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44 RECIPES YOU CAN BREW

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VOL 42 • N° 5 SEPTEMBER/OCTOBER 2019

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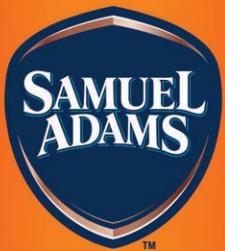
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ASK THE STAFF

IPA is everywhere, but what other styles do you wish got more love?



FALL'S BEST FEST

OCTOBERFEST



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In Praise of Little Breweries

One of my final acts as a beer nerd based in Europe was visiting the Ratsbrauhaus in Hann. Münden, Germany, at the beginning of July. Hann. Münden—formerly Hannoversch Münden—is a small town of about 25,000 residents in Lower Saxony (Niedersachsen) whose principal claim to fame is that my German teacher Ulrike is from there. Also, there is an abundance of half-timbered houses dating to as far back as the 1400s.

The town's most celebrated former resident is one Johann Andreas Eisenbart, an 18th-century itinerant barber and surgeon who traveled the length and breadth of the land purveying medical services and, one assumes, a close shave. A whole retinue of musicians, dancers, and jesters accompanied him, presumably with the aim of distracting distressed patients as Eisenbart deployed his quite literal interpretation of the term *medical practice*.

Eisenbart's escapades went on to inspire the drinking song *Ich bin der Doktor Eisenbart*, a jingle that, if you visit Hann. Münden, you'll hear the Glockenspiel play several times a day while a figurine of the good doctor repeatedly extracts an oversized tooth.

Said Glockenspiel is installed high up in the town's Rathaus, or city hall. In the basement of the same, you'll find the aforementioned Ratsbrauhaus brewery. (Thanks for sticking with me.)

Guido Einecke, head brewer and owner of Ratsbrauhaus, was generous enough to offer a tour of his brewery during my visit to Hann. Münden. The brew system yields just 2.5 hectoliters (66 gallons) of wort at a time: more than most homebrew setups but less than many craft nanobreweries. He brews a couple of days a week, which means the brewery's annual output only adds up to about 250 barrels, or 8,000 gal-



lons. By professional brewing standards, it doesn't get much smaller.

Like many small German brewers, Einecke brews a helles, a dunkel, and a hefeweizen. I was pleasantly surprised to also find a schwarzbiere on offer. Far too few breweries have the courage to keep a schwarzbiere in rotation, even in Germany. Ratsbrauhaus described its example as Dr. Eisenbart's "black medicine" and served it in 0.3-liter and 0.5-liter mugs "for the sick" and "for the seriously ill," respectively. I didn't feel particularly unwell, but I took several doses just to be safe.

Einecke showed off the beautiful copper-clad brewing system and explained how he gets yeast from a lab in Augsburg and uses only a few different kinds of malts and hops to produce his portfolio of beers.

I love visiting small breweries like Ratsbrauhaus. The technological and logistical precision of a large operation such as Pilsner Urquell never fails to impress (see Editor's Desk, Jul/Aug 2019), but small breweries offer more intimate and accessible links between homebrewers and professionals. It's still hard for me to wrap my head around packaging lines that can fill and seal thousands of cans per hour, but I can relate to a six-head bottle filler and a bench capper.

How many times have you toured a small brewery and found reminders of your own system? A 5-gallon blowoff bucket of sanitizer burps reassuring CO₂ bubbles. A shaker table agitates Erlenmeyer flasks of yeast slurry. Off in a corner, a cellar operator stands covered in just-jettisoned trub.

The pivotal moment for me on this particular tour came when Einecke opened the lid to one of his square, stainless-steel fermenters and the sweet, slightly sulfurous smell of helles at high kräusen met



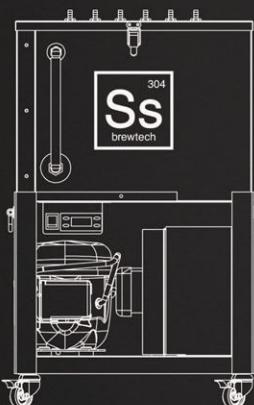
my nose. It is an aroma I know well. Sometimes it fills my garage.

Amateur or pro, large or small, we are all creators. We toil over tuns and kettles to make special things the world has never seen before. Large brewers enjoy the luxury of repeatability and blending, but small brewers understand every batch is unique. Fifty bottles and it's gone. Hope you took notes.

This issue of Zymurgy celebrates all who brew small batches in small spaces. From the best of American homebrewing, mead-making, and cidermaking to folk and farmhouse traditions in Belgium, Norway, and Ethiopia, the characters you meet on these pages will inspire you to create. With 44 recipes, there are many places to start.

