different.

Perceptually, there is just a single type of bitterness, but it often feels otherwise. Some bitter percepts may be altered by sensations from other senses, especially astringent mouthfeel from tannins and other polyphenols. This creates a multimodal sensation, as senses merge into a flavor "object" that we can recognize and recall.

Our senses are independent systems, but most of the time they act in concert.

Almost as soon as they enter the brain, our chemical senses start blending themselves together. **Multimodality**, then, is really how we process our world.

Rather than keeping track of innumerable parts and pieces from multiple senses, it's much more efficient to combine many sensory inputs and tag the entire thing with a single label. In beer, hop bitterness and aroma interact with each other. Geraniol, the rose-smelling aromatic compound found in classic Pacific Northwest hops, makes bitterness seem smoother; however, the terpene hydrocarbons abundant in wet-hopped beers have the opposite effect. It works the other way around, too: Hop-bitter compounds can alter the duration and sensory profile of hop-aroma compounds.



Your Brain on Hops

Hops produce a cornucopia of terpenes and related chemicals called terpenoids, and these make beer unique among alcoholic beverages. There are a *lot* of them in hops.

Jeff Dailey, sensory manager for the hop company John I. Haas, says there are 600 to 800 of these compounds known to be present in various forms of hops. Terpenes proper are hydrocarbons, but “terpenoid” is a broader term that includes alcohols and other chemical types. They all share certain structural characteristics, but the many possible variations bring differences in aroma, stability, solubility, and other traits. Beyond terpenoids, hops bring green-smelling aldehydes, fruity and rummy esters, spicy phenols, and exotic thiols smelling of grapefruit, passion fruit, or—less pleasantly—cat pee.

You may have heard about terpenes in connection with cannabis, a plant closely related to hops and one that shares many biological pathways with them. Terpenoids, on the other hand, are abundant in citrus, flowers, parsley, herbs, and many spices such as nutmeg, cardamom, and coriander. This makes their vocabulary quite complex and not always top of mind. To further muddy the waters: Despite the abundance of terpenoids, it’s not always obvious—even to experts—which of them are *really* responsible for a hop’s aroma. Of the hundreds of cataloged terpenoids, not a single one of them has been identified as really, truly smelling like hops.

Hop aroma changes dramatically from harvest through beer production. In the field, they contain a lot of the hydrocarbon terpenes, which tend

to have sharp, bright aromas—think raw carrots and turpentine. Highly volatile, many are partially blown off during hop kilning. More compounds are lost during the boil, which is why we typically add hops valued for their aroma late in the boil or in the whirlpool, to help preserve those aromatics.

The chemical compounds you put into a beer, via hops, may end up being something quite different in the glass. Terpenes are quite unstable and readily converted into terpenoids, which smell and behave differently. That’s why most hop sellers use two profiles on their spider charts. In the example here (on the opposite page), it’s striking how different the Cascade profile is between raw hops and a cold infusion. Brewing creates further differences, and it does so in ways that are not that easy to predict. This transformation is especially dramatic during fermentation.

Hop aromas in beer are what are known as **configural smells**. For the same reasons our brains combine sensations to create multisensory “objects,” it also does this with aromas. Each smell enters the body as a stream of inhaled chemicals, generating a complex pattern of olfactory responses from among our 400 or so receptor types. This pattern improves and adjusts as it flows from the receptors through the olfactory bulb.

Then, at the output of the olfactory bulb into the brain, something weird and wonderful happens: The response pattern generated by the chemistry is tossed out. It’s lost forever. What replaces it is a new pattern—one of meaning, value, hedonics, context, and more. Like our brains’ multimodal strategy, this economizes on memory and other resources by embodying our multifaceted responses to aroma chemicals into a single percept. However, this also makes these aroma objects challenging to deconstruct.

For me, hop aromas are just about the most impenetrable of all smells.

Something else is also going on: **olfactory “buffers.”** Well demonstrated in wine, this happens when a group of similar chemicals—esters, in the case of wine—stimulate related olfactory receptors in an overlapping way. This results in a combined aroma note that remains unchanged even when most of its components are removed. In one notable wine study, all but one of 14 fruity esters were replaced, with no noticeable change. Something similar happens with hop terpenoids. Researchers have observed cooperative effects among geraniol (rose/geranium), linalool (lavender/coriander/orange), and beta-citronellol (lemongrass).

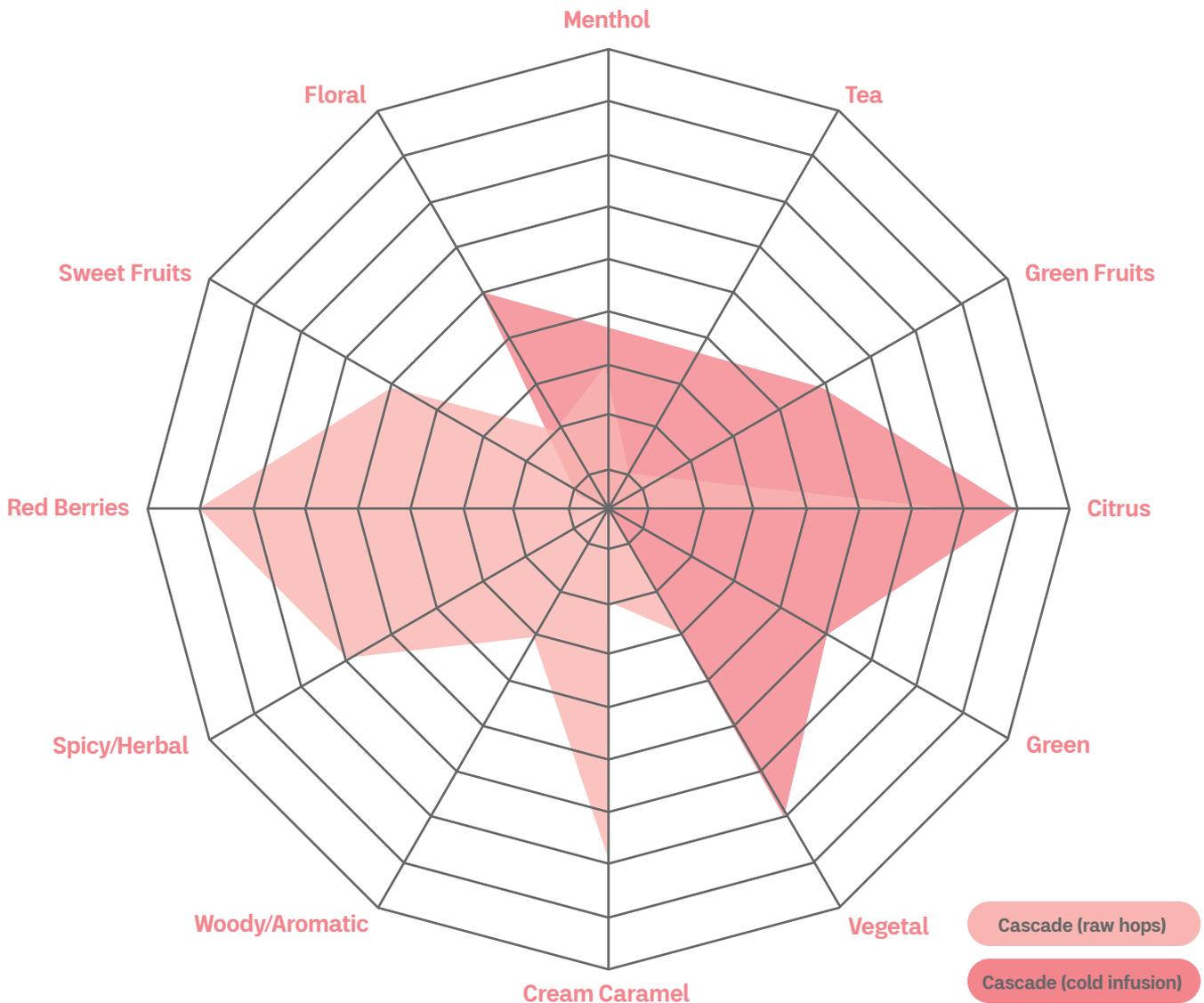
This is just one example of several possible olfactory interactions. These may be cooperative, as with the esters. Or they can be destructive, with one chemical squashing perception of another despite displaying little of its own smell. Burnt, barnyard, tar, and musty smells can to this. Although rare, there are true synergies in which a small, even undetectable amount of one chemical can boost or alter the intensity of another, and these can be important in fruitiness. Sulfur-containing thiols are notorious for potentiating other aromas.

Creative interactions are uncommon but striking. Here, two or more aroma compounds come together to create a new aroma unlike any of its components. The “melon” aroma in hops is probably one example. And when you add 3SMP (3-sulfanyl-4-methylpentan-1-ol)—a thiol with a sulfurous/onion odor—to the three terpenoids mentioned above, you get lime-like citrus notes.

What we think of as a generally “hoppy” aroma is itself a configural smell; it doesn’t really resemble any of its components. These configural smells often fold into even more complex mixtures: Beer itself is a configural smell made up of many others derived from hops, malts, and fermentation.

So, the next time you pop a cap off a beer bottle, give it a sniff. *That* is beer’s configural odor.

Hop aromas in beer are what are known as configural smells. For the same reasons our brains combine sensations to create multisensory “objects,” it also does this with aromas. Each smell enters the body as a stream of inhaled chemicals, generating a complex pattern of olfactory responses from among our 400 or so receptor types.



In Your Face: Smelling Hops

All of this paints a picture of mind-boggling complexity. It's a daunting challenge to smell hops in a meaningful way while also navigating how to incorporate them into our beers.

Fortunately, we have a pretty good ability to smell. With some practice, we can develop a workable vocabulary that helps us wrap our heads around this strange flower. Spider diagrams such as the one above can act as a helpful checklist of things to “look” for when you smell. You can even make up a blank one and connect the dots, to make your own profile—or create your own unique spider, reflecting how you perceive the various facets of hops.

We humans excel at categorizing just about anything, and hops are an excellent candidate. One way to organize varieties is more or less along lines of national origin. For a homebrewing book, I once made index cards of several dozen types and laid

them all out on the dining table, grouped by their similarities. It was a worthwhile exercise, and I ended up with seven categories representing concepts such as “Noble” or “Brittanic,” with each including hops that fit the description regardless of where they actually originated. Within each group, I ranked them in order of some relevant attribute, which made it easy to find substitutes and try novel varieties.

The longest established method of evaluating hops is called “rubbing.” Most brewers know it well: It involves putting a whole cone or broken-up pellet on the heel of your hand, rubbing until it smears across your skin and heats up a bit. Then cup your hands and smell. It helps to settle yourself in a mind-space with no expectations; just let any random thought pop into your head. Make a note of it and go back for more. It's messy (and sticky), so have some isopropyl alcohol handy to clean up.

In hop-forward IPAs, combining hop varieties is really where the magic is. For testing blends, there's a clever hack: Use a cannabis grinder. Once you've used it to turn hop pellets to dust, it's easy to make and evaluate blends by simply mixing specific amounts of different varieties until the mixture is pleasing. You can even sprinkle the mixed dust over a neutral beer and smell. It's not a perfect prototype of how it'll smell in your IPA, but it's a fine start.

With their immense complexity and somewhat alien nature, hops can be really intimidating. The good news is that you don't have to understand it all to make or enjoy really delicious beers. However, if you want to really dig into it and try to understand everything about them, that journey is just about endless. And for a guy like me, that means the fun will never end.

21st Century IPAs, 20th Century Hops

While Chinook and other classic C-hops may not be as exciting to brewers today as Citra, Mosaic, and Galaxy, some of the best IPA brewers in the country continue to treasure the “classics”—and they keep finding new uses for them, too. **By Stan Hieronymus**

BEFORE THERE WAS CITRA, there was a family of “C-hops,” led by Cascade, Centennial, and Chinook.

“Their citrusy, fruity American character has become one of the defining notes that differentiate American craft-brewed ales from all other beers,” Firestone Walker brewmaster Matt Brynildson writes in the foreword to Mitch Steele’s *IPA: Brewing Techniques, Recipes and the Evolution of India Pale Ale*, published in 2012.

OK. But what have they done for IPA recently?

Are they relevant now that Citra, Mosaic, Galaxy, Nectaron, Lotus & Associates help produce beers that drinkers describe as tasting of guava, melon, tropical punch, coconut, mandarin, lychee, and so on?

That’s a rhetorical question, asked for the sake of this story. Farmers in the Pacific Northwest harvested 14.6 million pounds of Cascade, Centennial, and Chinook in 2023, and growers east of the Mississippi River have turned Chinook into a unique brand. They’ve been around for more than 30 years, but brewers are still learning new things about them—and they’re learning new ways to use them, too.

Survivors and Survivables

It’s a story that’s been told many times: Interest in an experimental hop labeled 56013 was languishing in the late 1960s until Coors Brewing committed to support the variety, which was released in 1972 as Cascade. The interest didn’t last long. In oral histories kept at Oregon State University, USDA hop geneticist Al Haunold explains why.

The USDA mistakenly advertised Cascade as a direct replacement for Hallertau Mittelfrüh, based mostly on similar alpha-beta ratios; they didn’t have equipment to measure individual compounds found in the essential oil. “The beer tasted OK,” he says, “except when the beer drinker would have another bottle of beer ... something would come up through the nose he wasn’t familiar with,” he says. “We know now that it is geraniol.”

Geraniol was undesirable, until it wasn’t. Today, brewers understand that geraniol can play a role in the biotransformations of compounds, thereby creating fruity aromas and flavors; they also understand that those may interact synergistically with thiols to generate tropical flavors. (See “The Complex Case of Thiols,” beerandbrewing.com.)

Geraniol is one of eight beer-soluble and highly aromatic compounds—mainly contributing fruit-forward aromas and flavors—that Yakima Chief Hops began labeling as “survivables” in 2021.



The Survivables: Cast of Characters

Centennial and Chinook are among the varieties highest in survivable compounds and, thus, are good candidates to use earlier in the brewing process. Cascade, meanwhile, is relatively low and a better fit for dry hopping. Here are the eight key players.

Geraniol: Most terpenes in hops, such as myrcene, are volatile and do not survive the brewing process. Because they are oxygenated, monoterpene alcohols are more likely to end up in beer. As its name suggests, geraniol may smell geranium-like as well as citrusy. It may also be transformed into citronellol during fermentation, creating a new compound that contributes to tropical aroma.

Linalool: Like geraniol, linalool is a monoterpene alcohol. Much of it will be lost during the boiling process, but it is soluble in beer and will survive the whirlpool and active fermentation. It was established more than 50 years ago as the compound associated with “hoppy” flavor, although it was already understood there was no one marker. On its own, it is fruity in aroma and flavor, reminding some of Froot Loops.

2-nonanone: At its best, this aromatic ketone smells sweet and fruity. It also may be perceived as buttery or waxy.

2-methylbutyl isobutyrate: Like the other isobutyrate, an ester, and one of the most prominent volatiles. Its aroma is fruity, specifically apricot.

Isoamyl isobutyrate: This ester contributes fruity, tropical aromas.

Isobutyl isobutyrate: This ester is known for adding pineapple and other fruity aromas.

Methyl geranate: This is a fruity and floral ester. Centennial is particularly rich in methyl geranate.

3-mercaptohexanol (3MH): A thiol that may smell tropical and of grapefruit, 3-mercaptohexanol (3MH) may also be converted into 3-Mercaptohexyl acetate (3MHA), adding passion-fruit flavor. Also known as 3-sulfanylhexan-1-ol (3SH).

Using the research involved in choosing these particular compounds, YCH formulated Cryo Pop. The lupulin-rich, blended pellets benefit from the same cryogenic hop-processing technology that YCH introduced in 2017 for individual varieties. They also produced a poster, which has been updated several times, that makes it easy to visualize how to maximize the impact of many varieties—including Centennial, Chinook, and Cascade.

Survivables 101

The survivables tracked include two terpene alcohols (linalool and geraniol), one ketone (2-nonanone), four esters (2-methylbutyl isobutyrate, isoamyl isobutyrate, isobutyl isobutyrate, and methyl geranate), and one thiol (3-Mercaptohexanol). “For the other thiols, we have yet to find a supplier to purchase an analytical-grade standard,” says Pat Jensen, director of R&D.

The survivables chart is far from comprehensive; it mainly features the most popular hop varieties that YCH farmers grow. However, the lessons to be learned also apply to the wider universe of hop cultivars.

YCH includes four specific suggestions about how to use this information:

- **Use hops that are higher in survivables earlier in the brewing process.** Example: using Centennial in the whirlpool.
- **Use hops that are lower in survivables later in the process, such as post-fermentation dry hopping.** Cascade is such a candidate.
- **Blend hops to maximize beneficial concentrations.** For example, because Nugget is high in linalool and Chinook is high in geraniol, the two are good candidates for blending.
- **Load the wort stream with survivables early.** High concentrations of survivables in the whirlpool and during active-fermentation dry hopping create the conditions for biotransformations.

The Old-School Edge

“I used to say it was cool to say ‘old school,’” says Industrial Arts founder Jeff O’Neil. But now he is careful about how he uses his words.

Industrial Arts brews beers with the hippest varieties, and the team is not afraid of advanced hop products. However, O’Neil says he is certain that what sets their beers apart from one down the street is the whole-cone C-hops they add in the hopback. It’s “one more layer,” he says. “It adds something raw that others can’t.”

He learned his craft in the 1990s in the San Francisco area—“C-hop central,” he says. “That history is so important. From where I came from, that is the backbone. I feel an obligation to defend it.”

When the USDA released Chinook in 1985, people in the industry labeled it “super-alpha” and used it primarily for bittering. “We think of it as an aroma hop,” O’Neil says, before telling a story about how he “fell back in love with Chinook.” It was during hop selection, and a merchant was showcasing experimental varieties. “It was ‘smell this, smell this,’ and then we smelled Chinook. It is so expressive.”

Like Cascade, Chinook is “grippy” and “has some bite,” he says. “I won’t say bitter. Just different.”

He believes whole cones amplify their raw quality. “We use them for that edge. If you are local to the Hudson Valley area, you can distinguish our beer.”

The Forgotten C

Georgetown Brewing head brewer Reid Spencer is a Chinook advocate. “I love Chinook,” he says. “I’m often reminded how great it is at selection. It can have the most explosive aromatics. Sometimes it even out-performs Citra [at the selection table]. It can be a little forgotten.”

Chinook was one of five hops in Bodhizafa IPA when Georgetown set out to add a piny IPA to its portfolio in 2011. They had already made tweaks to “Bodhi” when it won gold at the Great American Beer Festival in 2016; it has grown into the Seattle brewery’s flagship, surpassing sales of the iconic Manny’s Pale Ale. Chinook is still there.

Brewed with a portion of rolled oats, Bodhi is now basically a three-hop beer: Besides a dash of CTZ at the start of the boil, it’s Citra, Mosaic, and Chinook. Chinook joins Citra and a smaller measure of Mosaic on the hot side; all three are included in the dry hops. The full range of resulting citrus flavors also gets a distinct pineapple note, which will seem familiar to brewers who’ve rubbed Chinook grown in the Midwest.

“Straightforward fruit, pineapple,” says Jonathan Moxey, head brewer at Rockwell in St. Louis, describing Chinook from Hop Head Farms in Michigan. When Rockwell opened, Moxey was familiar enough with Michigan hops that he knew he wanted to focus on them. “I don’t want to be different for difference’s sake. It is an opportunity to get to a similar place taking a different path.”

Spencer says he understands the role terroir can play in the character of any variety. Georgetown uses close to a half-million pounds of hops per year in producing about 125,000 barrels of beer, which is good reason for him to spend much of the harvest season in the nearby Yakima Valley. “I’ve gravitated toward Moxee-grown Chinook,” he says, pointing to the region around the city with the same name, located a bit southwest of Yakima.



A Known Quantity

At La Cumbre Brewing in Albuquerque, founder and brewer Jeff Erway also has a longtime relationship with Chinook. “After 20 years, honestly, I like it more every year,” he says. “I am never disappointed.” Chinook is central to Elevated IPA, La Cumbre’s flagship that won GABF gold in the crowded IPA category in 2010, less than a year after the brewery opened.

The recipe has changed because varieties such as Citra and Mosaic became available, but Chinook still makes a significant contribution to the aroma and flavor. “If you want classic American piney character ...” he says, letting the sentence finish itself. The La Cumbre team adds Chinook at first wort, then again at 30 and 15 minutes left in the boil. It’s also 20 percent of a dry-hop load that includes Citra and Mosaic.

What hasn’t changed much is the bitterness. About 10 years ago, when La Cumbre acquired equipment to measure bitterness accurately, it measured about 80 IBUs. It measures the same today. “I consistently like the bitterness [of Chinook],” Erway says.

He’s equally impressed with its consistent aroma. Last harvest, he says, “I rubbed 11 different lots of Chinook. I would have gladly picked any of them, something I cannot say about any other hop. [Northwest] farmers clearly have figured out how to grow it.”

And it comes at a price that works for both La Cumbre and farmers. “It’s not lost on me what the agronomics are,” he says.

More than a Memory

“I think it takes a little storytelling,” says Steve Luke, founder of Cloudburst Brewing in Seattle, talking about C-hops in general and Chinook specifically. “There are certainly shinier hops in the cooler.”

In Seattle, he says, drinkers are used to reading hop bills and know what to expect, or else they expect to be surprised. He uses Chinook throughout the brewing process, and he’s also brewed a hazy IPA using only Chinook. “Twice, the response was so good,” he says. “People went, ‘No way this is 100 percent Chinook in a hazy IPA.’”

In February, Cloudburst released a second batch of Memory of a Memory IPA. It was brewed using:

- Centennial at the start of the boil.
- Chinook at 20 minutes left in the boil.
- Chinook and Centennial at two minutes.
- Chinook, Centennial, and Simcoe in the whirlpool.
- Chinook, Cascade, Simcoe, Simcoe Cryo, and Columbus Cryo in the dry hop (on Day 7 of fermentation, at ambient temperature, after yeast cropping).

On Instagram, the brewery told drinkers to expect “a modern interpretation of an early 2000s PNW IPA. Back in the glory days, if our memory serves correct, those versions were assertive, rough around the edges, with a crystal-malt presence that sometimes came off sweet and/or muddled, a high perceived bitterness, an unfiltered sheen of haze, with aromatic notes of grapefruit and pine trees and sharp esters.

“And while we look back fondly on these formative beers, if we were to replicate one to the ‘T,’ in this day and age, it probably wouldn’t be all that great. So, we re-imagined it, and brewed what they could’ve been, with what we know now, 20-plus years later, making one with all the things we looked back fondly on while editing away some of those less desirable components. We hope this beer tastes familiar to you, but also like it was brewed in the year 2024.”

That’s a pretty good story.