And if, at the end of a long brew day, you find yourself tired, maybe even a touch under the weather, I know from experience that a good schwarzbiere might be just the thing. Doctor's orders.

Dave Carpenter is editor-in-chief of Zymurgy.



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Features



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WINNERS CIRCLE: NATIONAL HOMEBREW COMPETITION

The 2019 National Homebrew Competition was the largest yet, with more than 9,000 entries judged. If you're looking for something new to brew, check out these fresh, gold-medal-winning recipes.

By Amahl Turczyn



LOST BELGIAN BEERS: LIÈGE SAISON

At the end of the 20th century, saison was relatively obscure, made only by a handful of breweries in Wallonia. Historical sources, however, rarely mention Wallonian saison. In the 19th century, saison was associated with a different Belgian region: Liège.

By Roel Mulder



A DAY WITH LARS ON THE KVEIK TRAIL

Lars Garshol has been central to understanding that *kveik*, a family of Norwegian farmhouse yeast strains with origins stretching back centuries, may ultimately be more disruptive to brewing than new styles like brut IPA.

By Stan Hieronymus



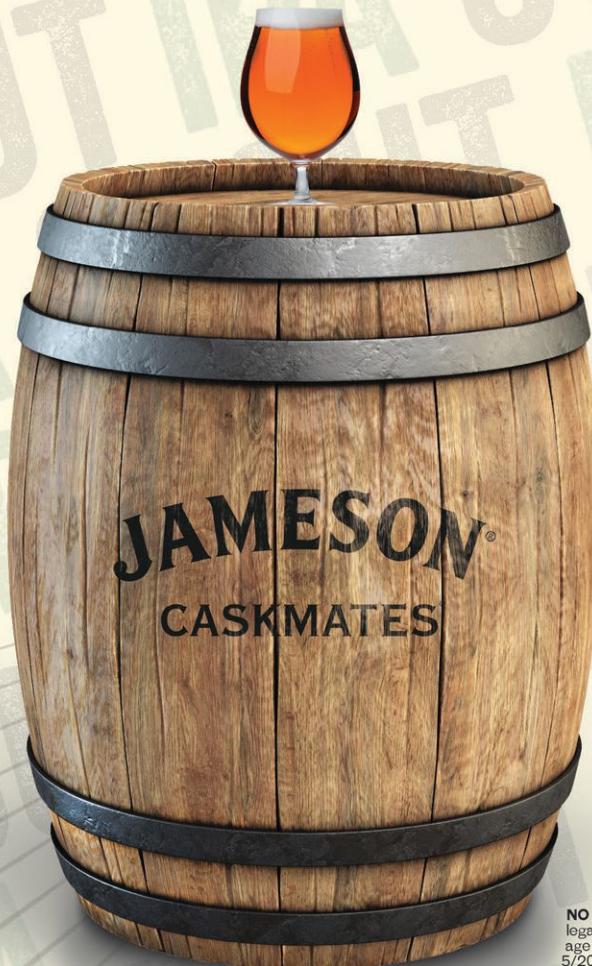
DRINKING IN THE CRADLE OF HUMANKIND

Many associate mead with Scandinavia, but a much older tradition exists in the heart of Africa. There may be no better place to drink homemade mead than Ethiopia, home to some of the world's oldest brewing traditions and the birthplace of humanity itself.

By David Schmidt

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Luke Trautwein**Vol 42 • No. 5**
September/October 2019**zymurgy**[®](zī'mərjē) n: the art and science
of fermentation, as in brewing.**ON THE WEB**Find these homebrewing recipes
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NOW ON Tap

Brew
This!



Briess RoastOat Red

Recipe courtesy Briess Malt & Ingredients Co.

Briess developed this recipe and served it at the 2019 Craft Brewers Conference in Denver, Colo., to mark the official launch of Briess Blonde RoastOat Malt. We've scaled it to homebrew size so that Zymurgy readers can enjoy this great beer at home!

Batch volume: 5 US gal. (18.9 L)

Original gravity: 1.048 (11.9°P)

Final gravity: 1.014 (3.6°P)

Color: 9 SRM

Bitterness: 20 IBU

Alcohol: 4.5% by volume

MALTS

6.9 lb. (3.13 kg) Briess Synergy Select Pilsen Malt

1.9 lb. (861 g) Briess Blonde RoastOat Malt

0.6 lb. (272 g) Briess Caramel Malt 80L

HOPS

1.1 oz. (31 g) East Kent Goldings, 4.5% a.a. @ 60 min

YEAST

Irish Ale Yeast, such as White Labs WLP004, Wyeast 1084, or Omega OYL-005

BREWING NOTES

Mash for 60 minutes at 152°F (66.7°C). Lauter, sparge, and collect wort. Boil 60 minutes, adding hops as indicated. Chill to 66°F (18.9°C), pitch yeast, and ferment until specific gravity stabilizes at or near 1.014 (3.6°P). Bottle or keg with 2 vol. (4 g/L) CO₂.