MAKE IT

Cloudburst A Memory of a Memory

From Cloudburst founder-brewer Steve Luke, here is a modern interpretation of an old-school, unfiltered Pacific Northwest IPA, leaning into Chinook, Centennial, Cascade, and Simcoe.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.060 (14.8°P)

FG: 1.009 (2.4°P)

IBUs: 49-ish

ABV: 7%

MALT/GRAIN BILL

9.9 lb (4.5 kg) Rahr Standard

2-Row

4 oz (113 g) Simpsons Crystal T50

3.5 oz (99 g) Weyermann

Carafoam

1.5 oz (43 g) Weyermann

Acidulated

HOPS & ADDITIONS SCHEDULE

0.15 oz (4 g) Centennial at

75 minutes [5 IBUs]

8 oz (227 g) sugar at 30 minutes

0.15 oz (4 g) Chinook at

20 minutes [5 IBUs]

1 tablet Whirlfloc at 20 minutes

0.5 oz (14 g) each Chinook and

Centennial at 2 minutes

[18 IBUs]

0.5 oz (14 g) Chinook, 1 oz (28 g)

Centennial, and 0.75 oz (21 g)

Simcoe at whirlpool [21 IBUs]

3 oz (85 g) Chinook, 3 oz (85 g)

Cascade, 2 oz (57 g) Simcoe,

and 2 oz (57 g) Simcoe Cryo at

dry hop

YEAST

Imperial Corporate A30 (our house strain), or any American or British ale strain

DIRECTIONS

Mill the grains and mash at 153°F (67°C) for 45 minutes.

Recirculate until the runnings are clear, then run off into the kettle.

Sparge and top up as necessary to get about 7 gallons (26.5 liters)

of wort, depending on your evaporation rate. Boil for 75 minutes,

adding hops, sugar, and finings according to the schedule. After

the boil, do a whirlpool step: Stir or recirculate to create a vortex;

when the wort has cooled to about 195°F (91°C), add whirlpool

hops and allow 15 minutes to steep. Chill to about 65°F (18°C),

aerate the wort, and pitch the yeast. Ferment at 67°F (19°C) until

gravity has dropped to about 1.013 (or about 1°P left to terminal),

around Day 7, and add dry hops. After 5 days, drop or remove

hops (or rack to secondary) dropping or removing additional trub

as needed every 2 or 3 days. Be mindful of hop creep, testing for

VDK if possible (see “Hunting for Diacetyl,” beerandbrewing.com)

or giving the beer enough time to reabsorb the precursors. Then

crash, package, and carbonate to about 2.70 volumes of CO₂.

BREWER'S NOTES

Hops: Using the freshest, brightest C-hops you can get is imperative. With the dry hops, we’re in unitanks all the way through—so we dump hops 5 days after dry hop and then every 2–3 days after that until we crash.

Water and pH: We add the equivalent of 2 g gypsum to the mash and 2 g calcium chloride at the start of the boil. Optionally, you can add lactic acid after the boil to get the knockout wort pH down to 5.05–5.15.

American IPA Remastered

Before there was hazy or even a defined West Coast style, there was an IPA that emerged as a brashly hopped counterpoint to British ale. It never went away—but it evolved. And today's brewers are making it better than ever. **By Joe Stange**

HOPFUCK! THAT WAS THE name of the beer blowing my mind, sipped from a plastic cup—filled via picnic tap and corny keg—in a large cellar under a fake Old West saloon in New Haven, Missouri, in August 2009.

What I had never tasted before—not like this—was a punchy explosion of grapefruit backed by light, fresh pine. It was bitter as hell but not tongue-coating. There was some caramel, but that wasn't weird—it was just a platform for all that hop flavor, its sweetness pushing that juicy citrus, its roundness pillowing that piney bitterness.

The person who made this, I thought, is some kind of hop-wizard.

The person who made it is Steve Crider, cofounder and brewer at 2nd Shift, which opened several months after our local homebrew club paid him a visit. In going public, Crider wisely changed the beer's

name to Art of Neurosis—because he was, and is, neurotic about it. “That's the beer I've jacked with the most, and tweaked on the most, and messed with the most of any beer I've brewed, probably to this day.”

He's still jacking with Art of Neurosis—and we'll get to that—but I'll always remember its *true* name, and I'll remember how it shifted my paradigm for what hops can do in beer. Even today, whenever we talk about the throwback style we call American IPA, I always think about Hopfuck.

Still Cranking Out the Hits

Here's our current situation: Over the past eight years or so, hazy IPA was ascendant. It's still popular, but now we often see a different modifier appear: “West Coast.” It's code for clarity, for the bitterness and crisp profile that's emerged as a counterpoint to hazy, sweetish, and soft.

If you spend too much time in tap-rooms—it's OK, you're among friends—it's tempting to think that we're looking at the two dominant strains of IPA today: hazy/New England and clear/West Coast. That's not the reality.

Consider: The Brewers Association added the Juicy or Hazy IPA category to the Great American Beer Festival competition in 2018. However, it wasn't until 2023 that West Coast-Style IPA got its own category. Until then, brewers making the leaner, paler, drier style were competing in the category called American-Style IPA.

Competitions matter to brewers, but the categories also reflect what people are brewing and drinking in the real world. The significance of the new category is twofold: First, West Coast IPA now has the home it deserves. Second: American IPA gets to be its own thing. It can reclaim its identity.



So, what makes American IPA different? There are a few things—a little bit of caramel malt, a little more color, a little more sweetness and body—and there are some implications that follow. Those differences permit a wallop of bitterness that can get a bit resinous without disrupting the balance. Arguably, they also limit your choice of hops—not everything goes with that profile. Big-time citrus-pine is the usual approach. (Overripe papaya funk, not so much.)

Sounds old-fashioned, right? An apt observation comes from Vinnie Cilurzo, cofounder and brewmaster at Russian River in Santa Rosa and Windsor, California: “The American IPA you’re talking about is like a snapshot in time.”

True. And yet it didn’t fade into obscurity. What it did was evolve—and it sells.

Most top-selling IPAs are *still* of this type—clear but not straw-pale, with enough body and sweetness to carry real bitterness. Looking at IPAs in retail sales (through the end of March, according to Chicago-based market research firm Circana), we find these six in the top 10: Voodoo Ranger Imperial IPA (1st), Elysian Space Dust IPA (4th), Lagunitas IPA (5th), Bell’s Two Hearted Ale (6th), Founders All-Day IPA (7th), and Cigar City Jai Alai IPA (9th).

Incidentally, the other four in the top 10 are hazy.

Going Back to the Analog

Temecula, California, is about 30 miles from the beach in Oceanside—about as West Coast as you can get without getting your feet wet. That’s where Cilurzo grew up and started homebrewing in the late 1980s. It’s also where he and Natalie Cilurzo in 1994 founded Blind Pig Brewing, and where he started brewing the influential Blind Pig IPA.

“We didn’t call it West Coast IPA,” Cilurzo says. That wasn’t a thing “because there was only English IPA. ... So, what we were making just naturally was *American* IPA because it was being done with American hops.”

The American IPAs that emerged in the ’80s and ’90s weren’t the first brewed on American soil. It would be negligent to ignore Ballantine IPA, first brewed in 1890 in New Jersey, and known for its oak maturation

and bitter smack of English hops. (Pabst now owns the brand and recently revived it, again.)

However, if American IPA needs a birth year—and it doesn’t, really—there’s a case to be made for 1983. That’s when Bert Grant’s India Pale Ale appeared in Yakima, Washington, British-inspired but packed with the Cascade hops that Grant loved. That’s also the year Sierra Nevada released the fresh-hopped Celebration Ale in something like its current form.

Yet it would be years before American IPA established its own identity.

“In fact, when American IPA was gaining popularity, Natalie and I would wander the halls of the Great American Beer Festival, just looking for IPA,” Cilurzo says. “And most were English. When we did find those that were making ‘American IPA,’ they were often the same color as an ESB or an English IPA—they had that dark copper color, you know, red, sometimes amber.”

The sliver of caramel malt that remains in American IPA is a strand of DNA that connects it with those English-inspired examples. A fervent embrace of American hops didn’t mean a dramatic change in malt bill—not right away. That came later, and gradually.

Popularity also came gradually. “It was so hard to sell IPA at the time,” Cilurzo says. “We made a Golden Ale at Blind Pig as well. We definitely sold more Golden Ale than we did Blind Pig IPA.”

The early movement in American IPA was “100 percent brewer-driven,” he says. “The consumers weren’t asking for hops. That was just brewers making what we wanted to drink. And then, in time, consumers picked up on it, and off it went.”

Over the next decade, the brewer-driven trend would kick into another gear. A moment of acceleration came in June 2004, at the National Homebrewers Conference in Las Vegas. That’s where Cilurzo first shared a homebrew recipe for Russian River’s Pliny the Elder—and it took off. Via homebrew mags, blogs, and message boards, it went nationwide.

“I’d never had the beer, but it was rated the best beer in the world,” 2nd Shift’s Crider says of Pliny. “I really copied that.” Hopfuck was his spin on it.

Meanwhile, just outside Cleveland, Matt Cole was at Rocky River Brewing, tinkering with an IPA called Hop Goblin. Its inspiration: what else?

“Honestly, it was a Pliny knockoff,” Cole says. “There was this *Zymurgy* issue, right? And it had Vinnie’s recipe. And I fucking just manipulated it. I just took all of his additions, and I twisted them around. ... I followed what Vinnie did—not necessarily verbatim with hops—but he knew how to layer hops, man, and how to get the best out of them. And he’s influenced a lot of people, you know?”

Besides Cilurzo, Cole says he learned a lot from other California brewers, including Arne Johnson at Marin and Rich Norgrove of Bear Republic. “They were hitting it harder,” taking steps to preserve hop oils, reduce vegetal matter, and more.

When he cofounded the Fat Head’s brewpub in 2009, Cole updated Hop Goblin to become Head Hunter IPA. He still tinkers, even if it accounts for about 45 percent of sales and wins lots of awards. Anyway, it’ll be hard to top last year: Even before we named it one of our Best 20 Beers of 2023 after blind tasting, Head Hunter won gold at the World Beer Cup, and then did it again at GABF.

Its category? American-Style IPA.

The Malt, Remastered

Early on, West Coast brewers were influencing American IPA—but West Coast IPAs were different back then. Consider one of the beers responsible for coining the style: Green Flash West Coast IPA, released in 2004. Then, as now, it was reddish-amber, featuring a comforting dollop of British crystal in the form of Bairds Carastan (30–40°L).

For years, Blind Pig IPA included some 40°L crystal. “I don’t remember the mindset, but it was still a pretty small percentage,” Cilurzo says. He mentions Sacramento’s Rubicon IPA and Pizza

The early movement in American IPA was “100 percent brewer-driven. The consumers weren’t asking for hops. That was just brewers making what we wanted to drink. And then, in time, consumers picked up on it, and off it went.”



Port's Swami's IPA in San Diego as two early examples in that mold. "What really made these IPAs stand out so much was the fact that, yes, they did have crystal malt—but it was really small amounts."

Today, that's exactly what defines American IPA. "We're not talking about some of the percentages that we saw in the '90s or even early 2000s for that matter," Cilurzo says. "We're talking maybe 2 or 3 percent."

It doesn't take much to make an impression.

"I still think that's a necessary thing in these beers," says Alexandra Nowell, former head brewer at Three Weavers in Los Angeles, now working toward setting up a new brewery, Mellotone Beer Project, in Cincinnati. "But we're talking really light—C-15, light-grade crystal that can still provide a little bit more complexity to the beer itself. ... I think the concept of American IPA has drifted into a more modern place."

Caramel malt has become uncool among IPA brewers today. Many avoid it altogether, while others have reduced, lightened, and fine-tuned it—essentially, they've learned how to use it with finesse.

Incidentally, the best IPA I had last year has about 10 percent C-15 in its malt bill. Head Hunter's base malt has evolved, too—it's two-row these days, but it used to include Maris Otter, "just to get the body up," Cole says. "And we did that for years. That goes to show you that there was a point where *body* meant something—when you're gonna pound the fuck out of what we did from a hops standpoint. But, in hindsight, all we were doing was just decreasing our drinkability."

At 2nd Shift, Art of Neurosis is a dramatic case of American IPA's evolution. Despite its inspiration, Crider immediately started molding Hopfuck to his own Midwestern tastes, brewing what he calls a "chewier" beer. (The brewery still proudly markets Art of Neurosis as "a hop sandwich.") He embraced crystal 40°L and mashed high—158–159°F (70°C). "And I did that for years," he says. Long one of their top sellers, Art of Neurosis won a following among St. Louis brewers who wanted to know how he was doing it. "It blew their minds with the mashing temps and the hop additions," Crider says. "Like, 'What the fuck are you doing?'"

Over the past four or five years, however, Crider's own tastes have shifted toward drier and more drinkable. He's lowered the mash temps and reduced the C-40 down to about 2 percent—"so, it's nothing," he says. He's also gone from a two-row base to splitting 50/50 with pils and two-row, "just to dry it up." It's gone from orange-amber to a pale golden hue. It's lighter in body, but it's still big and bitter and full of punchy hop flavor.

Crider says he's pondered cutting out the C-40 altogether—fully embracing the West Coast style—but his wife and co-owner Libby Crider won't let him. "She loves it. It's her favorite beer."

Besides changing tastes, there's another reason for the reduction in caramel malts—they're famously prone to oxidation. Staleness is a problem when you're trying to showcase beautifully fresh hop character.

"I always think about the beer sitting at Stinky Joe's Liquor Store in the middle of nowhere," Crider says. "There's always going to be a store where someone's going to come in and go, 'What, who is 2nd Shift? What is the Art of Neurosis?' They're going to open that can and ... they don't know it's two years old, but it tastes like shit."

When asked how the malts affect shelf life, Cole responds with an answer about packaging. Fat Head's sent Head Hunter to competitions last year with packaged dissolved-oxygen levels in the low teens, he says. "Our whole process is so solid, we don't even fucking worry about shit like that. That's how we win awards."

First and foremost, Cole credits a production team devoted to quality. "Head Hunter didn't win off of our pilot breweries," he says. "It won off of our main production line. And that's a testament to all the various steps that we took to reduce oxygen and increase shelf life and keep the hop character intact. And that's a team effort. Machines can do it—they can help. But it takes people—great, talented, passionate people."

The Hops, Remastered

Nowell, who went from brewing at Three Weavers to working as technical advisor for the hop growers at CLS Farms in Moxee,

MAKE IT

2nd Shift Art of Neurosis

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.072 (17.6°P)

FG: 1.013 (3.2°P)

IBUs: 76

ABV: 7.7%

MALT/GRAIN BILL

5.9 lb (2.7 kg) pale two-row

5.9 lb (2.7 kg) pilsner

3.2 oz (91 g) caramel/crystal 40°L

3.2 oz (91 g) acidulated

HOPS & ADDITIONS SCHEDULE

0.4 oz (11 g) Simcoe Cryo at 45 minutes [24 IBUs]

0.3 oz (9 g) CTZ at 45 minutes [13 IBUs]

0.6 oz (17 g) Simcoe at 20 minutes [14 IBUs]

14 oz (397 g) dextrose at 10 minutes

1 tablet Whirlfloc at 10 minutes

1.1 oz (31 g) Centennial at whirlpool [9 IBUs]

0.5 oz (14 g) each CTZ and Simcoe Cryo at whirlpool [16 IBUs]

1.1 oz (31 g) Columbus at first and second dry hop

1.3 oz (37 g) Simcoe at first and second dry hop

YEAST

Fermentis SafAle S-04

DIRECTIONS

Mill the grains and mash at 152°F (67°C) for 60 minutes. Recirculate until the runnings are clear, then run off into the kettle. Sparge and top up as necessary to get about 6.5 gallons (25 liters) of wort, depending on your evaporation rate. Boil for 45 minutes, adding hops and sugar according to the schedule. After the boil, do a whirlpool step: Stir or recirculate to create a vortex, spin for 5 minutes, then add whirlpool hops and allow 20 minutes to steep. Chill to about 66°F (19°C), aerate, and pitch the yeast. Ferment at 66°F (19°C) for 3 days, then allow rise to 68°F (20°C). On Day 6, add the first dry hops; rouse the hops the next day. On Day 8, drop or remove trub and add the second dry hops; rouse the hops again the next day. On Day 10, drop or remove trub. Assuming fermentation is complete and gravity has stabilized, crash to 35°F (2°C) and add the kettle finings. Package and carbonate to 2.8 volumes of CO₂.

BREWER'S NOTES

pH: We aim for a mash pH of 5.4, a pre-boil pH of 5.2, and a final pH of about 4.5.

Hopfuck: For the throwback 2010 time-machine version, go with this malt bill: two-row (78%), crystal 20°L (11%), and white wheat malt (11%).

MAKE IT

Fat Head's Head Hunter

The flagship IPA from Fat Head's in Ohio had quite a 2023, winning gold at the World Beer Cup *and* the Great American Beer Festival. After that, shining in a blind tasting to become one of *Craft Beer & Brewing's* Best 20 Beers in 2023 was icing on the cake.

Brewed since Fat Head's first opened its brewpub in New Olmsted in 2009, Head Hunter has evolved over the years, gradually becoming relatively lighter in color and body—yet it still has all the hallmarks of a great American IPA, including ample bitterness balanced by a light, honey-like sweetness.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.069 (16.8°P)

FG: 1.012 (3.0°P)

IBUs: 80

ABV: 7.5%

MALT/GRAIN BILL

10 lb (4.5 kg) pale two-row

1.3 lb (590 g) caramel/crystal 15°L

9.5 oz (269 g) wheat malt

9.5 oz (269 g) dextrin malt

HOPS & ADDITIONS SCHEDULE

9.5 oz (269 g) dextrose at 90 minutes

0.35 oz (10 g) Pahto at 80 minutes
[20 IBUs]

0.4 oz (11 g) Simcoe at 45 minutes
[13 IBUs]

0.2 oz (6 g) each Centennial and
Simcoe Cryo at 45 minutes [17 IBUs]

0.4 oz (11 g) each Centennial and
Simcoe at 20 minutes [15 IBUs]

0.75 oz (21 g) Citra at 2 minutes
[2 IBUs]

0.4 oz (11 g) each Simcoe and
Simcoe Cryo at 2 minutes [3 IBUs]

0.6 oz (17 g) each Citra and Simcoe
at whirlpool [10 IBUs]

1.5 oz (43 g) each whole-cone Mosaic
and Simcoe at hopback

1 oz (28 g) Simcoe at dry hop

0.75 oz (21 g) each Chinook and
Citra at dry hop

0.25 oz (7 g) Mosaic Cryo at dry hop

YEAST

White Labs WLP001 California Ale
or other Chico strain

DIRECTIONS

Mill the grains and mash at 152°F (67°C) for 30 minutes, then slowly ramp to 170°F (77°C) for mash out. Recirculate until the runnings are clear, then run off into the kettle. Sparge and top up as needed to collect about 7 gallons (26.5 liters), depending on your evaporation rate. Boil for 90 minutes, adding sugar and hops according to the schedule. After the boil, do a whirlpool step: Stir or recirculate to create a vortex, cooling to 185°F (85°C) if possible; add the whirlpool hops (including whole-cone hops in a muslin bag) and allow 20 minutes to steep. Chill to 64°F (18°C), aerate the wort, and pitch the yeast. Ferment at 64°F (18°C) for 2 days, then raise to 67°F (19°C) until fermentation is complete and the beer has passed a VDK test (see “Hunting for Diacetyl,” beerandbrewing.com), about 7 days. Add dry hops and rouse (preferably with CO₂) three times over the next 7 days. Drop hops or rack, crash to 32°F (0°C), and cold-condition for 7–10 days. Package and carbonate to 2.75 volumes of CO₂.

BREWER'S NOTES

Water profile: We target the following brewing liquor: calcium 162 ppm, magnesium 8.5 ppm, sodium 21 ppm, sulfites 285 ppm, chloride 23.5 ppm, and bicarbonate 104 ppm.

pH: We target a mash pH of 5.4 and post-boil pH of 5.2, adjusting as needed.

Pitch rate: About 0.75 million cells/ml/°P.

Hopback: If you have a hopback (ours is pictured at right), run the wort through the whole-leaf hops post-whirlpool, en route to chiller/fermentor.



Washington, lays out what she views as the most important component to American IPA: “Hop aroma,” she says. “I think that you need to have a really bright and inviting aroma to even come close to calling yourself an American-style IPA.”

When Cilurzo delivers talks on the history of West Coast IPA—which, as we’ve established, begins with the history of American IPA—he enjoys sharing the timeline of new hop releases. It starts with the slow beat of Cascade (1972) and Comet (1974) before gradually picking up rhythm with Centennial and CTZ (both 1990). It really starts to thrum with Amarillo (1998), Nelson Sauvin, and Simcoe (both 2000), then it gets seriously up-tempo with Citra (2008), Galaxy (2009), El Dorado (2010), and Mosaic (2012). Finally, it goes all breakbeat-hardcore techno into Sabro (2018), Talus (2019), and beyond.

With players like those, how could anyone expect the classic-rock opera of American IPA to remain the same?

Nowell’s own tastes run more toward the West Coast. That’s what she brewed at Three Weavers, including their flagship Expatriate IPA. However, she also views that style—and hazies, too—as more compatible with the newer, higher-impact hop varieties. A little caramel can play beautifully with grapefruit zest and pine resin; not so much with piña colada.

“That was a really huge shift in what was available aromatically, and it just doesn’t go as well,” Nowell says. “We’re living in a tropical realm of hop character these days. ... If you’re going to talk about utilizing Galaxy and Citra and then filling your beer with crystal malt, I think you’re completely wasting these really expensive, really impactful varieties.”

Many of these newer, popular varieties—including Citra, Mosaic, and Simcoe—are proprietary, rather than bred by the USDA for the public. Whatever the merits, it’s beyond dispute that these private varieties accelerated the popularity of IPA.

“Once private hops got brought into the picture, they were so much more impactful than public hops,” Cilurzo says. “That’s really when IPAs started to explode. ... I love to make fun of these brewers who came along when Citra and Mosaic were already in existence. I’m like, ‘Well, how easy is that? It’s easy to make an IPA with *those* hops.’”

Nowell says that if she were going to brew an American IPA with a small portion of light crystal—and she very well might, at Mellotone—she would reach for Simcoe. “I think it bridges the gap between still maintaining some of that piney, resinous character you can get, but with that cattiness—that sort of black-currant cattiness. Grapefruit, as well. That plays incredibly well in old-school beers.”

Another she’d suggest is Idaho 7. “You’re pulling in pineapple—but I call it pineapple-dank because you still have that really heavy sort of back-end cannabis dankness that plays really well with crystal malts.”

Advanced hop products are another innovation that brewers of American IPA have embraced.

Mixing in cryogenic hops and extracts allows a reduction in vegetal matter, increasing efficiency and amplifying more desirable aromas.

At 2nd Shift, Art of Neurosis has always gotten a whirlpool charge of Simcoe, Centennial, and Columbus; today, it includes Simcoe Cryo. At Fat Head's, Head Hunter also gets later kettle additions of Simcoe Cryo.

Brewers also continue to innovate in how they deploy the hops—and often there's a mix of old and new methods. At Fat Head's, Cole says, "We're a pretty heavily invested whole-flower brewery. So, we use a lot of hopback." Besides a range of kettle additions, Head Hunter gets a sizeable whirlpool charge, a run through the hopback with whole-cone Mosaic and Simcoe, and plenty of dry hops.

Late-kettle and whirlpool additions are critical to achieving the full spectrum of hop flavor for a great American IPA. Fat Head's spins its whirlpools at 185°F (85°C). "Like tea or coffee, we all know that there's an optimum range to be able to extract all those things, and hops are the same way," Cole says.

Bitterness matters, too. "American IPA, it's got a little resinous core to it," Cole says. "And it needs that fucking abrasiveness to make it a tad bit fucking different."