PARTIAL-MASH VERSION

As no oat malt extract products currently exist, there is no extract version of this recipe. To brew this recipe using a partial-mash technique, mash 1.9 lb. (861 g) Briess Synergy Select Pilsen Malt, 1.9 lb. (861 g) Blonde RoastOat Malt, and 0.6 lb. (272 g) Briess Caramel Malt 80L for 60 minutes at 152°F (66.7°C). Collect wort and in it, completely dissolve 3.5 lb. (1.59 kg) Briess CBW Pilsen Light malt extract syrup. Top up with reverse osmosis water to desired boil volume and proceed with the boil.

New Products

BRIESS BLONDE ROASTOAT MALT



Blonde RoastOat Malt from Briess Malt & Ingredients Co. is made from malted, roasted oats and will lend a lightly roasted, mildly sweet character to your next homebrew. This unique 4°L specialty oat malt works well in stout, Scotch ale, brown ale, New England IPA, and any beer that benefits from enhanced mouthfeel and a toasty, oaty flavor. Briess recommends the following typical usage rates as a percentage of grist.

- 10 percent for a light blonde hue, a nutty, light toast aroma, and hints of breakfast cereal
- 20 percent for a blonde hue, a slight roasted oat aroma, a delicate toasty malt character, and a creamy mouthfeel
- 30 percent for a golden blonde hue, a warm toasty oat aroma balanced by a pleasant roasted character, and a full, viscous body

To experience the unique flavor and texture offered by Blonde RoastOat Malt, why not brew up a batch of Briess's RoastOat Red? See the accompanying recipe for details.

For more information, visit brewingwithbriess.com.

RoastOat™ is a trademark of Briess Malt & Ingredients Co.

GROWLERWERKS uKEG NITRO COLD BREW

At least a couple of us at the AHA may or may not have an unhealthy fascination with cold-brewed nitro coffee. Unfortunately, it's an expensive habit that siphons away funds we'd rather spend on homebrewing. That's why we're excited about the new uKeg Nitro Cold Brew from GrowlerWerks, an all-in-one cold brew coffeemaker and dispenser that delivers the same rich, creamy feel of coffee-house nitro at a fraction of the cost.

The uKeg Nitro features the same double-wall vacuum insulated stainless construction as uKeg growlers, but with the higher pressure rating and pressure gauge needed for serving nitro coffee. And it uses the same standard nitro cartridges as a whipped cream charger.



→ Initially crowdfunded with Kickstarter, uKeg Nitro had achieved more than \$640,000 in pledges at press time, representing 850 percent of its \$75,000 funding goal. If you didn't get in on the Kickstarter, you can still pick yours up at growlerwerks.com.

PICO UNPAK'D

Attention, Pico users! With PicoBrew's new Pico UnPak'd functionality, owners of the Pico C, Pico S, and Pico Pro can now brew with their own malts, hops, and other ingredients. Existing Pico owners need only connect their devices to Wi-Fi to receive the software update. Then select "Manual Brew," add your own malts and hops to mesh brewing bags, and you're up and running. Those who don't yet own a PicoBrew device can purchase a Pico C UnPak'd Bundle for \$329 in PicoBrew's BrewMarketplace, which includes a Pico C, brewing keg, serving keg, reusable grain and hops beer bags, and reusable bags for brewing cold-brew coffee.

More details are available at PicoBrew.com.



Beer Science

NEW ENGLAND IPA AND THE INTERNATIONAL BITTERNESS UNIT TEST

By John Paul Maye

Printed with permission of Hopsteiner.

The International Bitterness Units (IBU) test was developed in the 1960s to measure the iso-alpha acid concentration in beer.

The test is a simple liquid-liquid extraction where 10 mL of beer is extracted with 20 mL of acidified isooctane by shaking the two in a test tube for 15 minutes.

The iso-alpha acids in the beer get extracted into the isooctane layer and can be measured using a UV spectrometer at a wavelength of 275 nanometers (nm). Beers that are dry hopped, like New England IPAs, contain additional hop acids, including humulinones, alpha acids, beta acids, and the hop polyphenol xanthohumol. These hop compounds are also extracted into isooctane and absorb at 275 nm and therefore interfere with the IBU test result. →



ZYMURGY'S 14TH ANNUAL GADGETS ISSUE

It's almost time for Zymurgy's 14th annual Gadgets issue (Jan/Feb 2020)! Have you created your own brewing equipment or tweaked your existing equipment to make your brew day easier? Or have you discovered a brewing-related use for a common (or not-so-common) household item?