Yet we're long past the days of giving drinkers a resin-punch to the tongue. Cole describes earlier versions of Head Hunter as "much more abrasively bitter. ... I look back at old recipes, and the amount of hops we were adding early in the boil was just ridiculous, and really sharp. ... The beer has evolved to meet more of the consumer palate."

However, it's still bitter. And it's still got that healthy portion of C-15. "We make it the way we like to drink it," Cole says.

Art of Neurosis is still bitter, too. And even if it's gotten leaner, the things that made it taste ahead of its time in 2009—those flavors that blew my mind—they're still there. It gets several kettle additions, a big whirlpool charge, and two dry-hop charges. "I was double dry hopping before anybody," Crider says. "I thought that's how you made good beer. And now everybody brags about it and puts DDH on every can."

He's also adjusted the water from a balanced profile to one with a higher sulfite-to-chloride ratio, for a crisper finish—essentially moving closer to modern West Coast. They also watch the pH, aiming to keep it low. He says he doesn't want the beer formerly known as Hopfuck to lose relevancy just because he was afraid to change it.

"I don't want to leave it stale, sitting on the back shelf all the time. Make it better, stay with the times. And personally I like it better, too."



FIVE ON FIVE

IPA

It's the predominant style in American craft, and there are many great examples—it takes an exceptional one to impress fellow pros. Here are five of their picks.



Russian River Blind Pig

Zack Adams, founder, Fox Farm in Salem, Connecticut

"I don't think I've passed on Blind Pig on tap once in 15 years. That said, being in the Northeast, I've probably averaged just a couple of pints a year in that time. It's made for a fun vantage point for checking in on an all-time favorite—each time revisiting and remembering why the beer is so special, and occasionally being delighted by the subtle and elegant tweaks."



Alvarado Street Mai Tai P.A.

Jacob Passey, director of brewing, Pinthouse in Austin

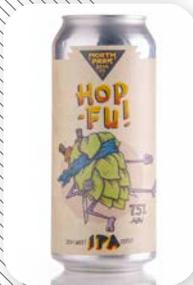
"This contemporary West Coast IPA embraces and expresses tropical notes not historically found in the style. I first tried it a few years ago, and it's a flavor and aroma profile that we've been chasing through the evolution of our IPAs ever since. The sheer drinkability is amazing and creates a repeatable IPA drinking experience that keeps me coming back for more."



Maine Beer Another One

Patrick Chavanelle, senior R&D brewer, Allagash in Portland, Maine

"It's one of those beers that you really don't have to think about too much when you're drinking it. It's so well-balanced. It's bitter in just the right amount, to where it dries the beer out to some extent and makes you want to take another sip. It has everything you'd expect from a hop-forward beer—it has tropical notes, citrus notes, it has some pine character. To me, it's a beer you could geek out on and get into, or don't think about it all and just enjoy drinking a killer beer."



North Park Hop Fu!

Daniel Hartmann, head brewer, Alvarado Street in Salinas and Monterey, California

"There's a sticky oiliness where you crack the beer and can smell it from a mile away. I love it. It's challenging to go from rubbing hops to understanding how they are in a beer, but they have it dialed. Their approach to Mosaic is different from ours—they go for more blueberry and diesel, and we use more tropical Mosaic. But it's one of those beers where, when you drink it, you think, 'I don't know how they pulled this off.'"



Pinthouse Training Bines

Andrew Bell, director of brewing, Radiant Beer in Anaheim, California

"There are many great IPAs I could choose from, but one of the most memorable is a beer I only get to have a couple of times per year. Pinthouse's team makes awesome hoppy beer, and I've had Training Bines on draft and at festivals in the past, but the first time I opened a can, I could smell it at arm's length. It's incredibly aromatic and a masterful use of the Simcoe, Citra, and Mosaic trio, with balanced bitterness and intense hop aroma and saturation."

Try Brewing IPAs for That Make You Dry Want More

Whether it's hazy or clear, intentional bitterness and a dry finish are the keys to an IPA of great drinkability. Getting there takes some attention to details—including perception, ingredients, and process. **By Josh Weikert**

IF THERE'S A BEER ARCHETYPE that I both perpetuate and find annoying, it's the "I don't even like," as in, "I don't even like Belgian tripel, but *theirs* is really good." The problem is that I clearly *do* like Belgian tripel—I just have a particular presentation that works better for me than others.

I bring this up because it's quite common for people to tell me, "I don't even like dry and bitter West Coast IPA, but I really like *that* one." Meanwhile, they're polishing off three to six pints of it on a sunny afternoon in my backyard.

For all the success of sweeter, softer hazy pale ales and IPAs, there's clearly still a place for drier, more bitter beers out there. Here's the thing: We want crisp, bitter, and dry—but *it must be balanced, too*. And, whether they are hazy or clear, we definitely *don't* want beers that are cloying and flabby.

So, what's a brewer to do?

Here, we discuss some levers you can pull and dials you can turn to get a drier, more drinkable IPA. Our target is a beer that delivers the sensory experience you want, avoiding the harsh palate assault ("I don't even like hoppy beers") that still keeps many people away from the style. A dry, snappy, flinty, bitter beer can be a joy to drink, and at its best it provides that natural incentive to go back for another sip ("but I like *this* one").

Designing for Balance

First things first: Let's not get lost in the numbers.

Sure, vital stats such as IBUs and gravity can tell us a lot about what a beer might taste like—but numbers aren't destiny. Ultimately, it's our perception of the beer's flavor and mouthfeel that matters, and "dry" and "bitter" are terms we use to describe our experience with it.

And that's what designing a beer for balance is ultimately about: how it's perceived. Think of the 12 percent ABV barleywine that lacks even a hint of fusel alcohols. Or think of the IPA that has the big IBUs but nevertheless leaves a light and bright impression on the tongue. When beers go wrong—when not because of off-flavors or poor sanitation—it's usually because they overcommit to a certain flavor or sensation. Balance is at the very heart of drinkability.

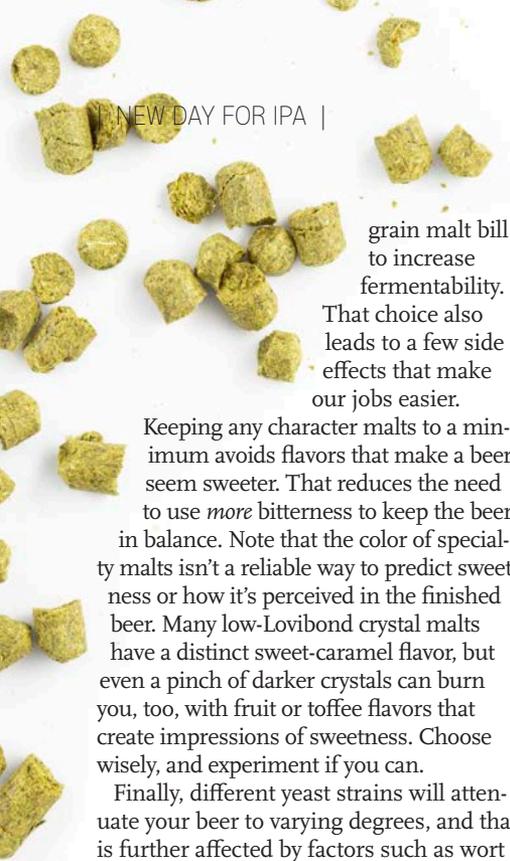
One brewery that knows a thing or two about drinkability—and producing dry, balanced beers—is Allagash in Portland, Maine. Best known for its well-attenuated, beautifully balanced White and other Belgian styles, the brewery only released its first year-round IPA, Hop Reach, in 2022. With that development process still fresh in mind, Allagash senior R&D brewer Patrick Chavanelle offers this gutsy piece of advice: "Lean into bitterness to create impressions of dryness."

Not all bitterness is created equal. Successful bittering keeps the harsher aspects of bitterness at bay, and that starts with your choice of hops. If you subscribe to the school that lower cohumulone equals softer bitterness, then by all means, have at it. However, I focus on a much more basic metric: alpha-acid percentage.

Lower-alpha hops tend to impart a softer (or finer, or smoother) impression of bitterness than higher-alpha. So, while the high-double-digit AA-percentage hops are more efficient, they also introduce a risk to drinkability. There's a cost to having more plant matter in the beer, too, in the form of beer loss via absorption, but those costs are worth bearing if the alternative is a resinous harshness.

Moving on to grist, Chavanelle recommends going with a leaner, mostly base-





grain malt bill to increase fermentability.

That choice also leads to a few side effects that make our jobs easier.

Keeping any character malts to a minimum avoids flavors that make a beer seem sweeter. That reduces the need to use *more* bitterness to keep the beer in balance. Note that the color of specialty malts isn't a reliable way to predict sweetness or how it's perceived in the finished beer. Many low-Lovibond crystal malts have a distinct sweet-caramel flavor, but even a pinch of darker crystals can burn you, too, with fruit or toffee flavors that create impressions of sweetness. Choose wisely, and experiment if you can.

Finally, different yeast strains will attenuate your beer to varying degrees, and that is further affected by factors such as wort composition and fermentation temperature. We can harness this diversity by selecting strains tailored to our desired flavor profile and attenuation range.

That's what Allagash did while developing Hop Reach. "Leading up to the release, we did yeast trials to see how the beer turns out differently with different yeasts," Chavanelle says. "We kept the wort and dry hopping the same but ran it in different strains. And even with identical wort, the attenuation rate and mouthfeel varied dramatically."

The experiments included their house ale yeast as well as some diastatic strains—highly effective attenuators that can take a beer dry indeed—but those shifted the flavor profile, he says, and didn't match their flavor target.

They also noticed differences in flavor stability. Even if they sometimes preferred the "younger" versions of the beer with certain yeasts, they found two yeasts that provided better long-term crispness and shelf life: Chico ale and a Bohemian lager strain. Chavanelle says he suspects that was also thanks to their lower finishing pH—another factor worth considering if you really want to dial in a dry, crisp finish.

Of course, there are also ways to employ process to compensate for the limitations of

certain yeasts—up to a point. For example, at the 21st Amendment Brewery in San Francisco, cofounder and brewmaster Shaun O'Sullivan describes a lesson learned from his early days: "When I began brewing in 1994," he says, "the Fullers strain was among the limited yeast options available. We adapted by employing low mashing techniques to dry out the beer, as the Fullers strain exhibited poor attenuation, and experimented with heightened hop rates to counterbalance its inherent sweetness."

Today, however, they "opt to brew with the American [ale] yeast strain or Chico ale, as it attenuates quite nicely, and more importantly has more of a neutral character allowing the hops to shine."

Unsurprisingly—and we'll come back to this in process considerations—yeast matter.

Producing a Winner

Once you've made some choices on ingredients and recipe, it's time to think about how your process can help you achieve that dry finish that makes for an IPA that can be hard to stop drinking.

It takes attention to detail to get it right, including meticulous control over wort production and fermentation—from mash and lauter to temperature management, dry hopping, and oxygenation. These variables significantly impact your beer's potential flavor profiles as well as yeast activity and, consequently, its attenuation and how it is perceived by the drinker. Plus, remember we want balance: If we turn all the dials up to 11 and produce a super-fermentable wort using a vigorous yeast in a hot environment, we'll go off the rails quickly.

As our dry beer comes into focus, let's look at some process considerations.

THE MASH AND LAUTER

At the start, focus on mash temperature is essential. The sugars that we ultimately ferment—unless we're adding simple syrups or sugars—begin the brew day as starches. It's in the mash that enzymes convert and cleave those starches into sugars that are accessible to our yeast, and *time* and *temperature* dictate the fermentability of what comes out of the mash tun.

In a straightforward single-infusion mash, we're choosing the temperature at which *all* our conversion will happen, and we have an idea of where to land to get a

more (or less) fermentable wort. For my money—and with plenty of data to back it up—152°F (67°C) is an excellent go-to temperature for the most-fermentable wort. At that temperature, you have a blend of alpha- and beta-amylase enzymes chipping away at the mash. Going higher than that tends to yield a less-fermentable wort with more body, while going lower *can* make a more fermentable wort—but I basically have "152" tattooed on my chest as a recommendation for a single-infusion mash.

If you want to get more complicated—and why not?—you could employ a step mash to promote fermentability. In that case, you could leave your wort at 140°F (60°C) for a nice long rest—say, 60 to 90 minutes—before bumping up to 160°F (71°C) for a brief spell to get some longer-chain sugars for body. This brings up the element of mash *length* as well: Generally, longer mashes tend to produce more-fermentable wort because the enzymes have more time to keep on cleaving up those sugar chains. If your goal is more attenuation, then time—either in a single-infusion mash or a step-mash at the lower beta-amylase temperature—is your friend.

When it's time to lauter, Chavanelle has some advice: Watch your pH. Lautering as your pH rises increases the risk of pulling tannins from the malt, and that can make your beer feel harsh—not the kind of bitterness we want. So, keep an eye on it, and hit the brakes if you see pH flirting with 5.6. (If you can, monitor your mash pH using a pH meter or good test strips, adjusting with lactic acid if needed. See "Water and Mash pH," beerandbrewing.com.)

FERMENTATION

With your yeast in mind, make a *plan* for your fermentation temperatures. Manage the starting temperature—beginning, typically, below your "prime" temperature—and increase it deliberately to promote thorough (but not runaway) fermentation. Then, finish a bit warm.

Another option to aid fermentation is adding exogenous enzymes to the mash or fermentor. Options include alpha-amylase or glucoamylase additions in the mash tun, which promote specific kinds of starch conversion for a more fermentable wort. A relatively simple solution could be the Fermentis All-in-1 packets, which include glucoamylase—SafBrew DA-16 would be the choice for an IPA. (Remember brut IPAs? They're still a thing—though they're not always sold that way.) Exogenous enzymes will definitely dry out a beer, but fair warning: These tend to work best on very high-gravity beers, so unless you're going into the double digits in ABV, you'll probably find them to be *too* drying.

Not all bitterness is created equal. Successful bittering keeps the harsher aspects of bitterness at bay, and that starts with your choice of hops.

We also want to be careful about oxidation—in *any* beer, but especially in dry, hop-forward ones. At the least, that means minimizing oxygen exposure at every point once fermentation begins. Besides the obvious benefits—such as not tasting like wet cardboard—limiting the oxidation of your beer also means limiting the oxidation of beta-acid remnants in your hops. Over time, that adds a harsh bitterness to the flavor *even as our softer, isomerized alpha acids are taking a hike*. Bad timing, there.

DRY HOPS

Finally—and fittingly, for IPAs—we should consider the effects of dry hopping, especially the phenomenon known as “hop creep.”

We’ve written plenty about this phenomenon in the magazine (see “Brewing with Hops: Don’t Be Creeped Out,” beerandbrewing.com), but here’s a recap: Hop creep happens when the naturally occurring, starch-degrading enzymes present in hops break down otherwise nonfermentable sugars. That leads to drier beer and higher attenuation, not to mention slightly higher ABV. This extra bit of fermentation also tends to produce diacetyl, an off-flavor that can spoil your bright hop character *and* drinkability, all at the same time.

Unfortunately, because we dry hop toward the end of the process, many brewers don’t give their yeast enough time to clean up that diacetyl. Time matters. Also, if you dry hop too long after the end of primary fermentation, there may not be enough life left in the yeast to ferment those newly accessible sugars *and* do the cleanup. A safer bet is to dry hop *near* the end—but not after—primary fermentation.

Dry, Bitter, Drinkable

This is one of those places where science meets art: the creation of a dry beer that gives drinkers a great experience, and one of *the* pivotal demonstrations of a brewer’s abilities.

In a world of easy-to-cash-in tricks that create unbalanced beers—gimmickry is, unfortunately, often rewarded—brewing an excellent dry, bitterish beer stands at an intersection of technical prowess and culinary intuition. That holds true whether your IPA is hazy or clear or something else along the spectrum.

Whatever you are brewing, thoughtful hop choices, knowing your yeast and what they can do, producing fermentable wort that’s tannin-free, and applying ingredients and processes that responsibly “dry out” your beers isn’t ever going to make them *worse*. In fact, that’s a proven formula for winning over more of the “I don’t even likes.”

And, if they keep drinking your beer, you might even get them to admit they *do* like it dry and bitter, after all. 

MAKE IT

Allagash Hop Reach

Founded in 1995 in Portland, Maine, Allagash is known especially for its witbier and other Belgian styles. However, after a lengthy R&D process and plenty of input from the staff, the brewery released Hop Reach in 2023 as its first year-round IPA. Senior R&D brewer Patrick Chavanelle describes it as a modern take on the classic American IPA, golden in appearance, with a panorama of juicy, hop-derived flavors—including pineapple, grapefruit, tangerine, and pine—all balanced by refined bitterness and a dry finish.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.056 (13.7°P)

FG: 1.006 (1.6°P)

IBUs: 45

ABV: 6.8%

MALT/GRAIN BILL

6.3 lb (2.9 kg) Briess base malt blend
1.4 lb (635 g) local pale malt
1 lb (454 g) unmalted white wheat
13.5 oz (383 g) flaked oats
10 oz (283 g) Briess Carapils
8.5 oz (241 g) Briess Bonlander Munich 10°L

HOPS SCHEDULE

0.12 oz (3.5 g) Nugget at 60 minutes [5 IBUs]
2 oz (57 g) Mosaic at whirlpool [23 IBUs]
1 oz (28 g) Idaho 7 Cryo at whirlpool [17 IBUs]
2 oz (57 g) Citra Cryo at dry hop
2 oz (57 g) El Dorado CGX at dry hop
3 oz (85 g) Cascade at dry hop

YEAST

Omega Yeast OYL-009 West Coast Ale II

DIRECTIONS

Mill the grains and mash at 151°F (66°C) for 60 minutes. Recirculate until the runnings are clear, then run off into the kettle. Sparge and top up as needed to get about 7 gallons (26.5 liters) of wort, depending on your evaporation rate. Boil for 60 minutes, adding hops according to the schedule. After the boil, do a whirlpool step: Stir or recirculate to create a vortex, add whirlpool hops, and allow 20 minutes to steep. Chill the wort to about 67°F (19°C), aerate, and pitch the yeast. Start fermentation at 68°F (20°C), allowing a rise to 72°F (22°C) when the beer has dropped to about 1.036 (9°P). On Day 6 or 7, or when the gravity has dropped to about 1.014 (3.6°P), dump the yeast (or rack to secondary) and add the dry hops. Dump the hops after 4 more days. Once the beer has passed a forced VDK test (see “Hunting for Diacetyl,” beerandbrewing.com), chill to 35°F (2°C). Package and carbonate to about 2.65 volumes of CO₂.

BREWER’S NOTES

Water and pH: We add 5 ppm of calcium sulfate at the start of the boil. Pre-fermentation, we aim for a 5.0–5.1 pH; consider an acid addition if yours is higher.

Malt: Our base malt blend is 50/50 pilsner and pale malt. For the local addition, we use pale malt from either Blue Ox or Maine Malt House.

Dry hops: We dry hop at ~2°P above terminal; the timing may vary depending on your fermentation rate. We’ve found that dry hopping too late increases the delay in the development of hop creep. (See “Brewing with Hops: Don’t Be Creeped Out,” beerandbrewing.com.)



GEARHEAD

Fresher, Further, Faster: Wet Hops Beyond the Harvest

Harvest-hopped beers are a seasonal delight no longer limited to breweries near the hop fields—nor even to the harvest season. Here's a look at the logistics and tech that are expanding the harvest in time and space. **By John M. Verive**

A CONFESSION, DEAR READER:

Though I've explored the beer world pen-in-hand for more than a decade—and though I nurture an unslakable ardor for the bitter, pungent brews brimming with the acids, terpenes, and thiols of *humulus lupulus*—I have yet to witness the sacrosanct labor that affords brewers these most prized materials.

By all accounts, the hop harvest is a bustling and hurried endeavor, where the intensity of the farmers' efforts to clear the vines of their plump green treasures is matched only by the intensity of their aroma (uh, the hops' aroma, not the farmers').

Everyone who tells me about the harvest—whether it's the Old World hop-

yards of Czechia, the far-off isles of the Southern Hemisphere, or the tidy rows of the Yakima Valley—mentions the smell. Thick, heavy, and penetrating, the green, resinous scent blows off the trestles and billows from the kilns as the growers pick, clean, and dry the bounty.

In my mind's eye—or nose, rather—the odor is inescapable and kaleidoscopic, shifting from pine to citrus to the dank musk that hopheads love so much. I imagine it as palpable, nearly stinging the eyes and rousing a desperate thirst in the throat.

Oh, how I'd long to sink into the haze of volatile organic compounds.

One day I'll make that pilgrimage to Washington or Oregon or Idaho to smell

the smells for myself. Thankfully, however, those of us who haven't ticked that box have ways to vicariously experience the harvest—from far away and year-round.

For not only does the hop harvest provide another year's supply of a precious commodity. It also provides bold brewers an opportunity to capture the time-and-place of the harvest in liquid form. And while they'll always be a celebration of the season, fresh-hopped beers themselves are less and less confined to a few parts of the world or a few weeks on the calendar.

The Mystique

Fresh-hopped beers exist on the boundaries of quantitative methods and sensory experience, and it's challenging to talk about them without getting a little spooky. Even pragmatic brewers will casually drop words like "ethereal" and "transportive" when describing what makes them special. So, please excuse the effusive and

PHOTO: JAMIE BOGNER



Fresh-hopped beers are not big moneymakers for breweries. The challenges of working with wet hops constrict a brewery's already-thin margins and stress production schedules. Thus, it's another of those labors of love that defines craft.

florid language on my part—expressing the nuance that differentiates these elixirs from workaday IPA requires a heavy hand.

As one of craft beer's biggest “if you know, you know” predilections, the fresh-hopped IPA must be sipped to be understood. Done right, there is arguably no better way to showcase hop flavor and aroma. When picked at their peak—and used before the slow but inevitable entropy of organic decay—hop flowers dazzle. They draw a straight line between agriculture and industry—staking beer in the land.

Yet fresh hops are tricky to work with, inefficient, and—above all—fading by the hour.

“Hops are like wilting petunias,” says Tom Britz, founder and CEO of Glacier Hops Ranch in Whitefish, Montana. A pile of hops, he says, becomes a “brown composting mess” in a matter of days—or less. “You have to dry them or they rot.”

Fresh-hopped beers are not big moneymakers for breweries. The challenges of working with wet hops—unkilned, with high, just-off-the-bine moisture content—constrict a brewery's already-thin margins and stress production schedules. Thus, it's another of those labors of love that defines *craft*. From the growers and suppliers to the makers and the entrepreneurs, those who value the audacity of fresh hops are compelled to evince the magic to more drinkers.

The Fresh-Hops Toolbox

So, how do brewers leverage the distinctive but fleeting impact of fresh hops?

The best tool in the box for acquiring the wet hops is brute force—or rather, sheer speed. Be it Sierra Nevada's convoys of refrigerated cargo trucks, FlyteCo Brewing's private flights to Colorado harvest, or cheating the clock with technology and ingenuity—more on that below—modern logistics push the boundaries of how far a brewhouse can be from the hopyard. Of course, the economics are challenging to balance.

The next-best tool stops the clock on the degradation of wet hops. Flash-freezing tech developed for other delicate crops with brief harvest windows, such as blueberries, does a brilliant job of preserving the ephemeral essence of freshness in

hops. However, it requires super-chilled distribution channels, and it's tricky to handle in the brewhouse (at least until some brewer perfects “ice hopping”).

“It's like Play-Doh when it starts to thaw,” says Sam Tierney, Firestone Walker's innovation brewer at the Propagator near Venice Beach in L.A. “There's a narrow window when it's workable.” (Blaze Ruud, Yakima Chief's VP of brewing innovations, calls it “the sticky-icky.”)

Straddling the line between flash-frozen hops and hop extracts is Yakima Chief's trial product known, for now, as YCH 301. An isolated lupulin dust made from flash-frozen, whole-cone wet hops, YCH 301 brings an aroma impact that's “as close as possible to being in the field,” Ruud says.

The tech is out there, but the marketplace and supply chain still need to catch up before flash-frozen, whole-cone wet hops are widely available.

That brings us to arguably the most accessible way for smaller brewers to capture fresh-hop character—by dispensing with all that pesky, perishable plant matter. Hop extracts are common and well-established in modern breweries. They're also developing fast, and there are a variety of ways to approach the extraction equation from a different direction.

The Science (and Art) of Extraction

The most-used method for creating hop extract—that is, separating the oils and various aromatic compounds from the cellulose, tannins, and water that comprise most of the hop cone—is supercritical CO₂ extraction. It's efficient, the liquid carbon dioxide makes for a superlative beer-friendly solvent, and there's no thermal degradation of the hops. However, it really works only with hop pellets. The hop material must have less than about 12 percent moisture content for the extraction to work—and freshly picked wet hops are 75 to 80 percent water.

Normally, hop farms dry the cones to about 10 percent moisture before pelletizing them for increased efficiency. However, the kilns do more than drive off water—they

also drive off some aromatic compounds.

“I tour a lot of kilns, and it always smells amazing,” Ruud says. “But what you're smelling is all the stuff you're losing.”

One way to try to capture that stuff is steam distillation, a traditional method for extracting “essential oils”—the aromatic compounds such as terpenes and thiols—developed by Arabian and Persian perfume-makers more than a millennium ago. Steam vaporizes the volatile aroma compounds in, say, roses, before the fragrant vapor recondenses into rose water. Then, it's a matter of separating the essential oils from the cooled water.

Mint is another crop prized for its aromatic compounds. Montana's Flathead Valley was once home to dozens of farms growing spearmint and peppermint, and they were processing their harvests into pungent oils using on-site steam-distillation rigs. However, the Montana farmers couldn't compete with cheaper imported mint. By 2014, there were only one or two mint farms left.

At Glacier Hops in Whitefish, Britz saw an opportunity in those dormant distillers, and he began to work on an extract made from his wet hops. Branded as Hopzoil, this extract is meant to capture the farm-fresh fragrance of the hopyard at harvest.

“Steam distillation is a closed loop,” Britz says. “We capture everything, and the flavors are very complex and round.”

It takes as many as 1,000 pounds (about 450 kilos) of wet hops to produce just one liter of extract—but Hopzoil is potent stuff. Glacier recommends starting with just 5 milliliters per barrel to replace half a dry-hop charge. (Hopzoil is only for the cold side.) A much lower rate—just one milliliter per barrel—is good for adding a “top note” to lagers. Britz says that dosage rates can bring out different sensory qualities: “Brewers can dial in the dose to match their exact vision.”

Another method for making cold-side additions is the solventless extraction process developed by New River Distilling in Boone, North Carolina. It's the tech behind the Hop Kief products from New Zealand's Freestyle Hops, and the plan is to apply it to fresh hops in the near future.

New River founder Daniel Meehan started working with a homemade steam-distillation setup, but he soon decided that the downsides—thermal exposure to the hops and the looming threat of catastrophic lab accidents—outweighed the benefits. After a few years of R&D, he landed on a solventless extraction method that captures the full spectrum of aromatic compounds while leaving bittering acids and plant material behind.

Meehan is vague in describing how their solventless extractor works—it is,



Clockwise from top left: Seven-week-old Mosaic hops from a RipeLocker storage chamber; fresh hops awaiting a flight back to Denver with FlyteCo; Glacier Ranch Hopzoil in a beaker

of course, proprietary—but the idea is to manipulate temperatures and pressures while agitating the biomass in a certain way, to coax volatile compounds in the hops to vaporize. The terpene vapors then condense into a sticky fluid, which is blended with ethanol to improve its stability and usability. Brewers can then add this extract to beer after fermentation, to boost hop character.

New River started by extracting hop pellets provided by clients—offering flexibility to breweries that may have over-contracted for hops or that need more space in a cooler. Today, its biggest client is Freestyle Hops in Nelson, New Zealand.

“We’re extracting hundreds of kilos of New Zealand hop pellets every day, Monday through Friday,” Meehan says. Yet the logistics of shipping all that Mosaic, Riwaka, and Nelson Sauvín from the Southern Hemisphere to Long Beach, California, then using refrigerated trucks to move the hops to North Carolina, is absurdly arduous. That’s why New River and Freestyle are partnering to build a solventless extractor on Freestyle’s New Zealand farm in 2024.

“It’s hard to get wet hops in North Carolina,” New River co-owner Kiever Hunter says, “and it’s tough to grow aroma hops here.”

“You get out what you put in, and we’ve definitely made some bad extract with locally grown wet hops,” Meehan says. There just isn’t enough material available

to dial in the variables for wet hops. So, the team is excited to perfect their methodology on the other side of the world.

The VIP (Very Important Produce) Treatment

Besides freezing wet hops, there are other ways to handle the delicate cones. The trick is to treat the hop cones like fresh flowers.

As with flash-freezing tunnels, engineers designed RipeLocker’s tech to help get blueberries and other fragile produce to market. Instead of stopping the clock on rot, RipeLocker slows down time.

The RipeLockers themselves are hermetically sealed, pallet-sized pressure vessels that hold fresh crops in a controlled, low-pressure environment designed to retard decay. The tech is popular with flower farmers, but growers of hops—which are flowers, after all—are taking note.

Growers can seal hops picked at their peak intensity in the RipeLockers, pump the oxygen out of the container, and walk away. The containers regulate humidity while balancing oxygen and carbon dioxide to prevent oxidation, locking in freshness. Parameters are specific to each crop, monitored by on-board sensors that link back to RipeLocker’s techs, who manage the state of stasis.

Selynn Vong, RipeLocker’s marketing director, likens the process to the cryosleep that Ellen Ripley endures between

the *Alien* and *Aliens* films. “When the locker is popped open, the hops are still at their best,” Vong says—even after 60 days.

Extending the viability of wet hops from a day or two to a month or more is a big deal, and not only for shipping considerations. Sure, brewers a few days’ drive away from Yakima can order a RipeLocker full of wet hops and slow-freight them to North Carolina, southern Florida, or New England. However, even brewers closer to the hopyards, and well versed in the production rigors of working with wet hops, are excited by the new possibilities.

“We make a lot of fresh-hop beer, maybe 10 or 12 every year,” says Max Shafer, brewmaster at Roadhouse Brewing in Jackson Hole, Wyoming. Roadhouse has long leveraged its proximity to the hop fields of Idaho and Washington, but Shafer calls the RipeLocker “amazing tech” that’s changed how they approach designing fresh-hopped beers.

“What if you wanted to make a beer dry-hopped with wet Mosaic and wet Idaho 7?” he says. “That used to be impossible, but we can make that beer now.” He explains that Idaho 7 typically hits peak ripeness three or four weeks after Mosaic. The RipeLocker nullifies that difference.

RipeLocker’s controlled storage provides flexibility to brewers, not only in recipe design but also on the brewing schedule. No need to interrupt production for the arrival of time-sensitive wet hops. “It extends the working time,” Shafer says, “and makes my life much easier.”

Is the Juice Worth the Squeeze?

There’s an undeniable romance around fresh hops, and why shouldn’t there be? It’s impossible to overstate the impact of freshness in beer. Yet it’s no simple thing to harness the bewitching splendor of beer’s signature ingredient picked at its peak. Farmers and brewers are racing the clock—racing against nature itself—and it takes considerable passion and dedication to bring the fresh-hopped beers to market.

Fresh hops further premiumize an already-luxe product—but in a hop-saturated market, intensity of flavor is a valuable distinction. Extracts made with wet hops add to the arsenal available, and wet cones are more attainable farther from the fields. At a time when beer culture seems to languish in a hazy doldrum, a fresh take on IPAs evolving flavors may be just what we need.

And it will be harvest time again soon, with more reasons than ever to get excited.

NO RESTS FOR THE WICKED

Extract² Get Punchy With Hop Extracts

Pro brewers these days are learning about how best to take advantage of cold-side aroma extracts and other advanced hop products. Why shouldn't you? **By Annie Johnson**

AS SPRING MARCHES TOWARD

summer, I look forward to brewing and drinking one of my favorite summer beers: my Firecracker Pale Ale. It's got a crisp mouthfeel layered with zesty hop goodness of classic citrus peel and pine—something I eagerly anticipate enjoying with some of my favorite warm-weather activities, like backyard barbecues, camping, and the Fourth of July picnic.

For the most part, I've been brewing this same pale from the same base recipe for the past two decades. Even so, I occasionally tweak it with different yeasts, techniques, or trendy hop varieties such as Strata or Sabro. Generally, the one constant is the base malt—mostly two-row or pale extract with a small percentage of crystal 20°L.

This year, however, I tried something different with the hops. After talking about it with a trusted fellow homebrewer, I was intrigued to experiment with some

hop extracts. Skeptic that I am, I wasn't convinced that extracts could really replace hop pellets or whole cones. I'd used a few hop extracts in the past—including Hop-Shots and a homemade extract I made via steam distillation—but it had been several years since I'd tried any of the newer hop-extract products.

Suddenly, I was looking forward to taking them for a spin.

Efficiency: Also Nice for Homebrewers

For commercial brewers, one of the big selling points of extracts and other hop products is that you can use fewer actual hops. We all love hops, but they do tend up suck up some wort.

Looking around with my *Craft Beer & Brewing* editors for something to try, we wanted something relatively new, packing a punch, but also available in sizes friendly to homebrewers. That brought our

attention to concentrated hop-aroma extracts and terpenes. So, we reached out to the folks at Abstrax

Hops, who offered to send samples of their Quantum Series extracts for testing.

I'd never tried these aroma extracts, but one of the things I liked was that they have them available in single varieties, such as Citra, El Dorado, and Mosaic. If you're familiar with those hops, it gives you a point of reference.

They're available in 4 fl oz bottles for \$89 a pop—and that may not sound cheap, but a little goes a *loooooonng* way. Abstrax recommends using them only on the cold side, to replace your dry hops (or give them a boost). They recommend substituting ½ fluid ounce (15 ml) of extract for a full pound (454 g) of dry hops.

So, at the five-gallon (19-liter) scale: Let's say you normally dry hop an IPA with four ounces (113 g) of aroma hops. In this case, you could try skipping the hop pellets and instead add just 4 milliliters of this extract. And all that beer those hops would have absorbed? You get to keep it. Assuming you still like the beer in the end, that \$89 starts to look like a pretty good deal.

As much as I enjoy brewing hop-forward beers, one of the things I've always loathed is losing volume to hop absorption. I give myself a little pat on the



Ultimately, what I really loved about using these hop extracts was the effect on aroma and flavor—it was immediate, and that is powerful. I was able to adjust the level of hop intensity in a matter of minutes.

back for doing such a good job of calculating wort loss because of grain absorption and boil-off rates—but hops are just different, thieving all that nice, finished beer during dry hopping. In a dry-hopped pale ale or IPA, I might lose as much as a half-gallon (about 2 liters)—just short of a six-pack.

So, I was eager to see how a beer made with these extracts would smell and taste—but also to see how much beer I'd have in the end.

Brewing the Quantum Firecracker

Abstrax suggests dosing a plain beer to see how the Quantum extract plays in the liquid. So, I add just two drops of the CIT—that's Citra—to a well-known Italian lager. The results are impressive: Within a few seconds, it smells like a freshly dry-hopped Italian pilsner. The bright Citra aroma is pronounced. So, I set out to see what Quantum could do for my Firecracker.

Originally, I based this recipe off the classic Sierra Nevada Pale Ale. As the years went by, however, I lightened the crystal malt, taking it down to 20°L, and I nudged the ABV down to 5 percent. Those changes made the beer brighter and less filling—maybe because I just wanted to enjoy more of them!

With the hops, this year, I stuck with my old habit of including a bittering addition in the form of pellets—Magnum, in this case, high-alpha and clean. But you could use a bittering extract, if you prefer, or any higher-alpha variety. I skipped the late-kettle flavor hops, wanting to have a clearer idea of what these extracts could do.

For yeast, Chico is the go-to for this style—I went with US-05, knowing that it ferments cleanly so the hops can star. I kept fermentation at a steady 66°F (19°C), and it was done and clear after 10 days. I racked to a keg and chilled it to just below 40°F (4°C). Finally, I took the leap: Instead of dry hopping, I added ¼ fluid ounce (7 ml) each of the Quantum

Series Citra and Mosaic extracts to the keg—enough, in theory, to replace a half-pound (227 g) dry-hop charge.

Then, because I like a pricklier beer for the summertime, I carbonated it to 2.6 volumes of CO₂.

Punchy Results

My friends who brew and know me also know that I can be a little stubborn about certain things—they don't call me the Old School Master for nothing. (Decoction mashers, unite!) So, they might be surprised when they read that I'm now fully on board for hop-aroma extracts. I found the use of these particular products from Abstrax to be easy and approachable.

Admittedly, I've struggled at times with uber-hoppy beers for a variety of reasons. In the past, I've found that my dry hopping would introduce oxygen and leave a cardboard-like flavor or that I'd get a subtle scratchy sensation in the mouthfeel—astringency—from leaving the hops in a smidge too long. And, as I mentioned, the beer loss from absorption drove me a bit bonkers.

So, will I keep using hop pellets or whole cones in hoppy beers? Of course. But in my IPAs and pale ales, at least, I'll be using fewer—as long as I can get these kinds of extracts, anyway.

Obviously, commercial brewers have many more options, and scale, and a budget. But my hope for this company and others is that they can introduce products based on more hop varieties, in a size and format that work for homebrewers.

Ultimately, what I really loved about using these hop extracts was the effect on aroma and flavor—it was immediate, and that is powerful. I was able to adjust the level of hop intensity in a matter of minutes, which I found to be really cool.

So, now I'm a believer. These extracts or others like them are definitely worth a try for any brewers who want to punch up their hop-forward beers for summertime, or anytime. 

MAKE IT

Annie's Quantum Firecracker Pale Ale

EXTRACT

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.047 (11.7°P)

FG: 1.009 (2.3°P)

IBUs: 29

ABV: 5%

MALT/GRAIN BILL

7 lb (3.2 kg) light liquid malt extract (LME)

8 oz (227 g) crystal 20°L

HOPS & ADDITIONS SCHEDULE

1 oz (28 g) Magnum at 30 minutes [29 IBUs]

0.25 fl oz (7 ml) Abstrax Quantum Series CIT at dry hop

0.25 fl oz (7 ml) Abstrax Quantum Series MOS at dry hop

YEAST

Fermentis SafAle US-05

DIRECTIONS

Mill the crystal malt and steep in 1 gallon (3.8 liters) of 152°F (67°C) water for 30 minutes, then raise to 168°F (76°C). Rinse the steeping bag, add 6 gallons (23 liters) of water, and bring to a boil. Add the malt extract in batches, stirring to dissolve. Boil for 30 minutes, adding hops according to the schedule. After the boil, chill the wort to 65°F (18°C), aerate well, and pitch the yeast. Ferment at about 66°F (19°C). Once fermentation is complete and gravity has stabilized, rack to secondary or keg, and crash to 40°F (4°C). Add the hop extracts, carbonate to about 2.65 volumes of CO₂, and enjoy.





Tasted

Our blind-tasting panel of judges dove into the deep end of the hoppy beer pool for this issue's survey of **American** and **West Coast IPA, Hazy IPA, Southern Hemisphere-Style IPA, Black IPA** and more—including their higher-strength iterations...

PHOTO: MATT GRAVES/WWW.MATTGRAVESPHOTO.COM

INSIDE CB&B

How We Taste & Test

Reviewing beer may sound like a dream job, but our tasting and review panel takes the role seriously. Composed of professional brewers, certified Cicerones, and Beer Judge Certification Program (BJCP) judges who have all studied, trained, and been tested on their ability to discern characteristics in beer, our panel is independent and diverse. The panel tastes all beer blindly—they do not know what brands and beers they are tasting until the tasting is complete.

Our goal is to inform you about the strengths and weaknesses of these beers as well as their relative differences (not everyone has the same taste in beer, so accurate descriptors are more valuable than straight numerical values). The quotes you see are compiled from the review panel's score sheets to give you a well-rounded picture of the beer. To add to that snapshot, we also include a brief review from an editor, although that editor's input does not impact the score.

As our reviewers judge, they score based on the standard BJCP components: Aroma (max 12 points), Appearance (max 3 points), Flavor (max 20 points), Mouthfeel (max 5 points), and Overall Impression (max 10 points). We've listed these individual component scores, and the bottom-line number is derived from adding then doubling these component scores to produce a rating on a 100-point scale. Note that the component scores are rounded automatically to the next whole number, so numbers here may appear to not add correctly. Rest assured that the score calculation is built off the numbers before rounding.

Our judges use the following scale in valuing scores:

- 95–100 » Extraordinary**
World-class beers of superlative character and flawless execution
- 90–94 » Exceptional**
Distinguished beers with special character, style, and flavor
- 85–89 » Very good**
Well-crafted beers with noteworthy flavor and style
- 80–84 » Good**

Keep one thing in mind as you read these reviews—your perception of a beer is more important than that of our review panel or editorial staff, and reading reviews in a magazine (or online or in a book) is no substitute for trying the beer yourself.

TASTED: AMERICAN AND WEST COAST IPA



Grains of Wrath Panopticon

100 AROMA: 12 APPEARANCE: 3 FLAVOR: 20 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Bright and balanced with piney bitterness and a touch of dankness. Notes of juicy pineapple, honeydew melon, bright berries, passion fruit."

What our reviewers thought:

"Wildly complex, amazing hop nose of lime leaf, fresh orange-blossom flower, grapefruit zest, passion fruit, peach, pine, lemongrass. The flavor doesn't disappoint. A fleeting dose of light malt sweetness gives way to a balanced, bright bitterness with hints of lemon, peach, mango, pine, some floral notes. Finishes dry, crisply bitter."

What our editors thought:

"Intriguing mélange of baked stone-fruit tart, lime leaf, ripe plantain, with a very light, fresh, tropical-floral structure. Beautifully structured bitterness in the sip accentuates the fruit notes without overwhelming them. Full without feeling heavy. Remarkable body in such a tight and concise beer."

ABV: 6.8% **IBUs:** 72

Loc: Camas, WA

Absolution Courage DDH

95 AROMA: 12 APPEARANCE: 3 FLAVOR: 19 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Loaded with Mosaic, Amarillo CGX, Strata."

What our reviewers thought:

"Complex combination of what hops have to offer—piney, dank, citrus, nicely integrated. Firm malt body, sweetness lingers but complements the hop flavors."

What our editors thought:

"Deeper mineral and earth tones underscore the brighter classic citrus and forest aromas. Sweeter orange in the flavor as the medium body syncs effortlessly with the hop and fermentation notes. Just a touch of bitterness to keep it ordered."

ABV: 7.3% **IBUs:** 70

Loc: Torrance, CA



Alvarado Street Single Cone

97 AROMA: 12 APPEARANCE: 3 FLAVOR: 19 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Brewed with Mosaic, HBC 586, Riwaka. Tropical and light, but heavy on the hop flavor and aroma."

What our reviewers thought:

"Aroma is dank, resinous with bright floral, perfume, light papaya, hint of lemon, orange. Pleasant hop flavors with hints of diesel, pine, lemon. A hint of residual sweetness in the finish. A post-COVID, modern West Coast IPA."

What our editors thought:

"Rich with pithy grapefruit and earthier gooseberry notes in the aroma, and a rosy-red floral note. Light and lean in the flavor, with faint hints of energetic lime."

ABV: 7.2% **IBUs:** 50

Loc: Monterey, CA



Alma Mader Pacific Portal

96 AROMA: 12 APPEARANCE: 3 FLAVOR: 20 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Heavily hopped with Oregon-grown Strata and Washington-grown Citra, Mosaic, Simcoe."

What our reviewers thought:

"Pine and subtle orange notes in the aroma. Diesel in the flavor, with a softer orange underneath. Bright, clean bitterness slowly fades with the pine lingering. Malt backbone is heavier but needed, given the heavy hopping."

What our editors thought:

"Bright tropical guava and lychee notes with a touch of clean sulfur in the aroma. Medium tropical fruit-pith bitterness balances the sweet malt in the sip without dulling the bright tropical fruit highlights."

ABV: 7% **IBUs:** 65

Loc: Kansas City, MO



Amalgam DDH Modern West

90 AROMA: 11 APPEARANCE: 3 FLAVOR: 18 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Double dry-hopped West Coast IPA."

What our reviewers thought:

"Big grapefruit and pine greet the nose. Light sweetness balances the dank pine and grapefruit hop flavors. Noticeably spritzzy carbonation. Soft and pleasant, easy on the palate. Very well balanced and a good starter IPA for someone ready to try the style."

What our editors thought:

"Very pale color suggests the lightest pilsner malt approach. Light grapefruit aroma with very soft honey tones on the edges. Grapefruit-pith bitterness in the flavor with a sunny citrus brightness."

ABV: 6.9% **IBUs:** N/A

Loc: Denver



Barebottle Phantasti-Cali

88

AROMA: 10
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Brewed with Phantasm, dry-hopped with Cashmere, Eureka, Enigma, Riwaka, Nelson."

What our reviewers thought:

"Dank grass, candied raspberry, light spiced herbs in the aroma. Restrained hop bitterness beneath a slightly sweet toasty malt flavor. Hints of garlic. Medium bitterness throughout."

What our editors thought:

"Sweet mango and papaya notes in the aroma, big and round with a light herbal bitterness in the distance. Deeper earthy and mineral bitterness at the front of the sip, softened by a touch of tropical fruit as it lingers."

ABV: 7.2% **IBUs:** N/A
Loc: San Francisco



BKS Artisan Ales Colors in Your Mind

89

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Dry-hopped with Strata, Strata CGX, Mosaic, Mosaic Cryo, Columbus Cryo."

What our reviewers thought:

"A citrus-led hop nose with some sweet malt to balance. A strong burst of hop flavor, more bitterness than the nose suggests. Woody pine tar, some Mexican oregano, grapefruit pith. Bitterness carries through on the tongue and lingers."

What our editors thought:

"Peach and mango tones in the aroma span old and new schools. Punchy mineral bitterness in the flavor hits hard and fades fast with only slight fruit tones around the edges."

ABV: 7% **IBUs:** N/A
Loc: Kansas City, MO



Boneyard RPM IPA

87

AROMA: 10
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 9

What the brewer says:

"Slightly sweet maltiness balanced with five PNW hops."

What our reviewers thought:

"Fresh pine, lingering citrus-hop aromas. Orange peel, light grapefruit hop flavors sit atop a soft malt foundation. Light body with subtle malt notes, balanced with crisp hop bitterness. Somewhat astringent finish with a pleasant bitterness and a touch of orange juice."

What our editors thought:

"Light stone fruit with some crusty sourdough bread in the aroma. Aggressive bitterness in the sip hits hard with a ripping energy. Not for the faint of heart."

ABV: 6.5% **IBUs:** 50
Loc: Bend, OR



Break Even Hundred Percent: Strata

93

AROMA: 12
APPEARANCE: 2
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "The Hundred Percent IPA series focuses on multiple lots of a single hop."

What our reviewers thought:

"Piney aroma suggests resinous flavor, while citrus turns into tropical and lightly juicy on the tongue. Dare we add ... dank? Lean but muscular body. Restrained hop bitterness, in a 2024 kind of way."

What our editors thought:

"Papaya and plantain notes in the aroma, tropical but not too sweet with earthy peel notes. Guava nectar in the flavor with a tropical bitter underpinning, light and lilting with a touch of fruit tartness."

ABV: 6.8% **IBUs:** 25
Loc: Amador City, CA



Beachwood Animatronic Friends

91

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 9

What the brewer says:

"Futuristic blend of innovative hops including Mosaic, Ekuano Cryo, Columbus, Centennial, HBC-586."

What our reviewers thought:

"Vibrant orange peel aroma with underlying pineapple notes. Flavor focuses on the hops, with tropical flavors and some light citrus notes. Soft malt sweetness underneath. Sweeter finish with a touch of bitterness."

What our editors thought:

"Pungent tropical aromas with guava and sudachi. Broader in the flavor as the sharper tropical notes fade quickly while the semisweet body lingers."

ABV: 7.1% **IBUs:** 60
Loc: Huntington Beach, CA



Blackbird Chimcoe West Coast

95

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Mélange of Citra and Simcoe lends itself to a fruit-forward medley on the palate. Effervescent, dry finish."

What our reviewers thought:

"Aromatic bouquet of grapefruit, grass clippings, peach, white grape, evergreen, a touch of the dank. Comes through just as pronounced in the flavor. Balanced bitterness supported by the right amount of malty sweetness. Finish is dry, firmly bitter."

What our editors thought:

"Papaya, mango in the aroma with a leafy green note alongside some fall leaves. Peppery piquant bitterness in the flavor with very subtle fruit undertones."

ABV: 7% **IBUs:** N/A
Loc: Wake Forest, NC



Break Even The Head of Joaquin Murieta

94

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

What the brewer says: "Our iterative IPA built for balance and depth."

What our reviewers thought:

"Mild orange in the nose with a touch of pith, honeydew, floral, light pine, peach, mango, guava. Fruity floral aspects flash initially in the flavor that becomes more aggressively pine, citrus. Finishes dry with a bit of sweetness."

What our editors thought:

"Solid classic-hop notes in the aroma with bits of lime juice and peel, a touch of overripe tropical fruit, oily citrus-tree leaf, coconut. Thick, slightly sweet in the sip, with a lime daiquiri-meets-IPA tone."

ABV: 7% **IBUs:** 25
Loc: Amador City, CA



Cellarmaker Mo' Simcoe

90

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

What the brewer says: "With Mosaic and Simcoe hops."

What our reviewers thought:

"Hints of diesel, green onion, notes of peach, lemon, white grape, touch of pine, perfume in the nose. Flavor runs parallel to the nose with a light malt sweetness supporting the peach, grapefruit, earthy, floral, pine-like notes. Bright carbonic bite tempers the sweetness, gives an impression of dryness, crispness."

What our editors thought:

"Herbal pineapple with a light fennel note in the aroma. A touch of Thai basil offers a bitter counterpoint to the softer fruit tones in the flavor."

ABV: 6.9% **IBUs:** 70
Loc: San Francisco



Cerebral Mass Extinction

91  AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

What the brewer says: "With Simcoe, Simcoe Cryo, Mosaic."

What our reviewers thought:

"Citrus-forward nose. Sweet orange, light vanilla atop a firm malt backbone. Ripe pineapple lingers throughout. Sturdy bitterness cuts through the sweet malt, providing a nice framework for the hop flavors. Somewhat dry on the back end with a pleasant bitterness. Finish is soft, slightly sweet, and fruity."

What our editors thought:

"Orange marmalade with a bit of berry definition in the aroma. Tight berry notes in the sip help balance the light but sprawling, body."

ABV: 7.2% **IBUs:** N/A
Loc: Denver



Creature Comforts Begin to Arrive

92  AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 9

What the brewer says:

"Collab with Everywhere features Superdelic, Riwaka, 586."

What our reviewers thought:

"Citrus and tropical-fruit notes in the aroma. Some nice background malt aroma. Light sweetness across the palate with the malt shimmering behind the bright tropical, citrus hop flavors. Tight finish with a slight punch of bitterness."

What our editors thought:

"Papaya and pomegranate aroma with a touch of herbal freshness. Sweeter papaya in the sip is balanced by an equally strong herbal punch that quickly fades for an assertive drinkability."

ABV: 7% **IBUs:** N/A
Loc: Los Angeles



Green Cheek False Memories

93  AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Citra, Mosaic, HBC 586. Ruby Red grapefruit, navel oranges, the devil's lettuce in the linger."

What our reviewers thought:

"Lively nose of lemongrass, lemon balm, orange peel, tangerine, pine, light floral. Flavor follows nose, but with a softer approach that gives way to a balanced bitterness that carries into the finish."

What our editors thought:

"Sweet mango, guava notes with a touch of pomegranate in the aroma balance the fresh, sharp tropical floral notes. On the palate, light tropical-fruit bitterness, a very lean body, flavor that hits quick and cleans up even quicker."

ABV: 7% **IBUs:** N/A
Loc: Orange, CA



Humble Sea West Coast Swellness

91  AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "TDH with Citra, Mosaic, Strata, Nectaron."

What our reviewers thought:

"Earthy, dank hop notes with hints of pine, citrus, grass clippings. Those aromatics give way to a sip with light malt sweetness that becomes a pepper- and onion-forward bitterness with some orange and pine to balance. Finish is bitter, lightly dry with enough lingering sweetness to coat the palate pleasantly."

What our editors thought:

"Berry notes with a woody back note in the aroma. Raspberry-lime notes in the flavor with a touch of earthy, woody hops."

ABV: 7.3% **IBUs:** N/A
Loc: Santa Cruz, CA



Cinderlands Beer HAHPS

94  AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Brewed with Yakima Valley Citra, Mosaic, Simcoe hops, and a lean grain bill."

What our reviewers thought:

"Assertive hop aroma of peaches, orange peel, pineapple. Medium malt aroma. Bright herbal, grassy hop flavors with a burst of pineapple, mango dominating the finish. Crisp bitterness almost balances the sweetness. Leans New England."

What our editors thought:

"Jumbled fruit candy in the nose with SweetTarts peaks and funkier tropical midtones. Bready yet tropical in the sip with a substantial fruit flesh throwback middle."

ABV: 7% **IBUs:** 70
Loc: Pittsburgh



Fonta Flora Your Tai

94  AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Dry-hopped with Amarillo, Mosaic, New Zealand Cascade, Riwaka."

What our reviewers thought:

"Aroma is tangerine peel, peach, strawberry, kiwi, pine forest. Hop flavors are fresh, crisp, with a citrus aftertaste. Firm yet balanced malt background. Brief berry-forward finish with lingering bitterness."

What our editors thought:

"Lime, pear, azalea flower, touch of tamarind in the aroma—a compelling blend of sweet and spice. High contrast in the sip with punchier pomegranate bracing the lower midtones with lime top notes. Achieves an expert balance with disparate flavors and aromas."

ABV: 7.5% **IBUs:** N/A
Loc: Nebo, NC



Hi-Wire Slam Dank

99  AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "Pink grapefruit, berry, orange zest, piney resin flavors."

What our reviewers thought:

"Earthy, dank, lime, passion fruit, strawberry in the aroma with herbal ginger root, green-tea notes. Tea-like notes in the flavor with an earthy bitterness complemented by lemon/lime notes. An impression of spiciness in the finish."

What our editors thought:

"Terpene overload in the aroma, with deep, dank weedy notes. Strong herbal notes offer a fresh lift in the sip, more woody and spicy than bitter, for a nice counterpoint to the sticky sweet citrus. Oddly delicious."

ABV: 6.5% **IBUs:** 55
Loc: Asheville, NC



Lawson's Finest Liquids Chinooker'd

93  AROMA: 12
APPEARANCE: 2
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Chock-full of Chinook hops bursting with pine, citrus aromas. Firm bitterness. Balanced malt profile."

What our reviewers thought:

"Complex but unified. Can pick out flavors—citrus, pine, touch of leather, stone fruit, pineapple—or just enjoy the richness. A bit of aspirin at the finish, which can either be off-putting or provide balance."

What our editors thought:

"Orange, tangerine, yuzu aroma with a bright layered herbal freshness. Firm bitterness in the sip with a mineral, almost dark-chocolate depth while touches of oily citrus flit on the surface. Bold, boisterous."

ABV: 6.5% **IBUs:** N/A
Loc: Waitsfield, VT



Liquid Mechanics West Coast Cartel

97

AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Collab with Cannonball Creek to help celebrate our 10th year in craft beer."

What our reviewers thought:

"The aroma, then flavor, push expressive hops to the edge of catty and onion-garlic without going over. Touch of dank, piney, with some cigar-box character. Just enough malt sweetness to lay a foundation for the next sip. Resinous."

What our editors thought:

"Tropical fruit and funk in the aroma, with juicy mango and overripe guava. Oily orange with an orange-pith bitterness gives structure to the sip. Finishes quickly with a light snap."

ABV: 7.1% **IBUs:** 57
Loc: Lafayette, CO



pFriem Family Midwest IPA

88

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

What the brewer says:

"Hugely resinous, with notes of kiwi, guava, peach with a touch of candied malt."

What our reviewers thought:

"Medium-low hop character of tangelo, lemon, diesel, pine. Bready malt-forward. Soft-spoken flavor profile with a nice balance of floral, pine, light citrus. Beautiful simplicity is an enjoyable counterpoint to its more brash and outspoken counterparts."

What our editors thought:

"Light, contemporary, with a stone-fruit lead in the aroma and subtle tropical-fruit highlights. Full despite the pale body, with clever tropical top notes on the concise malt middle."

ABV: 6.8% **IBUs:** 25
Loc: Hood River, OR



Public Offering Good Old Days

91

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Mosaic Cryo, Nelson, Simcoe."

What our reviewers thought:

"Fresh tropical flavors throughout—mango, passion fruit, hint of pineapple juice. Hop fruitiness blends easily with malt sweetness, choosing smoothness over the complexity hop resins would add."

What our editors thought:

"Very light tropical fruit with a cotton-candy-like airiness in the aroma. Smoothly tropical in the sip with subtle flavor notes that prize accessibility over intensity."

ABV: 6.6%

IBUs: N/A

Loc: Denver



Riverlands Drifting Canoe

95

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"North Star Pils, a bit of dextrin, Citra, Nectaron, Simcoe, Mosaic."

What our reviewers thought:

"Pineapple, dank peaches, citrus in the nose. The taste contrasts, starting with a firm, clean bitterness before jumping into a bouquet of grapefruit, tangerine, pine, diesel, followed by a background malt sweetness. A good, bitter-forward, flavorful example."

What our editors thought:

"Strong woody, almost cocoa-powder-like note in the nose with berry undertones. Bolder berry in the flavor, accentuated by the semisweet body, with a balancing drying woody note below. Interesting and engaging."

ABV: 6.5% **IBUs:** 70
Loc: St. Charles, IL



Outer Range Cosmic Sauce

93

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Mosaic, Cascade, Citra."

What our reviewers thought:

"Fresh cedar pops at the outset, mingling with tropical aromas of passion fruit and mango and a balancing sweaty note. Resinous on the tongue, although not particularly bitter. Clean malt sweetness lingers through the finish."

What our editors thought:

"Elegant rose and herbal notes in the aroma, with a touch of pineapple and dark cherry. More light pineapple in the flavor with an oily, sweet orange note, and only very light bitterness."

ABV: 6.4% **IBUs:** N/A
Loc: Frisco, CO



Pinthouse Layers of Flavor

90

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Brewed to showcase modern hop varieties."

What our reviewers thought:

"Lemongrass notes blend with herbal, floral, zesty pine forest, blackberry honey aromatics in the nose. An orange-like sweetness in the initial sip is quickly countered by a firm resinous, herbal bitterness that carries into the finish. Stays drinkable and lean."

What our editors thought:

"Tropical fruit, cured fish, a touch of tamarind, and red curry in the nose. Broadly tropical in the sip, with a light herbal spice."

ABV: 6.9% **IBUs:** N/A
Loc: Austin



Radiant Beer Make the Leap

89

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"With Mosaic, Riwaka, Simcoe, Idaho 7."

What our reviewers thought:

"Light aroma of lemon pith, orange. On the palate, grapefruit and pine play off one another with a soft, light, sweet malt character underneath. Well-rounded bitterness. An easy drinker with just enough bitterness to keep you coming back for more. Finish is soft and pleasant."

What our editors thought:

"Sparkling pale straw color. Subtle peach and apricot in the aroma. Peppery tropical-fruit pith in the flavor with a smart radish-like bite."

ABV: 7.1% **IBUs:** N/A

Loc: Anaheim, CA



Russian River Pliny for President 2024

94

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"A lower-ABV version of our regular PTE but with more hops."

What our reviewers thought:

"Hop aromas showcase tangerine, grapefruit, background pineapple. Round malt foundation with bright sweaty tropical hop flavors: ripe mango, white wine, herbal. Dank, diesel, sweaty on the finish."

What our editors thought:

"Vivid yuzu, lemon, touch of tangerine, underscored by a fresh white-flower aroma. Light bready body balances semisweet tropical-fruit notes and a strong, fresh tropical-herbal bitterness that leaves a touch of tingle on the tongue."

ABV: 7% **IBUs:** 60
Loc: Santa Rosa, CA



Shred Smack Down!

91  AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

What the brewer says:

"Riwaka, SubZero Hop Kief, Citra, Simcoe, Riwaka, Columbus Cryo."

What our reviewers thought:

"Aroma brings a mix of tropical fruit and earthy dankness, but flavor notes of pine, tangerine, vegetal come across muted. Mild malt character and dry finish seem to strip away any lively characteristics. Lean and clean. Crushable."

What our editors thought:

"More tropical floral than tropical citrus, with light berry notes in the aroma. Bigger on the tongue with an oily intensity that spreads and lingers while still keeping the bitterness in check."

ABV: 7% **IBUs:** N/A
Loc: Rocklin, CA



Solemn Oath Kidnapped by Vikings

91  AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "A light but rich caramel malt backbone balances the piney, citrus hop presence."

What our reviewers thought:

"Fruit Stripe gum collides with citrus cannabis but on the medium end of the style. Finishes lean and dry. Light hint of alcohol carries that hop profile. Well-crafted and approachable."

What our editors thought:

"Classic American IPA nose leads with a touch of lemon and lime before sliding into grape cotton candy. Chunkier piney bitterness in the flavor, familiar but piquant with an herbal licorice bite."

ABV: 6% **IBUs:** 75
Loc: Naperville, IL



Tenma Sphere of Eternity

97  AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Mosaic, Mosaic Cryo, Mosaic 702, Citra. Big tropical fruit up front but finishes with that classic Mosaic dank quality."

What our reviewers thought:

"Dances between tropical fruits and resinous pine on the nose. Lean, firm body complements the complex hop character. Did we mention fresh pineapple, a sprinkling of tobacco?"

What our editors thought:

"Subtle cantaloupe, apricot, orange peel, tropical flower in the aroma. A bit sweet in the body, but that sweetness underscores the light tropical-fruit notes in the flavor with just a bit of herbal structure."

ABV: 6.7% **IBUs:** 60
Loc: Oakland, CA



Sunriver Critical Few

96  AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Clear and dry, with ample bitterness and an intense hop character. Expect pronounced notes of Blueberry Kush, Orange Crush, resinous evergreen, mango nectar."

What our reviewers thought:

"Hop aroma is earthy dank, slightly funky, onion. Also some nice fruity hop aromas: berry, passion fruit, white wine. Flavor is clean hop bitterness with layers of passion fruit, kiwi, mango, pineapple while leaning into rustic berry notes. Nice balance. Supporting malt character provides the stage for the hops. Semisweet finish with lingering hop flavors, a touch of bitterness."

What our editors thought:

"Curious blend of classic and modern double IPA in the aroma, as thiol-focused pineapple and funky tropical notes play over more classic orange notes, with a clean edge. The same approach extends to the flavor, with delicately pointed tropical structure and fresh white floral notes over softer guava and kiwi. The malt supports admirably, with just enough sweetness to build body and highlight the fruitier tones."

ABV: 8.6% **IBUs:** 80
Loc: Sunriver, OR

Slice Untold Prophecy

94  AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Hopped with Mosaic, Mosaic Cryo, Strata, Nectaron."

What our reviewers thought:

"Orange pith dominates the aroma. Leans more toward sweet orange, honey tangerine, lemon, grapefruit, pine in the flavor. A restrained bitterness lingers in the background. A good balance between the firm hop bitterness and some sweet, complex flavors."

What our editors thought:

"Fresh tropical-floral aroma with a distant touch of diesel oomph. Light and racy in the flavor with minimal tropical bitterness and a very smooth low-intensity-for-high-consumption angle."

ABV: 6.9% **IBUs:** N/A
Loc: Lincoln, CA



Sunriver Something Dank (This Way Comes)

89  AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 9

What the brewer says:

"Notes of tangerine zest, bright evergreen, wild berry jam, flowering OG Kush."

What our reviewers thought:

"Nicely blends pre-tropical and post-tropical hops—neither pine nor citrus nor guava dominates, but they are all there. Sweet-malt flavors balanced by resinous bitterness."

What our editors thought:

"Orange and mineral notes in the aroma with an updated classic American IPA feel. Bready and rich in the flavor as strong and sweet malt plays with the heavy orange notes."

ABV: 7% **IBUs:** 70
Loc: Sunriver, OR



Westbound & Down IPA Reimagined

99  AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Simcoe, Citra, Mosaic Cryo, Citra Cryo. Collab with Ghost Town Brewing."

What our reviewers thought:

"Nose of floral, lemon, and a healthy dose of dank, resinous character. Hop flavor blends citrus, verbena, herbal notes with fresh-cut grass. Hint of astringency emerges mid-palate and lingers."

What our editors thought:

"Unapologetically forward in the nose with locker-room dank over guava petit four and papaya. Light on the tongue with tightly reined bitterness. Airy, bright with soft tropical-fruit notes. Finds a beautiful space between intensity and character and light accessibility."

ABV: 7% **IBUs:** N/A
Loc: Idaho Springs, CO



Absolution Wicked '24: The Ritual

90

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 9

What the brewer says:

"Mosaic, Nelson Sauvin, some Nectarin. All together to make some of that good-good drinky drink."

What our reviewers thought:

"Aroma is dank, resinous, piney, lightly tropical hop notes. Full body with alcohol warmth. Nice blend of caramel, biscuit-like sweetness, grapefruit, pine, lightly diesel bitterness. Hops and malt blend and are well balanced."

What our editors thought:

"Orange biscuit with a pineapple spike in the nose, alongside some earthy tropical undertones. Sweeter orange in the sip, big and luxurious, with a tidy herbal bitterness that sweeps up the finish."

ABV: 10.76% **IBUs:** 80
Loc: Torrance, CA



GOAL Rollin' On Wats

86

AROMA: 11
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 4
OVERALL: 10

What the brewer says: "West Coast double IPA with Nelson Sauvin, Mosaic Cryo."

What our reviewers thought:

"A slight mango-and-papaya nose. Sweet malt, followed by a smooth bitterness, some red fruit, with a subtle dank and pine note. The flavor is a little muted but well balanced between the bitterness and sweetness. Perhaps showing its age."

What our editors thought: "Touches of powdery rose with bits of pineapple in the aroma. Much sweeter in the flavor with a tropical cocktail feel and very light bitterness."

ABV: 8% **IBUs:** N/A

Loc: San Diego



Roaring Table Bar & Grill

89

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"California-style pils malt IPA."

What our reviewers thought:

"Smooth dankness and grassiness in both the aroma and flavor. Grapefruit and orange stay through and through. Moderate-plus bitterness, smooth malt with a slightly sweet alcohol component. Slight, pleasant warmth is left on the palate."

What our editors thought:

"Very light color from what must be the palest pilsner malt available. Light tropical fruit with spicier red floral notes in the aroma. Pineapple and cherry with tobacco behind them in the flavor, for a nice push and pull."

ABV: 7.9% **IBUs:** 72
Loc: Lake Zurich, IL



Slice Resting Peacefully

92

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Hopped with Citra, Columbus Cryo, Mosaic, Nectarin, Riwaka Cryo."

What our reviewers thought:

"Pine and dank notes in the aroma complemented by subtle green onion, tangerine. Flavor continues the dank experience, carried by sneaky alcohols in a well-executed fashion. Finishes dry, drinkable, crushable."

What our editors thought:

"Tropical mango and papaya with a touch of white pepper and white flower in the aroma. Plays a nice middle ground in the flavor with polished fruit notes and softer structuring bitter notes both pulling back into a cohesive whole. Refined."

ABV: 8.3% **IBUs:** N/A
Loc: Lincoln, CA



Breakside Double Wanderlust

89

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 10

What the brewer says: "West Coast double IPA with Mosaic, Nelson, Chinook."

What our reviewers thought:

"Slight malty sweetness followed by bright, sharp grapefruit in the aroma. Nicely balanced between clean bitterness and sweet orange hops. The finish is clean and quick with just a hint of the bitterness lingering on the tongue."

What our editors thought:

"Lemon, lime, papaya with a fresh tropical and herbal edge in the aroma. Guava with bits of white pepper spice and firm but rolling bitterness in the flavor offer a friendly approach that isn't floppy."

ABV: 8.4% **IBUs:** 52
Loc: Portland, OR



North Park House of Fu!

91

AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Triple dry hopped with Citra, Mosaic, Simcoe, Strata, Amarillo."

What our reviewers thought:

"Fruity hop aroma, notes of mango, guava, yuzu, citrus. Crisp hop bitterness and bright citrus flavors, with a softer semisweet malt backbone providing structure. Round finish with ripe orange notes. Quite drinkable."

What our editors thought:

"Light notes of mango with a vague tropical funk in the aroma, soft but enticing. Crisply structured in the sip as the carbonation, light sulfur and thiol notes combine with blurry tropical fruit notes for a bright but regimented flavor."

ABV: 8% **IBUs:** N/A
Loc: San Diego



Single Hill Well Armed

93

AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Lurking in the Pacific Northwest, ready to snatch your tastebuds with its powerful grip."

What our reviewers thought:

"Some tobacco mixed with citrus in the aroma. A touch of stone fruit. Minty pine, dank hop flavors underline a hop bitterness and sweet alcohol. Finish leaves a pleasant well-rounded bitterness."

What our editors thought:

"Subtle and refined citrus in the aroma, sunny with an almost watermelon freshness. Contrast in the sip as softer sweet melon notes up front take on a bold peppery, pithy bitterness as it finishes."

ABV: 9% **IBUs:** 55
Loc: Yakima, WA



Sun King Rhinomite

86

AROMA: 10
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

What the brewer says:

"Brewed with Citra and Sultana hops and Pineapple Kush terpene for boosted tropical fruit character."

What our reviewers thought:

"Aroma is woody and alcoholic, with berry and sweet orange. Flavor leans into the malt. Orange notes pop with sweeter caramel/bread notes. An unusual approach to IPA, this is focused on the interplay of earthy flavors."

What our editors thought:

"Light copper color. Cooked orange with light tobacco in the aroma, almost smoky? Classic C-hop orange and pine in the flavor, oily but softer bitterness."

ABV: 8.5% **IBUs:** 54
Loc: Indianapolis



TASTED: BLACK IPA OR CASCADIAN DARK ALE



Pax Verum Nectar of the Night

95 AROMA: **11** APPEARANCE: **3** FLAVOR: **20** MOUTHFEEL: **5** OVERALL: **10**

What the brewer says:

"Brewed with Simcoe, Idaho 7, Citra Incognita, Citra Spectrum."

What our reviewers thought:

"Chocolate and red fruit in the aroma. Dark roast notes and a clean, soft chocolate flavor. Tempered pine and herbal licorice bitterness in the background. Chocolate and dark fruit appear as it warms. Slightly sweet and roasty finish with a lingering bitterness. Enough complexity to keep it interesting. Mouthfeel is heavier but really keeps everything together, especially on later sips."

What our editors thought:

"Sweet oak and a touch of charred oak in the aroma, with a light nuttiness and darker toasted bread notes. Citrus bursts in the sip, with light chocolate notes, a touch of drying cocoa-powder bitterness, and a body that rides up to the full line but never feels excessive. Artfully balanced in the way its story unfolds through the aroma and flavor."

ABV: 9.2% **IBUs:** 95
Loc: Lapel, IN

Allusion As You Wish

92 AROMA: **11** APPEARANCE: **3** FLAVOR: **19** MOUTHFEEL: **4** OVERALL: **10**

What the brewer says:

"Brewed with dark malts and Cascade, Centennial, Simcoe."

What our reviewers thought:

"Coffee roast with chocolate powder in the aroma. Chocolate, coffee, roast intermingle with a backbone of slight bitterness balanced by a restrained sweetness. Relatively quick, dry, slightly cocoa finish."

What our editors thought:

"Classic orange and pine hop aroma with a light fresh edge and a touch of roastier dark chocolate. Rich chocolate in the sip highlighted by the oily orange note, but with a concise and economical body that prizes drinkability. Remarkable in its restraint."

ABV: 6.3% **IBUs:** 71
Loc: Vandergrift, PA



Meanwhile Icarus's Revenge

92 AROMA: **11** APPEARANCE: **3** FLAVOR: **18** MOUTHFEEL: **5** OVERALL: **10**

What the brewer says: "New World American hops wrapped in a black velvety malt blanket."

What our reviewers thought:

"Coffee and dark chocolate in the aroma, with pine hops. Some dank on the palate, a bit of spearmint. Juicy Fruit-type gum. Soft cocoa powder behind the hops. Quick, clean finish. Very classic, well balanced."

What our editors thought:

"Sweatier tropical hop notes offer a contemporary take in the aroma, with a grilled pineapple vibe. Tight, modern, and dry in the flavor with very light chocolate alongside vivid tropical tones. Unexpected and intriguing."

ABV: 6.8% **IBUs:** 57
Loc: Austin



TASTED: SOUTHERN HEMISPHERE-STYLE IPA



BKS Westland

95 AROMA: **12** APPEARANCE: **3** FLAVOR: **19** MOUTHFEEL: **4** OVERALL: **10**

What the brewer says:

"Dry-hopped with Motueka, Mosaic, Strata, Motueka Hop Kief."

What our reviewers thought:

"Myrcene and pine sap, followed by pineapple, lime, and a touch of orange-blossom sweetness. The flavor carries that forward with more emphasis on the floral-citrus side. The aftertaste lingers on with a highlight of lime. Focused, but not one-note. Some sweetness carries through to the finish."

What our editors thought:

"Brilliant yellow color with a rocky white head. Fresh floral notes bounce among light peach, mango, passion fruit in the aroma with a bright cohesion. Bold passion fruit and guava in the flavor, with a beautifully balanced tropical bitterness that scrubs quickly into a lingering cool tropical-fruit tone. Vibrant without overdoing the intensity. Rides the delicate line of drinkability with aplomb."

ABV: 7% **IBUs:** N/A
Loc: Kansas City, MO

Caius Farm Cleopatra

88 AROMA: **12** APPEARANCE: **3** FLAVOR: **18** MOUTHFEEL: **4** OVERALL: **9**

What the brewer says:

"Unfiltered. Brewed with Riwaka, Nectaron, Rakau, Nelson Sauvvin."

What our reviewers thought:

"Floral and citrus-like aroma with hints of blueberry, lavender, fresh-mown grass, orange blossom, a little pine. The flavor stays grassy but leans more toward citrus. Medium bitterness, but the finish is a touch sweet. Creamy mouthfeel with sticky foam."

What our editors thought:

"Stone fruit with a touch of mango and pineapple in the aroma that also carry into the flavor. Creamy texture with low bitterness, but a fresh white-floral edge that holds it together."

ABV: 7% **IBUs:** 45
Loc: Branford, CT



Cloudburst A Little Much

90 AROMA: **12** APPEARANCE: **3** FLAVOR: **18** MOUTHFEEL: **4** OVERALL: **10**

What the brewer says: "Nectaron, Nelson, Riwaka, Mosaic, Citra (T90s, Cryo, HopKief)."

What our reviewers thought:

"Dank orange-blossom hops are cut with a hint of onion-garlic in the aroma. More of the same in the flavor. Gentle alcoholic warmth noticeable in the retronasal. Really nice balance throughout with a clean finish."

What our editors thought:

"Light stone fruit and a touch of honeydew melon in the aroma, subtle and fleeting. Bolder in the flavor, yet still restrained, with light pineapple and melon, plus thoughtfully balanced pithy tropical bitterness. Cohesively minimal."

ABV: 7.1% **IBUs:** 65
Loc: Seattle



Grains of Wrath Wastelandia

94

AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Riwaka, Superdelic, Strata, Mosaic. Sweet citrus, strawberries, peaches."

What our reviewers thought:

"Fruity, floral, tropical aromatics of strawberry, grape, passion fruit, limoncello, orange blossom. Well-balanced sip accentuates hop aromatics with a carrying bitterness. Finishes dry and crisp."

What our editors thought: "Fresh floral and stone fruit in the aroma, alluring yet coy. Well rounded in the flavor as the softer stone-fruit notes meld with a light mineral bitterness for a tightly structured yet rewarding sip."

ABV: 6.9% **IBUs:** 68
Loc: Camas, WA



Moonraker Straight Up Nelson

88

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

What the brewer says:

"A West Coast India Pale Ale with Nelson Sauvín."

What our reviewers thought:

"Very soft citrus aromas with touches of herbal, melon. Flavor has a lightly sweet malt base, with bright citrus hop flavors layered above. Hop bitterness lingers pleasingly into the somewhat sweet finish."

What our editors thought: "White floral and papaya notes in the aroma, with gentle stone-fruit edges. Sweet stone fruit in the sip with a broad body, lower bitterness, and light carbonation."

ABV: 7.4% **IBUs:** 60
Loc: Auburn, CA



pFriem Family South Pacific IPA

88

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 3
OVERALL: 10

What the brewer says:

"Brimming with notes of nectar, gooseberry, pineapple. Bright, zesty finish."

What our reviewers thought:

"Floral and stone-fruit aromas. Hops provide a citrus-leaning blend of tangerine, orange, lime, with a touch of pineapple, some resinous pine. Some sweetness throughout the mid-palate. Finish is a touch sweet for style, but it contributes to the smooth bitterness."

ABV: 6.8% **IBUs:** 45
Loc: Hood River, OR



Urbanrest Freestyle Ur Ded to Me

92

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Simcoe, Amarillo, Mosaic, Freestyle Nelson. Bright, bitter, dry, punchy."

What our reviewers thought:

"Dank hops with a bit of mango in the nose (lemon and diesel, resinous and grassy) while the flavor pulls in some pineapple. Clean bitterness lingers, urging another sip. Bright finish with a subtle hint of white bread as it warms in the mouth."

What our editors thought: "Strong pineapple in the aroma with mango and papaya. Relatively dry in the sip with a noticeably light body."

ABV: 7% **IBUs:** N/A
Loc: Ferndale, MI



Green Cheek All Your Friends

88

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Galaxy and Nelson. Fresh kiwi, honeydew, passion fruit, orange marmalade."

What our reviewers thought:

"The grapefruit-orange-pine aroma doesn't quite deliver the expected tropical-hops character. Really looking for more from the Southern Hemisphere. Nice combination of dank rubbery aromas and softer citrus aromas. Finishes a bit pithy and sweet."

What our editors thought: "Pronounced peachy-guava umbrella cocktails with creamy hints in the aroma. Sleek kiwi and white pepper in the flavor that balloons into soft tropical fruit as it lingers."

ABV: 7% **IBUs:** N/A
Loc: Orange, CA



New Image Coriolis Effect

93

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Motueka + Citra + Columbus. Sweet on the first sip while finishing dry."

What our reviewers thought:

"Great hop flavor takes center stage: papaya, guava, white peach, subtle grass. Myrcene and lemon. Light-to-medium creamy body. Very smooth bitterness lingers into the clean finish."

What our editors thought: "Wheaty tones in the aroma with white peach and brief guava flashes. Hefty in the sip, significantly sweet with a soft, creamy body that beautifully amplifies the blended fruit notes. Finishes quickly and cleanly with a bright edge."

ABV: 6.5% **IBUs:** N/A
Loc: Arvada, CO



Pinthouse New Zealand Scorpion Disco

88

AROMA: 12
APPEARANCE: 2
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Featuring notes of exotic citrus, papaya, gummy candies."

What our reviewers thought:

"A good blend of tropical-fruit character from the hops. The aroma leans more toward mango, with a touch of lemongrass. Also, diesel and herbaceous aromas (wet concrete comes to mind). The flavor evokes guava, passion fruit, and a little lemon. Smooth bitterness."

What our editors thought: "Lemon peel and coastal cedar forest in the aroma. Oily lemon, tangerine, and yuzu in the sip."

ABV: 6.6% **IBUs:** N/A
Loc: Austin



Wren House Wrenovation New Zealand

90

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Bursting with notes of orange zest, pine, floral pink grapefruit."

What our reviewers thought:

"Subtle aromatics of peach, grape, tropical fruit. The fruity elements carry forward into the flavor to join tangy-tart clementine, but the impression of sweetness is balanced by a nice firm bitterness that emerges mid-palate and lingers well into the dry but crisp finish."

What our editors thought: "Pink guava and orange in the aroma with a light thiol edge. Crisp mineral and tropical pith notes in the flavor with light fruit edges, zippy and direct."

ABV: 6.5% **IBUs:** 65
Loc: Phoenix



TASTED: HAZY IPA



Maplewood Sabro Transit Authority

99

AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "Our juicy, DDH love letter to Sabro hops. Huge notes of citrus, coconut, and overripe tropical fruit."

What our reviewers thought: "Sweet honey grass, fresh-cut coconut, melon, candied tropical fruits. Lovely aroma. Fruit flavors to rival a smoothie: papaya, mango, yogurt-covered dried fruit pieces, sugarcane, breezy sea grass, and floral touches. A little sweet on the body with a pungent floral aspect that reaches a crescendo. A bold bitterness cushions the sweetness."

What our editors thought: "Thai-like sweetness and spice in the aroma with a touch of lemongrass, coconut, and overripe lychee, alongside a woody undertone. Quirky in the flavor, as an acidic tinge takes the fruit on an unexpected journey, with pithy tropical bitterness and a sunny-but-not-sweet disposition. It's a left-field approach that feels challenging yet accessible."

ABV: 7% **IBUs:** N/A
Loc: Chicago

12 West Parallel Bubbles

92

AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Strata hops. Huge passion fruit and strawberry flavor; dank tropical-fruit aroma."

What our reviewers thought:

"Aroma of orange creamsicle with a touch of mango. Nicely balanced flavor, light bitterness, with elegant tropical fruit dripping with pizzazz. Light bitterness in the aftertaste lingers pleasantly. Ripe, velvet-like finish with pineapple and mango bursts."

What our editors thought:

"Alluring chardonnay aroma with subtle woodiness and light vanilla notes. Tight and expressive in the flavor with more white grape and a light, sparkling herbal-pepper bitterness."

ABV: 7% **IBUs:** 21
Loc: Gilbert, AZ



The Big Friendly After the Rain

94

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Hazy IPA."

What our reviewers thought:

"Bright aroma of sweet lemon, grapefruit. Eschews the heavy-handed tropical direction for a lighter candy sugar-like sweetness that pairs nicely with New World hops, providing hints of bubblegum, coconut. Very smooth, light white-grape and resin hop flavors."

What our editors thought:

"Mango and guava in the nose with a light, fresh phenolic edge. Sweeter yet structured in the sip, as the bold fruit notes strike a big presence before the subtle pithy bitterness gently scrubs them from the palate."

ABV: 6.5% **IBUs:** N/A
Loc: Oklahoma City



Creature Comforts Flash Cat

88

AROMA: 10
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "One big haze bomb with a silky-smooth finish."

What our reviewers thought:

"An aroma of dried pineapple and mango, tangerine, marshmallow sweetness. Jackfruit dominates in the flavor with some banana, a few hot esters, a bit of yogurty mango, and some hops playing peekaboo. Hop bitterness balances the malty sweetness. Finishes quite smooth, with lasting flavor."

What our editors thought:

"Tangerine, lime leaf, and subtle peach notes in the aroma. A touch more spice in the sip, with a bit of tamarind."

ABV: 6.8% **IBUs:** N/A
Loc: Los Angeles



Barebottle Haze & Ashbury

96

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "DDH with Simcoe, Simcoe Cryo, Citra, Citra Cryo, Mosaic."

What our reviewers thought:

"Big nose of grapefruit, lemongrass, sagebrush, candied tangerine, floral. Cracker-like maltiness with mandarin oranges, green hop resin. Big, dank hop presence with a creamy and dry finish. Bitterness elegantly complements the body, and carbonation is spot-on. Mouthfeel carries the flavors without being sweet or full."

What our editors thought:

"Fresh thiol-driven aroma with brief flashes of mango and lychee. Wheaty body with a very light peppery bitterness and round stone-fruit notes."

ABV: 6.7% **IBUs:** N/A
Loc: San Francisco



Big Grove Nod

90

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "A throwback hazy that features Citra, Mosaic, Galaxy hops."

What our reviewers thought:

"Lemongrass, tangerine, apricot, peach, rose on the nose. Full-bodied, like a chewy granola bar, contrasted with a strong rose-and-jasmine hop profile and mineral tangerine. Medium bitterness with a soft mouthfeel and dry finish. High carbonation with a warming alcohol presence."

What our editors thought:

"Malt-forward nose with an almost rye-like character. Sweet, overriding tropical fruit in the flavor, with low bitterness and a firm malt note."

ABV: 7.5% **IBUs:** 40
Loc: Iowa City, IA



Dalliance Five of Wings

90

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 9

What the brewer says:

"Azacca, Citra, Lotus, Comet. Soft bitterness, tropical aroma, pineapple, guava, hint of lime on the palate."

What our reviewers thought:

"Light diesel provides a counterpoint to pine, floral, tangerine, grapefruit hoppy aromas. Moderate body showcases orange, passion fruit, lemongrass, pine, grapefruit hop notes. Slightly sweet finish with a light, pleasant bitterness."

What our editors thought:

"Light floral and herbal edge to the vague tropical fruit in the aroma. Sweet and soft in the sip with light lemon frosting and minimal bitterness, but it still finds a clean finish."

ABV: 6.5% **IBUs:** 40
Loc: Yakima, WA



DankHouse Dose of Nelson Sauvín

90

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

What the brewer says: "Just screams Nelson, but in a super-soft and creamy way."

What our reviewers thought: "Aromas of orange, grapefruit, candied strawberry merge with pine and tropical elements. Diesel and dank elements emerge in the flavor, provide a counter to the tropical sweetness. Soft body and mouthfeel, but with a mild carbonic bite. Mouth-coating bitterness emerges late."

What our editors thought: "Bright thiol-driven nose with a weedy back note and very subtle mango and strawberry. Sweet in the sip with mild bitterness that pushes the soft berry and tropical notes forward."

ABV: 7% **IBUs:** N/A
Loc: Newark, OH



Hill Farmstead Harlan

88

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

What the brewer says: "Copiously dry-hopped with Columbus, Simcoe, a hint of Nelson Sauvín."

What our reviewers thought: "Aroma entices with apricot, cantaloupe, pineapple upside-down cake, guava, tangerine zest. Creamy mouthfeel. Full bodied, with a Hawaiian-bread sweetness, contrasted by a hefty piney-hop bitterness that cuts through the sweetness."

What our editors thought: "Dank pineapple and weedy notes in the aroma, rich and enveloping with mineral undertones. Sweet orange, guava notes in the flavor braced by a very firm bitterness. Hazy, but not soft."

ABV: 6% **IBUs:** N/A
Loc: Greensboro Bend, VT



Indio Broke & Famous

91

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "Hopped with Citra, Mosaic, Columbus, Nelson Sauvín."

What our reviewers thought: "Refined tropical aroma, lychee and guava, meets complex cereal grains. Seamless. Berry, grapey notes and lemon zest make a late appearance, moving subtly into a creamy finish."

What our editors thought: "Light pineapple juice with soft earthy undertones in the aroma. High-key and bright in the flavor, with energetic pineapple, a slight mineral undertone, and subtle herbal bitterness."

ABV: 6.2% **IBUs:** 12
Loc: Sugar Hill, GA



Lumen Beer Slice

98

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "Featuring Citra, Citra 702, Mosaic."

What our reviewers thought: "Orange bomb that makes your mouth water. Clementine spritz, creamsicle. Flavor hits with super-thick orange marmalade, guava, pineapple. A little bitterness catches on the back of the throat after bursting, then melting with viscous sunshine in the mouth."

What our editors thought: "Aroma pulls with evocative guava, lychee, and pushes with a fresh herbal edge, but it's all warm tropical-fruit hug in the flavor with subtle pepper notes high pointing the sweet-yet-trim fruit in the sip. Feels big without heaviness."

What our editors thought: "Aroma pulls with evocative guava, lychee, and pushes with a fresh herbal edge, but it's all warm tropical-fruit hug in the flavor with subtle pepper notes high pointing the sweet-yet-trim fruit in the sip. Feels big without heaviness."
ABV: 6.4% **IBUs:** 30
Loc: Omaha, NE



GOAL Infrared AM's

88

AROMA: 12
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 5
OVERALL: 9

What the brewer says: "Citra and Maui Nelson SubZero Hop Kief."

What our reviewers thought: "Citrus-forward nose of tangerine, grapefruit, lemon, melon, herbal hops. Agave-like sweet maltiness with hints of melon, marmalade, black tea. Light cracker malt note. Fairly low bitterness leans toward a full mouthfeel. Dry finish."

What our editors thought: "Vague orange and lemon in the aroma with a warm and woody malt note. Lemon-lime in the flavor with light bitterness for a modern grown-up soda feel."

ABV: 6.7% **IBUs:** N/A
Loc: San Diego



Humble Sea Socks & Sandals

88

AROMA: 12
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 5
OVERALL: 9

What the brewer says: "Citra, Centennial, Simcoe, Chinook. Aroma: orange juice, mimosa, lime zest. Flavor: pineapple, cantaloupe."

What our reviewers thought: "Nose has notes of rising bread, lemon cake bar, dragon fruit, grapefruit, floral hops. A bit malty, reminiscent of a honey-drizzled brioche. Creamy mouthfeel with a dry lemon-zest finish. Definitely quaffable, as the bitterness is well balanced."

What our editors thought: "Low-key guava and lychee in the aroma with a touch of dragon fruit. Spicy herbal and pithy bitterness in the flavor with some red tropical-fruit notes."

ABV: 6.6% **IBUs:** 64
Loc: Santa Cruz, CA



Jagged Mountain Wolfpack

87

AROMA: 12
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 4
OVERALL: 9

What the brewer says: "With Strata and El Dorado."

What our reviewers thought: "Aroma is reminiscent of fruity cereals, like Special K Red Berries or Cap'n Crunch Berries. Also dried apricot/peach, goat cheese. More subtle vanilla, orange, a hint of red berry round out the flavor profile. Smooth, creamy mouthfeel. Finishes well balanced."

What our editors thought: "Hibiscus and red licorice note in the aroma, with a bit of dragon fruit. Sweeter and less structured in the flavor, with just a touch of lime creeping in."

ABV: 7.2% **IBUs:** N/A
Loc: Denver



Marto Be the Reason

98

AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "DDH with Riwaka, Citra, Galaxy, Motueka, Nelson Sauvín."

What our reviewers thought: "Fresh, juicy tropical-fruit aroma. Pineapple, orange cream soda. Ripe tropical hop flavor flows across a soft malt bed with citrus notes stitched in. Assertive, clean tropical finish with a dash of bitterness."

What our editors thought: "Intensely subtle nose with overripe tropical-fruit notes and chalky candied fruit. Sweet in the sip with strategically positioned guava notes that express beautifully in full spectrum, with light tropical bitterness and a touch of tropical spice."

ABV: 6.8% **IBUs:** N/A
Loc: Sioux City, IA



Moniker Stun Gravy

94 AROMA: 11 APPEARANCE: 3 FLAVOR: 19 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Thiolized NEIPA with Galaxy, Citra, Mosaic, Cashmere."

What our reviewers thought:

"Tropical smoothie notes of mango, passion fruit, coconut, pineapple, tangerine, light grapefruit, strawberry in the nose. Subtle notes of pine, resin. Soft, clean malty body provides a backdrop for the tropical, piney, earthy bitterness. Characteristic fluffiness."

What our editors thought:

"Yuzu and orchid-blossom aroma, unconventionally alluring and thoroughly modern. Light and juicy yuzu in the sip, never sweet, with a quirky yet cohesive citrus-pith bitterness. Off-kilter rhythm, yet the melody is irresistible."

ABV: 7.5% **IBUs:** N/A
Loc: Providence, RI



Onsite Higher Mindset

89 AROMA: 10 APPEARANCE: 3 FLAVOR: 19 MOUTHFEEL: 4 OVERALL: 9

What the brewer says:

"Strata, Citra, Mosaic hops create passion fruit, melon, berry flavors."

What our reviewers thought:

"Assertive aroma of tropical hops: big pineapple initially, fading into light citrus-forward notes. Some mountain meadow, grassy and clean. Soft yet firm wheat-driven body provides a footing for the citrus-forward hop flavors. Hop bitterness medium-strong. Soft citrus finish with a touch of rind and soothing bitterness."

What our editors thought:

"Fun candy-fruit note in the aroma with yuzu and lychee. Pithy herbal bitterness in the sip with softer pink tropical edges."

ABV: 6.8% **IBUs:** N/A
Loc: Anchorage, AK



Prison City Mass Riot

90 AROMA: 12 APPEARANCE: 3 FLAVOR: 16 MOUTHFEEL: 5 OVERALL: 10

"Big, juicy citrus notes from the Simcoe, Citra, Mosaic hops."

What our reviewers thought:

"Rich, layered hop character from start to finish with an intriguing mix of tropical, candy, dank, earthy notes. Flavors relax into a more resin-earthly IPA. Soft body. Light bitterness adds definition on the swallow, but no harsh edge."

What our editors thought:

"Dank and sticky nose, as sweet pineapple and diesel collide. Sweet pineapple juice in the flavor is braced by firm mineral bitterness."

ABV: 6% **IBUs:** N/A
Loc: Auburn, NY



Pure Project Diamond Dust

95 AROMA: 12 APPEARANCE: 3 FLAVOR: 18 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Michigan Cashmere, PNW Mosaic for peach, mango, coconut, grapefruit-zest flavors."

What our reviewers thought:

"Light fruit with hints of toasted almonds in the aroma. Then a celebration of sweet Ruby Red grapefruit flavors from first taste to finish. Pleasant tropical-hop character with strawberry and lime. Nails the rounded, soft mouthfeel for the style."

What our editors thought:

"Light and fresh pineapple in the aroma with subtle earthy and mineral undertones. Initially sweet pineapple in the flavor, voluminous without feeling thick or heavy. Its drinkability defies its intensity."

ABV: 6.7% **IBUs:** 35
Loc: San Diego



Offset Bier Glossy

87 AROMA: 10 APPEARANCE: 3 FLAVOR: 18 MOUTHFEEL: 4 OVERALL: 9

What the brewer says:

"Featuring Citra and experimental NZH105 from New Zealand."

What our reviewers thought:

"Aroma of fresh-cut grass, herbaceous, with orange, pineapple, mango, berry. Slightly sweet flavor is full of fresh-squeezed orange notes. Robust malt backbone. Aftertaste is lightly bitter with overripe melon. A touch of astringency and sweet toward the back with lush pineapple dominating the retronasal."

What our editors thought:

"Rosy floral note in the aroma with sweeter fruit undertones. Lean in the sip, with soft pineapple notes and a strong herbal bitterness."

ABV: 6.5% **IBUs:** 45
Loc: Park City, UT



Parish Dr. Juice

91 AROMA: 12 APPEARANCE: 3 FLAVOR: 18 MOUTHFEEL: 4 OVERALL: 10

What the brewer says:

"Tasting notes of passion fruit, papaya, pithy blood orange."

What our reviewers thought:

"Pretty mild for an IPA, but the lemon hops are quite pleasant in both the flavor and the aroma. There's also a spicy floral undercurrent that provides a shimmer of complexity. The lemon drop finish sets up your next sip."

What our editors thought:

"Spicy floral note punches through the general tropical aroma with a funky mineral undertone. Woody and herbal hop notes in the flavor balance the orange and tangerine with more spice than bitterness."

ABV: 6% **IBUs:** N/A
Loc: Broussard, LA



Public Offering Tomorrow Can Wait

88 AROMA: 11 APPEARANCE: 3 FLAVOR: 16 MOUTHFEEL: 5 OVERALL: 9

What the brewer says:

"Pacific Sunrise, Motueka, Mosaic Cryo, Strata Cryo."

What our reviewers thought:

"Pineapple, mango, guava lead the charge in the aroma, followed by minty strawberry, watermelon rind, creamsicle, red licorice. Fruit-cocktail mixture of fruits in the flavor, but with a refreshing zestiness from hop bitterness and lasting dryness."

What our editors thought:

"Chalky candy-fruit aroma with a Pez note and a sweet red-curry spice. Big guava and gooseberry in the flavor with a white pepper prickle."

ABV: 6.5% **IBUs:** N/A
Loc: Denver



Radiant Beer So Into You

91 AROMA: 12 APPEARANCE: 3 FLAVOR: 17 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Hazy IPA with Citra, Mosaic, Cashmere."

What our reviewers thought:

"Subtle aroma of candied pineapple, passion fruit, tangerine, pine. Big, full, sweet, bread maltiness with lychee, passion fruit, chalky melon flavor notes. Complementary bitterness with a hefty carbonation. Dry finish."

What our editors thought:

"Higher-key citrus with stone fruit and a touch of overripe tropical fruit in the aroma. Funky tropical fruit-pith bitterness in the sip with broader mango notes. Bold and unrefined."

ABV: 6.7% **IBUs:** N/A
Loc: Anaheim, CA



Scofflaw Juice Quest

90

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

What the brewer says: "The juice is here and filled with our favorite Citra and Mosaic hops then lavishly dry-hopped with Azacca for a tropical zing."

What our reviewers thought: "Tropical aromas of pineapple, passion fruit, mango sap, maybe a bit subtle. Grainy with fruit notes, mango, dried apricot, ripe citrus. A bit heavy on the finish, masking some more delicate aspects."

What our editors thought: "Purple pansy floral note with a touch of cotton-candy grape in the aroma. Guava and grape drive the flavor with a touch of overripe fruit and a particular intensity."

ABV: 6% **IBUs:** N/A
Loc: Atlanta



Slice Camp Fog Lake

90

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 10

What the brewer says: "Hopped with Citra, Riwaka, Riwaka Cryo."

What our reviewers thought: "Bright lemon-lime-juice-squeezed-on-garlic hop aroma leads to coconut, tropical, bright citrus with low dank flavors. A bit clunky with overripe mango, peach backed by a grassy hop bitterness. Semismooth and finishes on the dry side."

What our editors thought: "Spicy white pepper and linen edge in the nose with softer, sweeter mango and guava. Big fruit-juice notes with restrained sweetness in the sip, for intensity without excess body, while the light pepper bitterness scrubs it clean."

ABV: 7% **IBUs:** N/A
Loc: Lincoln, CA



Templin Family Squirrel

94

AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "The first hazy/juicy IPA recipe to come out of Templin."

What our reviewers thought: "Aroma of soft wheat, orange zest, lime, Juicy Fruit bubblegum. Big orange juiciness, myriad other citrus fruits. A conniving grapefruit in the flavor couples with a sharp dryness, but they both sizzle into a mellow finish."

What our editors thought: "Peachy wheat tones in the nose with very subtle citrus. Sweeter citrus in the flavor with bits of lemon and orange, and a light but unapologetic herbal bitterness that firms the middle."

ABV: 6.5% **IBUs:** N/A
Loc: Salt Lake City



WestFax Urban Lumberjack

92

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

What the brewer says: "Citra, El Dorado, Azacca. Juicy and soft with notes of navel orange, nectarine, mango."

What our reviewers thought: "Fresh, juicy aroma of melon, pineapple, guava, orange peel, lime. Some fresh meadow dew. Tangy citrus. Light acidity. Low bitterness, so the overall impression is slightly sweet and fruity. Soft finish with the malt giving way to the hops."

What our editors thought: "Chalky orange with a light herbal back note in the aroma. Sweeter and less defined in the flavor, with very low bitterness and an overripe-orange sweetness that permeates."

ABV: 6.5% **IBUs:** 67
Loc: Lakewood, CO



Shred God Machine

88

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 9

What the brewer says: "Nelson and Citra hops blend in harmony."

What our reviewers thought: "Dank, unripe mango and garlic hop aromas carry right into the flavor. Odd caramel note adds sweetness that would pair better with a more aggressive hop profile. Smooth mouthfeel. Grassy hop in the finish adds definition."

What our editors thought: "Intense guava, gooseberry aroma with a very strong fresh floral edge. Focused. Less defined in the sip with a mid-sweet body and light tropical-pith bitterness that meanders compared to the aroma."

ABV: 7% **IBUs:** N/A
Loc: Rocklin, CA



Structures FVZZ

89

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

What the brewer says: "All Mosaic. Aromas of tropical fruits, dried blueberries, grapefruit, pine."

What our reviewers thought: "Notes of apricot, peach, strawberry, lemon, orange, pineapple in the nose with just a hint of pine. The sip swerves, steering a different direction as it leans hard into a piney, earthy, lightly dank profile. Medium body. Finishes with a low lingering bitterness."

What our editors thought: "Orange and tropical-fruit notes with an overripe-fruit funk in the aroma. Light and lively in the sip with a dry citrus twang that balances pleasure with drinkability."

ABV: 7.2% **IBUs:** N/A
Loc: Bellingham, WA



Underground Beer Lab Variable

92

AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

What the brewer says: "Cryo Pop, Strata CGX, Strata, Mosaic for layered tropical-fruit flavors."

What our reviewers thought: "Soft aroma of citrus, passion fruit, guava. Some grassy notes creep in behind the fruit. Vibrant citrus hop flavors mix with light hop bitterness. Aftertaste lingers as a soft fruity impression. Thins out toward the finish with a firm yet balanced bitterness."

What our editors thought: "Wheaty stone-fruit aroma plays hard to get, holding its cards. Overripe fruit in the flavor with a heavy herbal note that leans bitter."

ABV: 6.7% **IBUs:** N/A
Loc: Syracuse, NY



Wise Man Little Troublemaker

95

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "Thiolized IPA to maximize tropical notes. Dry-hopped with Citra, Strata."

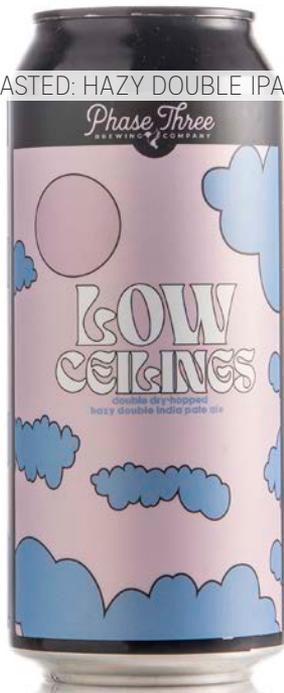
What our reviewers thought: "Big papaya hops with orange-lemon touches in both aroma and flavor. Aftertaste expands on the theme, with flashes of guava, grains of paradise. Full experience reveals some nice depth."

What our editors thought: "Thick tropical guava with a waxy candy tone in the aroma. Touch of almost saison-like phenolics. Softly sweet in the sip with very low bitterness, and just a bit of white pepper to offset the guava. Bold and distinct."

ABV: 5.8% **IBUs:** 9
Loc: Winston-Salem, NC



TASTED: HAZY DOUBLE IPA



Phase Three DDH Low Ceilings

97 AROMA: 12 APPEARANCE: 3 FLAVOR: 19 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Double dry-hopped with Citra and Mosaic hops."

What our reviewers thought:

"Absolutely massive creamy head. Light lychee and lime aromas, with earthy dank and orange-pith flavors. Soft and delicate from start to finish. Extremely smooth despite being on the stronger side. Finish lingers with light malt, candy sugar, ripe peaches."

What our editors thought:

"Soft, moderate peach in the nose, with a creaminess that borders on vanilla. Very light lemongrass and bamboo notes tuck in behind. Peachy and direct in the flavor, with a very light tropical fruit-pith bitterness. Feels light throughout, especially in the body, where it feels full yet tightly controlled and quickly paled with a tight herbal finish."

ABV: 7.8% **IBUs:** N/A

Loc: Lake Zurich, IL

Alvarado Street Southern Hemi

94 AROMA: 12 APPEARANCE: 3 FLAVOR: 18 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Nelson Sauvin, Riwaka, Waimea, NZ Cascade, Manilita deliver tropical diesel, sweet fruit."

What our reviewers thought:

"Spicy garlic hops in the aroma and flavor with a nice twist of grapefruit undertone. Smooth on the palate with a semidry, somewhat creamy finish. A more old-school interpretation of the style."

What our editors thought:

"Fresh lemongrass and yuzu in the aroma with a clean white-floral zing. Bolder and sweeter in the sip with a bit of pineapple and grapefruit, but the comparatively trim body stays lively with a funky bitterness."

ABV: 8.5% **IBUs:** N/A

Loc: Monterey, CA



Barebottle Cryo Chemistry

94 AROMA: 11 APPEARANCE: 3 FLAVOR: 20 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Mosaic, Mosaic Cryo, Citra, Citra Cryo, Idaho 7, Azacca, Sabro, Amarillo Cryo, Strata."

What our reviewers thought:

"Citrus-forward nose followed by ripe tropical-fruit notes. Some pineapple, mango. Flavor has an initial sharp hop bitterness, softened by lots of fresh-fruit flavors. Medium-full body. Sweet yet refined finish."

What our editors thought:

"Apricot and mango with a soft bokeh sheen in the aroma that artfully blurs the edges. Vivid yet restrained in the flavor, with chiseled mango and fresh peppery bitterness that balances without overstepping. Bright and defined, high contrast."

ABV: 8% **IBUs:** 34

Loc: San Francisco



Cerebral Continued Learning 08

95 AROMA: 12 APPEARANCE: 3 FLAVOR: 20 MOUTHFEEL: 4 OVERALL: 10

What the brewer says:

"Citra Cryo, Motueka, Alora, Mosaic, Nelson SubZero Hop Kief."

What our reviewers thought:

"Fruity hop aroma: vibrant orange, melon, pear, lingering mango. Soft, lush flavors. Juicy Fruit gum. Plenty of hop presence but all too easy to quaff. Layered citrus-and-pineapple finish, with just enough bitterness."

What our editors thought:

"Tangerine, mango, and a touch of pomegranate spice in the aroma. Equal parts sweet and spicy in the sip, with matched intensity and a light herbal and floral note that balances the sweet fruit in the finish."

ABV: 8% **IBUs:** N/A

Loc: Denver



American Solera Squad Up

88 AROMA: 12 APPEARANCE: 3 FLAVOR: 16 MOUTHFEEL: 4 OVERALL: 10

What the brewer says:

"Dry-hopped with Citra, Strata, Nelson Sauvin, Motueka."

What our reviewers thought:

"Powerhouse aroma of white bordeaux, mango, apricot, peach, salty melon, sagebrush. Lighter-bodied with a little alcohol warmth. Lemon hops, faint cracker malt, slight peppery finish. Soft, pillowy malt with a substantial bitterness. A bit of hop dank and tropical fruitiness blend together for complexity."

What our editors thought:

"Light honey, subtle peach, and just a bit of lemon zest in the aroma. Fresh herbal-bitter burst in the sip quickly resolves into general semisweet green tropical fruit."

ABV: 8% **IBUs:** N/A

Loc: Tulsa, OK



Burial Beer Perceptions of Carnage

89 AROMA: 12 APPEARANCE: 3 FLAVOR: 17 MOUTHFEEL: 5 OVERALL: 9

What the brewer says:

"Whirlpooled with Incognito, Cryo. DDH with Mosaic, Simcoe."

What our reviewers thought:

"Papaya, citrus, creamsicle, tropical fruit, malty sweetness in the aroma. Mango, pineapple, sticky pine, citrus in the flavor. Hops are prevalent but lend a balance without overpowering the juiciness. Finishes slightly sweet."

What our editors thought:

"Pillowy apricot, melon in the aroma, with a slight phenolic edge that takes on more of a fruity, smoked-meat note in the sip. Huge body amplifies chewy fruit notes. Big yet thoughtful in its offbeat rhythm and tone."

ABV: 8.5% **IBUs:** 35

Loc: Asheville, NC



DankHouse Wreck League

92 AROMA: 11 APPEARANCE: 3 FLAVOR: 19 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"In honor of Ohio passing Issue 2 to legalize marijuana."

What our reviewers thought:

"Earthy, woody aromatics blend with notes of orange, grapefruit, mango. Incredibly soft mouthfeel accentuates an initial malty, fruity sweetness. Slowly fades into tropical and herbal bitterness with hints of coconut, lemongrass, grapefruit pith. Hint of boozy warmth late in the finish."

What our editors thought:

"Overripe tropical fruit in the nose, with a lightly chalky aromatic texture. Sweet in the sip with slight berry notes that add structure to the mango notes in the flavor."

ABV: 8.5% **IBUs:** N/A

Loc: Newark, OH



Firestone Walker Mind Haze Brain Melter

96

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Juicy symphony of hop aromas and smooth textures."

What our reviewers thought:

"Aroma of lemongrass, orange, lemon, strawberry, pine, grapefruit. Flavor notes of candied orange, lemon, tangerine, grapefruit balanced by pine, cedar, hint of green pepper. Bitterness extends lightly into the finish."

What our editors thought:

"Round mango, banana, pineapple notes in the nose with a touch of classic IPA orange and pine—a blend of old and new. Vivid flavor with melon, stone fruit, a touch of banana, some forest-like hop bitterness. Modern, with undeniable familiar classic touches."

ABV: 8.5% **IBUs:** 40
Loc: Paso Robles, CA



Grimm Artisanal Ales Suicide Door

94

AROMA: 11
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"Adds Galaxy to Lambo's hop blend of Citra, El Dorado, Simcoe."

What our reviewers thought:

"Pungent tropical-fruit nose with layers of pineapple, mango. Juicy, sweaty semisweet tropical hop flavors. Somewhat sweet finish with a touch of alcohol coming through. Hops taste fresh, spicy, woody. Malt flavors are bready and enticing."

What our editors thought:

"Light peach with a touch of cotton-candy aroma. Sweeter and overtly tropical in the sip, with ripe mango and and pureed banana-pineapple cocktail that convey heft."

ABV: 10% **IBUs:** N/A
Loc: Brooklyn, NY



Hidden Hand A Smile with a Future in It

94

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Oily resin, blackberry. Featuring Citra and Haas Mosaic hops." "Aroma of white grapes, pineapple, Pixy Stix candy, mint, tangerine, hint of cracker, slight dankness. Medium body, creamy with a dry finish. Fruity alcohol presence with apricot, peach, grape but backed by a sweet bread maltiness. Just enough hop bitterness."

What our editors thought:

"Wheaty with peach and orange notes in the big nose. Sweet orange with a touch of green herbal spice in the flavor and a boisterous but concise body and finish."

ABV: 7.6% **IBUs:** N/A
Loc: Naperville, IL



Living Waters Seven Springs

89

AROMA: 12
APPEARANCE: 2
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Our latest IPA iteration with Nectar. Tangerine, mango, orange, grapefruit, vanilla." "Aroma is filled with mint, candied tangerine, grape candy, faint cracker malts. Big body with a creamy dry finish. Dank tangerine, grapefruit, lemongrass, mint-sage notes with a faint white peppery bite. Neutral malt flavor. Touch of sweetness. Soft mouthfeel. Warming alcohol presence."

What our editors thought:

"Mango and guava in the aroma, with a light fresh edge. Juicy fruit nectar in the sip with a firm but rounded bitterness, despite the very soft carbonation."

ABV: 7.8% **IBUs:** N/A
Loc: Nashville, TN



Fonta Flora BZZZZ

88

AROMA: 12
APPEARANCE: 3
FLAVOR: 15
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Brewed with honey, heritage seashore rye. DDH with Mosaic, Mosaic Cryo. Collab with Trillium Brewing."

What our reviewers thought:

"Big resinous aroma with grapefruit, dank herbs. Medium body, creamy mouthfeel finish semi-dry. Flavors explode with dank, candied tangerine, herbs. Medium alcohol warmth. Low carbonation, relatively low bitterness leave the beer bordering on cloying."

What our editors thought:

"Tropical-leaning honey with a light melon aroma and gentle tropical floral overtones. Tart with a rather strong kiwi-lychee-honeydew melon hop flavor, and smooth tropical fruit-pith bitterness."

ABV: 8.2% **IBUs:** N/A
Loc: Nebo, NC



Guggman Haus Citra Single Hop

94

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Brewed exclusively with our hand-selected 2023 Citra."

What our reviewers thought:

"Nose comprised of rising bread, alcohol, tangerine, white grapes, grapefruit, lemongrass. Full-bodied with a chewy, sweet malt profile of honey, Hawaiian sweet bread. Hop flavor of pineapple, mango, melon, sage, tangerine. Creamy mouthfeel and semi-dry finish."

What our editors thought:

"Gorgeous melon notes with a smooth pineapple lift in the aroma. Intense guava and passion fruit in the sip with very light herbal bitterness that appears in the finish. Exuberant and sunny."

ABV: 8.2% **IBUs:** N/A
Loc: Indianapolis



Hop Butcher for the World Peak Mosaic

89

AROMA: 12
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 5
OVERALL: 9

What the brewer says:

"Mosaic-hopped triple India pale ale."

What our reviewers thought:

"Rich tropical hop character with coconut, citrus, a touch of onion-garlic. Flavors follow suit but with the low peppery spice of dried papaya seeds. Full-bodied given the gravity, but restrained on the lingering sweetness. Alcohol adds pleasant warmth without coming across as harsh."

What our editors thought:

"Fleshy grapefruit and a touch of pineapple in the aroma, with a funky mineral undertone. More layered fruit funk in the sip, curiously lambic-like, with a clean tropical-fruit bitter edge. Bold and energizing."

ABV: 10.5% **IBUs:** N/A
Loc: Chicago



Lumen Beer Hi Res

87

AROMA: 12
APPEARANCE: 2
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 10

What the brewer says:

"All Citra-hopped hazy DIPA."

What our reviewers thought:

"All the lemon zest hops can provide combined with creamy malts, complex beyond the first tropical blast (mango meets bark). Rich, with expected hop and alcohol burn."

What our editors thought:

"Creamy lemon peel and lychee with a light woody aroma, and just a touch of locker-room funk. Sleeker in the sip, as more green tropical-fruit notes push forward with a pleasant ethanol sweetness."

ABV: 8.5% **IBUs:** 35
Loc: Omaha, NE



Mikerphone NINE

90 AROMA: 10
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "DDH with Citra, Citra Cryo, Stata, HBC 586 hops."

What our reviewers thought: "Fresh, lightly herbal aroma with some pear or plum notes. Zesty citrus hop profile across the palate with a heavier woody spice note. Sweet alcoholic finish with bright citrus notes followed by a splash of bitterness."

What our editors thought: "Orange and pineapple with a red-floral punch in the aroma. Strong floral bitterness in the sip with a bit of bitter orange. Catchy but not afraid of a little friction."

ABV: 9% **IBUs:** N/A
Loc: Elk Grove Village, IL



Pivotal Soul Fire

93 AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Aroma of bright lychee, tangerine, fresh cannabis, strawberry. Tropical-punch flavors, subtle berry undertones."

What our reviewers thought: "Strong garlic-hop nose with a pleasant garlic-hop flavor. Steers clear of the fruit punch-tropical explosion. A bit one-dimensional but well-made; a different take. The flavors and body smooth out for a pleasurable drinking experience."

What our editors thought: "Mango, papaya, a touch of white pepper in the aroma. Initial peppery bitterness softens into broader sweet and tart fruit with a quick but energetic finish."

ABV: 8% **IBUs:** 50
Loc: Bristol, RI



Reuben's Triple Crush

89 AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 9

What the brewer says: "Heavily hopped and juicy, with notes of citrus, tropical fruit."

What our reviewers thought: "Ruby Red grapefruit, white grape, candy sugar, floral aromas lead to a sweeter-than-expected sipper. Flavors of candied orange, lightly spiced marmalade."

What our editors thought: "Stone fruit with a pineapple-cocktail note in the aroma. A bit of overripe tropical-fruit funk. Thick and expansive in the sip, as the fruit notes layer with a savory tamarind and almost curry-like spice note. Big, yet nimble."

ABV: 10% **IBUs:** 60
Loc: Seattle



Social Project N.Y. State of Mind

88 AROMA: 10
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

What the brewer says: "Super-juicy, tropical stone fruit, good body, restrained sweetness."

What our reviewers thought: "Light pineapple nose with faint bubblegum, herbal citrus. Initial flavor impression is alcohol. Cloud-like body with zesty citrus, clean tropical-fruit flavors. Semisweet malt background helps support the alcohol. Nicely balanced. Finishes almost dry."

What our editors thought: "Lighter haze with light malt in the aroma and just a touch of peach. Forceful and assertive herbs-and-pith bitterness in the sip that lingers. Trades juiciness for solid structure."

ABV: 9.5% **IBUs:** N/A
Loc: Bentonville, AR



Narrow Gauge King OJ Run

94 AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"DDH with Citra, Galaxy, Amarillo." **What our reviewers thought:** "Fruity aroma of peach, apricot, piña colada, candied tangerine, marmalade with a hint of mint. Medium-bodied, slight creaminess, medium-high alcohol warmth. Pineapple-juice flavor dances with white pepper, grapefruit, herbs. Carbonation and light bitterness help cut through the sweetness. Boozy but integrated."

What our editors thought: "Papaya, orange, a touch of pineapple in the aroma. Thicker and sweeter in the sip, but the ethanol note cuts through and amplifies the light peppery bitterness."

ABV: 10% **IBUs:** 70
Loc: Florissant, MO



Precarious Electrowave-baby

87 AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

What the brewer says:

"Notes of mango juice, white peach sangria, bright hoppy dankness, followed by a mind-bending mouthfeel and refreshing finish."

What our reviewers thought: "Orange and fresh, juicy pineapple aroma punctuated by subtle delightful stone fruit (mostly pear). Alcohol brightens the aroma and flavor, but delivers some burn at the finish, balancing the sweetness in lieu of hop bitterness."

What our editors thought: "Slight peach and pineapple in the aroma carry through into the flavor, with a firm rose floral note and tropically tinged fruity bitterness. Angular and quirky."

ABV: 8.5% **IBUs:** N/A
Loc: Williamsburg, VA



Riverlands Three Waves

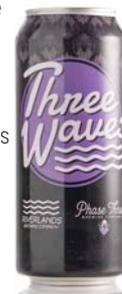
92 AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "DDH with Citra, Strata, Cashmere."

What our reviewers thought: "Fruit cocktail, pineapple, citrus, tropical-fruit aromas. Vanilla, guava, mango round it out. Tropical fruits with mango lead the flavor charge, papaya or guava in the middle, a touch of banana ties it all together. Smooth mouthfeel. Finishes well balanced and zesty."

What our editors thought: "Light wheaty malt and soft stone-fruit tones in the aroma suggest gentle classicism. Peachy tones with fresh laundry and subtle pithy tropical bitterness in the sip. Gentle but medium intensity, a well-structured sip."

ABV: 8.3% **IBUs:** 25
Loc: St. Charles, IL



Terra Nova Bear in a Cage

91 AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 9

What the brewer says: "Potent power encaged in a bouquet of hoppiness."

What our reviewers thought: "Sauvignon blanc, honey, Lemonheads, thyme, pineapple, sage in the aroma. Neutral malt character lets the hop character shine and bring similar notes as the nose. Well-hidden alcohol. Relatively low bitterness. Medium alcohol tickles the tongue. Slight dankness."

What our editors thought: "Sweet and saturated peach and pineapple aroma, with a touch of mineral undertone. Big flavor notes of the same, with a pointed mineral note and a ranging but balanced bitterness."

ABV: 8.3% **IBUs:** N/A
Loc: Swannanoa, NC



Underground Beer Lab Conceptual

91

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 9

What the brewer says:

"Mango, overripe pineapple, fresh berry, apricot from a blend of hops."

What our reviewers thought:

"Aroma of grass growing outside a horse stable; straw, mango, citrus. Tiny bit of jackfruit. Melon and orange flavors. Mango with a crackery dryness finishes it off. Balanced hop bitterness. An interesting flavor profile that diverges from the norm."

What our editors thought:

"Strong pineapple notes with a touch of agave in the aroma. Fast and sleek in the flavor with a fairly lean body, light herbal bitterness, and an inherent drinkability."

ABV: 8% **IBUs:** N/A

Loc: East Syracuse, NY



BKS Greenway Fields

95

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Pale ale brewed with Simcoe and Cascade. Dry-hopped with Cascade, Cascade CGX, Citra, Strata, Zeus."

What our reviewers thought:

"The fruity esters pair nicely with the citrus notes coming from the hops. The light cracker malt adds another point of attraction, but these all dance well together. Easy and interesting."

What our editors thought:

"Golden straw color with a bright white and persistent foam. Aroma threads the needle between old- and new-school hops, with big and fragrant orange notes under lighter pineapple and slightly perfumey tropical floral notes. Clean and defined in the sip, with fresh lemon-grass, black pepper, mango pith, honeydew melon, and a bit of guava. It holds a lean line and finishes lightly and crisply, with faint fruit flourishes around the solid peppery bitterness. Energetic yet disciplined."

ABV: 5.5% **IBUs:** N/A

Loc: Kansas City, MO



Offset Bier DoPo

95

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

"A beer designed to punch well above its weight featuring our favorite hops from New Zealand and the Pacific Northwest."

What our reviewers thought:

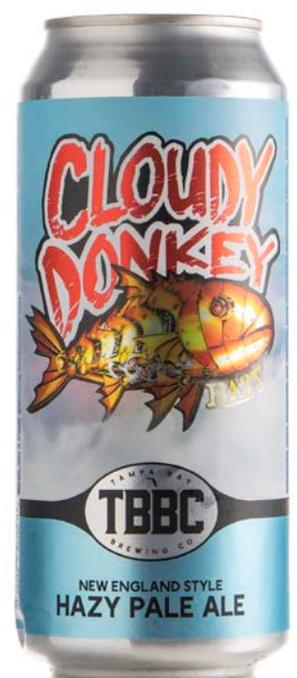
"The very first impression of the aroma is orange dreamsicle, but then a dank note creeps in and shifts the perception into a more interesting tropical zone. Lime citrus, pineapple, and a touch of pine make for a flavorful hops impression with each sip. Where those could come across as sharp, they meld smoothly enough here."

What our editors thought:

"Lightly hazy without milky or murky turbidity. Tangerine and lime in the aroma with a warm straw backing note that develops into mango and guava as the glass sits. Restrained in the sip with a very light sweetness that highlights the soft and creamy passion fruit notes, and just a light touch of tropical pith bitterness as it fades. Beautiful in its expression and balance, flavorful yet imminently drinkable."

ABV: 5% **IBUs:** 54

Loc: Park City, UT



Tampa Bay Cloudy Donkey

95

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Double dry-hopped pale ale brewed with London Fog yeast, Citra, Equinox, Motueka hops, and dry-hopped with Sabro hops."

What our reviewers thought:

"The aroma blends citrus esters, lime and orange hops, and some sweet bready malt that all carry forward into the flavor. It's a great representation of the hazy pale-ale style, being lighter-toned than an IPA version, but delivering the things you love."

What our editors thought:

"Chiseled tropical-fruit aromas underpinned by strong classic pale-ale tones, as lighter tropical and funky fruit notes skitter over deep orange and sweet roll wafts. Quirky and angular in the sip, with bright acidity that buoys the strong citrus notes as they bob around the lighter tropical sea without losing their definition. Peppery bitterness punches quickly and dissipates. Full without being heavy, and loaded with personality that doesn't detract from ordering a second and a third."

ABV: 5.5% **IBUs:** N/A

Loc: Tampa

WeldWerks Extra Extra Juicy Bits

94

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Brewed and double dry-hopped with Citra, Mosaic, El Dorado."

What our reviewers thought:

"Rich, layered hop character leans on earthy notes with hints of coconut, mango. Nails the mouthfeel to provide a smooth, creamy finish with a balanced sweetness. Very floral hop flavors, almost pushing soapy. Enough bitterness to add support. Excellent finish with low alcohol note."

What our editors thought:

"Funky tropical aroma with plantain, passion fruit, kiwi. Sweet in the sip with very light bitterness and rollicking tropical rhythms that reverberate in the long finish."

ABV: 8.6% **IBUs:** N/A

Loc: Greeley, CO



Alma Mader Taxi Stand

89 AROMA: 12 APPEARANCE: 3 FLAVOR: 17 MOUTHFEEL: 4 OVERALL: 10

What the brewer says: "A West Coast-style pale with a blend of Simcoe, Amarillo, Citra, Mosaic."

What our reviewers thought:

"The earthy and herbal hops evoke a bit of green pepper and marjoram. The malt offers a slight backbone to support the hops, with a touch of hops astringency. That said, it's a solidly drinkable pale ale."

What our editors thought:

"Bits of cantaloupe and a touch of pineapple in the aroma, with a warm and welcoming glow. More austere in the sip, as bitter herbal spice offers a regimented and unwavering back beat for the grapefruit and mineral melody."

ABV: 5.8% **IBUs:** 50
Loc: Kansas City, MO



Hi-Wire Lo-Pitch Hazy IPA

87 AROMA: 12 APPEARANCE: 3 FLAVOR: 16 MOUTHFEEL: 5 OVERALL: 9

What the brewer says: "This easy-drinking hazy IPA packs a bright citrus hop punch without all the bitterness."

What our reviewers thought:

"Hazy appearance, but the flavor and aroma suggest SMASH beer, with straight-ahead grapefruit hops character. Shut your eyes, and you'll think it's an old-school West Coast pale ale with no frills."

What our editors thought:

"Clear in the glass with a light straw color; whatever haze there was has dropped. Peach, lime, grapefruit, and pineapple in the aroma with a sweet candy edge. Tighter grapefruit bitterness in the flavor for a classic feel."

ABV: 5.5% **IBUs:** 45
Loc: Asheville, NC



Kros Strain Tankin' and Tubin'

93 AROMA: 12 APPEARANCE: 2 FLAVOR: 19 MOUTHFEEL: 5 OVERALL: 10

What the brewer says: "West Coast session IPA, with Nectarone and Mosaic hops."

What our reviewers thought:

"The strong hops flavor helps this beer punch above its weight. The light body offers a bright touch of malt, but it's quickly subsumed under the herbal/green onion of the hops. If a light bodied West Coast IPA is your thing, this will get your attention."

What our editors thought:

"Juicy mango with tropical floral high-lights in the nose, and an undercurrent of over-ripe fruit funk. Extra light in the sip with very tame bitterness, just a touch of malt body without sweetness, and a very gentle tropical hop note."

ABV: 4.8% **IBUs:** 40
Loc: LaVista, NE



Westfax Suburban Lumberjack

93 AROMA: 12 APPEARANCE: 3 FLAVOR: 18 MOUTHFEEL: 5 OVERALL: 10

What the brewer says: "A session version of 'Urban Lumberjack' Hazy IPA brewed with all the same tasty hops!"

What our reviewers thought:

"Tropical hops punch your palate with guava, papaya, and a bit of citrus. As a lighter version, it lacks some of the sweetness you'd likely find in its bigger sibling, but this one holds its own."

What our editors thought:

"Candied pink grapefruit and guava with an almost creamy aroma. Soft and pillowy in the flavor without being sweet, and just a bit of rhubarb-like bitterness."

ABV: 4.9% **IBUs:** N/A
Loc: Lakewood, CO



Fidens As the Story Unfolds

92 AROMA: 12 APPEARANCE: 3 FLAVOR: 18 MOUTHFEEL: 4 OVERALL: 10

What the brewer says: "With all Simcoe."

What our reviewers thought:

"Pleasant citrus aromas of orange, and grapefruit merge with some pine and tropical elements, along with pineapple and papaya. Brash sip with a bold bitterness and bright carbonic bite that hits early. As that subsides, a more gentle, grapefruit pith-like soft bitterness emerges along with hints of pine and some herbal notes."

What our editors thought:

"Charred grapefruit and pineapple in the aroma, with a sweet floral note. Soft and inviting in the flavor with subtle pointed tropical floral notes and a touch of white-pepper spice that lingers."

ABV: 5.2% **IBUs:** N/A
Loc: Colonie, NY



Hop Butcher for the World Sliders

89 AROMA: 12 APPEARANCE: 3 FLAVOR: 17 MOUTHFEEL: 5 OVERALL: 9

What the brewer says:

"Mosaic, Simcoe, Nelson Sauvin-hopped American pale ale."

What our reviewers thought:

"Dank and oniony hops are balanced by a clean, cracker-like malt. Hops flavor dominates in the mouth with relatively low bitterness. There's a faint warmth in the finish, suggesting a touch more alcohol, but it's smoothly delivered."

What our editors thought:

"Chalky tropical fruit in the aroma with a touch of coconut cream. Lighter-than-expected body and slightly grassy hops with a touch of allium and a very light grapefruit pith bitterness."

ABV: 6% **IBUs:** N/A
Loc: Chicago



Prison City Alora Borealis

91 AROMA: 12 APPEARANCE: 3 FLAVOR: 17 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Highlights a new hop on the scene, Alora! The hop's unique oil composition creates a tantalizing aroma with delicious flavors of yuzu, peach."

What our reviewers thought:

"The lemony citrus hop aroma is inviting while the lighter mouthfeel makes it easy to dive into. The bright hop flavor brings tropical notes, without the typical sweet heft."

What our editors thought:

"Fresh aroma with a bit of yuzu and even cucumber, lightly defined. A bit rangy in the sip as the ultra low bitterness allows the body to meander with a light malt texture, even if it isn't quite sweet."

ABV: 4.5% **IBUs:** N/A
Loc: Auburn, NY



Woods Boss Trail Time

93 AROMA: 12 APPEARANCE: 3 FLAVOR: 18 MOUTHFEEL: 5 OVERALL: 10

What the brewer says:

"Brewed with Genie Pale Malt, Carafa-foam, Premium Caramalt. Hopped with Bravo, Sequoia, Centennial, Columbus."

What our reviewers thought:

"Grapefruit and orange hops take center stage in both the aroma and flavor. Feels more full bodied than a straight session, but I count that as a plus. The lingering bitterness hangs with you pleasantly."

What our editors thought:

"Classic orange and forest tones in the aroma with a heft that belies its low strength. Full on the palate with an unassuming yet firm bitterness that's softened by beautiful malt expression. Light bitterness lingers."

ABV: 5.5% **IBUs:** N/A
Loc: Denver



TASTED: FRUITED IPA



12 West Tangelo Frontside

90

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Frontside IPA with locally grown tangelos."

What our reviewers

thought: "Bright but earthy citrus notes jump out of the glass with hints of orange, tangerine, lemon, grapefruit. The citrus notes carry through into the flavor and add a nice counterpoint to the other bittering aspects. Some orange peel and grapefruit pith-like notes emerge into the finish, creating a drying and pleasantly bitter finish. It's all about the citrus, and it's done well."

What our editors thought:

"Bright light citrus in the aroma, tangerine with a bit of lemon, and an inherent creamy aromatic texture. Initial light citrus sweetness in the sip persists with very light bitterness, shifting the balance toward sweet over bitter. Finishes with soft definition and a lingering light citrus sweetness."

ABV: 7.5% **IBUs:** 65

Loc: Gilbert, AZ



Tampa Bay Brewing Hop Silo 24

90

AROMA: 10
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 10

What the brewer says:

"Fruited IPA brewed with Citra, Galaxy, Idaho 7 hops, then treated with passion fruit, mango, orange to accentuate the hops!"

What our reviewers

thought: "Aromatics are insubstantial both from an IPA and a fruit perspective, but the flavor is a completely different character—grips of fruit that come together in a zippy, fresh, and incredibly interesting execution. Muted fruity citrus notes emerge out of an otherwise dank and earthy aroma, but the flavor immediately makes a pleasant left turn and leans hard into fruity tropical sweetness with a balancing bitterness to hold it all together. The beer doesn't forget its roots, still grounded with bitterness through a citrusy hop-forward flavor. Citrus, peach, and strawberry blend with pine and earthy notes to create a fun and balanced flavor that is wildly discordant with the aroma. A tale of two experiences."

What our editors thought:

"Strawberry and passion fruit in the aroma, subtle but present. Shockingly intense citrus and fleshy tropical fruit notes jump out of the flavor in sharp contrast to the subtle nose. Cool, smooth tropical pith bitterness cuts a firm line into the finish."

ABV: 8% **IBUs:** N/A

Loc: Tampa

Harbor Brewing Big Ed's Brew

89

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

What the brewer says:

"Hazy IPA with a healthy amount of blood orange added. Bright, fruity and citrus forward."

What our reviewers thought:

"It is an absolutely wild color, especially for an "orange" beer, and looks like ruby-red grapefruit juice. The nose on this catapults the blood orange, with a fresh pulp-forward format, and lands solidly in a foundation of healthy, but conservative hops. The acid provides enough bitterness perception to keep the taxonomy as IPA."

What our editors

thought: "Bold pink grapefruit-juice color. Slightly funky new-school hop aroma with strong orange notes. A touch sweet in the sip."

ABV: 6.5% **IBUs:** N/A

Loc: Winthrop Harbor, IL



Old Thunder Wandering the Vineyard

86

AROMA: 12
APPEARANCE: 3
FLAVOR: 15
MOUTHFEEL: 5
OVERALL: 10

What the brewer says: "An IPA hopped with New Zealand-grown Nelson Sauvin and Riwaka, and then conditioned on white grapes."

What our reviewers thought:

"The nose brings an interesting blend of earthy, vegetal elements and bright citrus characteristics. The flavor leans hard into the vegetal notes with a subtle nondescript fruity sweetness emerging out of the clutter. The softness of the mouthfeel helps to balance the flavor complexity and dampens the bitterness."

What our editors thought:

"Assertive gooseberry in the aroma, with fresh NZ hops definition in the sip and just a touch of white grape in the finish."

ABV: 6.7% **IBUs:** N/A

Loc: Pittsburgh



TASTED: FRUITED IPA



North Park Ice Fu!

91

AROMA: 12
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 4
OVERALL: 10

What the brewer says: "Cold IPA with Citra, Mosaic, HBC 586."

What our reviewers thought: "Mango hops with a splash of guava give this beer a strong tropical vibe in both flavor and aroma. Grassy herbaceous aromas, very subtle rubber-like aromas in the background, and just a touch of tropical aromas. The finish is clean with a little bit of hop astringency. Sweetness and bitterness are up front in the mid-palate but subside quickly. It bridges New Zealand IPA and cold IPA."

What our editors thought: "Fresh pithy tropical fruit and tropical floral notes in the aroma, with a rain forest richness and just a bit of overripe fruit funk. Glimpses of stone fruit esters flash around the aromatic edge. Bright and purposeful in the flavor, as peppery tropical fruit notes balance sweetness and spice. It's a hefty departure from the original vein of cold IPA, but this modern thiol-focused hop expression fits it nicely."

ABV: 7% **IBUs:** N/A
Loc: San Diego

Captain Fatty's The Accountant

88

AROMA: 12
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 5
OVERALL: 9

What the brewer says:

"Hopped with a unique combination of Simcoe hops and a new experiment hop named HBC586."

What our reviewers thought: "The flavor is clean, focused on earthy hops with a slight citrus note. Grassy hop aromas up front give way to a floral bitterness. The moderately assertive bitterness is a touch pithy, but the finish is clean and snappy with a lingering bitterness. Really clean appearance, bright with sticky foam."

What our editors thought:

"Pink guava with a touch of grass and pepper in the aroma. Malt pushes through in the flavor, with a light peppery tropical edge."

ABV: 5% **IBUs:** 60
Loc: Goleta, CA



Terra Nova A Cold Embrace

89

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

What the brewer says:

"Made with a cadre of classic Pacific Northwest hops. Crisp and dry with a bitter bite."

What our reviewers thought:

"Lemon tea up front, subtle melon and jasmine, white peach and stone fruit in the flavor. The nose is stingy, only letting a little bit of pine slip out. The flavor offers a little more with nice citrus stepping forward in the mix, along with some hop astringency. Finishes quick and bitter with fleeting foam."

What our editors thought:

"Weedy dank note in the aroma with a lightly fruity punch. Herbal orange in the flavor with a peppery tea-like bitterness."

ABV: 7% **IBUs:** N/A
Loc: Swannanoa, NC



Gold Dot Stagers & Jags Cold IPA

89

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 9

What the brewer says: "Cold IPA made the way it was intended"

What our reviewers thought:

"Bright notes of lemon and orange mingle with subtle pine and floral hop notes in the nose along with a nice corn-like malt character. The bitterness is present early and often in the sip, but the clean, crisp malt body is just enough of a counterpoint to hold things together. The finish is dry and crisp with a healthy lingering bitterness that coats the mouth."

What our editors thought:

"Classic and modern all at once, with a lean body that pushes forward big and familiar American hop notes. Refined but unapologetic."

ABV: 7.1% **IBUs:** N/A
Loc: McMinnville, OR



Vallensons' Dragon Lady Light and Heavy

87

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

What the brewer says: "We are making a new style invented for the Gulf Coast of Texas called "Light and Heavy." It's an ale or lager, and it has to be light on the body but heavy on the aroma and ABV."

What our reviewers thought:

"Grassy hop aromas with some Noble hop character with very subtle coconut-like aroma and a white-wine-like finish. The toasted coconut in the nose suggest Sabro hops, but there's also caramel malt and toffee that seem out of style. The flavor doubles down."

What our editors thought:

"Minimal lime coconut aroma. Cracker malt in the sip with subtle lime hints and just a touch of grassy bitterness."

ABV: 7% **IBUs:** 50
Loc: Pearland, TX



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The craft-beer market as a whole may be slowing down a bit, but Craft Beer & Brewing isn't. This winter and early spring have seen us crisscrossing the country, from Arizona to Vermont, Texas, Minnesota, and beyond. Here are some highlights from the past few months: **Top row:** Justin "Gully" Gullickson of T2 West pours Radial Spines from their 2023 CB&B Best in Beer trophy handle; the new batch of Arizona Wilderness Best in Beer winner Jitterbug Perfume is conditioning in the barrel cellar; the Wren House brewery; crowds enjoy beer at the Arizona Strong Beer Festival. **Second row:** We received the most unique cooling packs with the IPA submissions from Onsite in Alaska—wild-caught salmon and halibut; dancing and drinking amid the feeders at New Belgium's Lost in the Woods. **Third row:** The petite lager cellar at Notch's Brighton location in Boston; Vasily Gletsos of Wunderkammer in his rustic Vermont brewhouse; the brewing team of Von Trapp set up for a podcast in their lab. **Fourth row:** Multiple years of CB&B Best in Beer trophies in the retail window of Hill Farmstead; mud season in Vermont; sidestreamed hop sludge from a fermenter at Fidens; Steve Parker of Fidens poses for photos after filming a CB&B All-Access video course. **Fifth row:** Four scenes from the Brewery Workshop in Austin—opening night events in the Jester King brewhouse, an ingredients panel, tech tour with Nick Griffin of Lazarus, and Paige Martin leads a sensory class. **Sixth row:** The Idyll Forest facility in Minnesota; three scenes from the Minnesota Craft Beer Festival—dancing to Roughwear, Jacob Passey and Trevor Kelly of Pinthouse pouring IPA, and Kristin Popcheff and Neil Fisher of WeldWerks quenching festival-goers' thirsts.