If so, please upload a description of your gadget, along with high-resolution photos, at HomebrewersAssociation.org/gadgets-submission. Please include your city and state (or country!) and, if relevant, your homebrew club. Submissions are due by October 21. Thanks in advance for helping us make the 14th annual Gadgets issue the best ever!

→ The graph to the right shows the UV absorbance spectra of each hop compound at a concentration of 30 ppm in isooctane. Their corresponding response factors, at 275 nm, were calculated and found to be 0.7 for iso-alpha acids, 0.6 for humulinones, 0.6 for alpha acids, 0.4 for beta acids, and 0.07 for xanthohumol. Many New England IPAs have humulinones and alpha acids concentrations greater than iso-alpha acids, yet these hop acids are only 2/3 and 1/10, respectively, as bitter as iso-alpha acids; yet they absorb nearly 86 percent as much as iso-alpha acids at 275 nm.

The increase in the IBU value caused by dry hopping falsely indicates an increase in bitterness. Although humulinones, alpha acids, and beta acids absorb nearly as intensely at 275 nm as iso-alpha acids, they only provide a fraction of the bitterness compared to iso-alpha acids.

This generally means the sensory bitterness of New England IPAs is a little more than half of what the IBU test result would indicate.

Dr. John Paul Maye is technical director at Hopsteiner and a passionate homebrewer with more than 23 years of experience in the hops industry. Dr. Maye is a recipient of the ASBC's Eric Kneen Memorial Award for his work on preparing stable high-performance liquid chromatography (HPLC) calibration standards for isomerized and reduced alpha acids and is a founding member and the secretary of the International Hop Standards Committee.



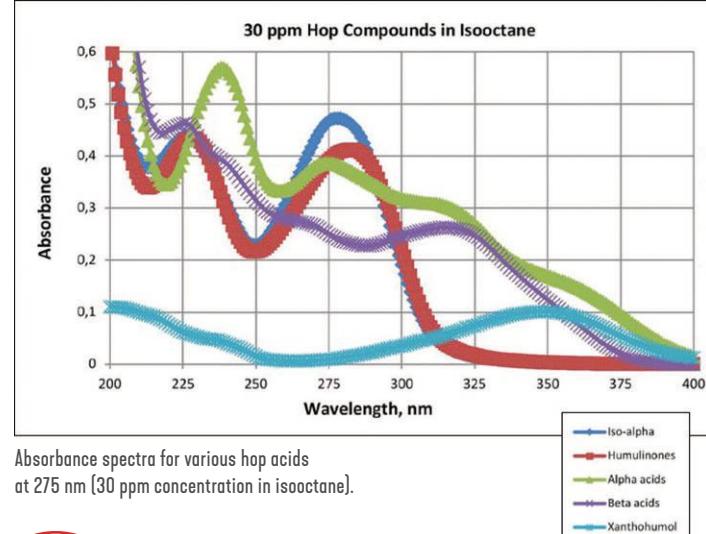
Homebrew News

NOTHING BUT A GOOD TIME AT BREW FOR GOOD 2019!

By Chip Walton

Homebrew was flowing for a good cause in Minneapolis this summer when the second annual Brew for Good homebrew sampler and fundraiser was held at Sociable Cider Werks on June 15, 2019. More than 300 people came out to enjoy beers, ciders, and meads from 50 Twin Cities homebrewers. The event helped organizing group Good Company Brewing raise \$7,500 for its nonprofit partner Think Small.

Homebrewers from the larger Minneapolis/Saint Paul homebrew clubs served at club booths, while a community brewer tent hosted solo brewers and members of smaller clubs. The general public had a blast sampling, but it was also a great evening behind the scenes as homebrewers enjoyed beers, shared ideas and techniques, and took inspiration from one another. The event had a great Club Night—→



Four-Two-Oh NEIPA

Recipe courtesy Paul Forgey, People's Choice, Brew for Good 2019

Batch volume:	5 US gal (18.9 L)	Bitterness:	84 IBU
Original gravity:	1.080 (19.3°P)	Efficiency:	77%
Final gravity:	1.018 (4.6°P)	Alcohol:	8.2% by volume
Color:	5–6 SRM		

MALTS

6.5 lb. (2.95 kg) 2-row malt	1 lb. (454 g) flaked rye
4.25 lb. (1.93 kg) Maris Otter	1 lb. (454 g) light Munich malt

HOPS

1 oz. (28 g) Citra CryoHops @ 10 min	1 oz. (28 g) Mosaic CryoHops, dry hop 6 days
2 oz. (57 g) Citra CryoHops, whirlpool 20 min	1 oz. (28 g) Citra CryoHops, dry hop 3 days
2 oz. (57 g) Simcoe CryoHops, whirlpool 20 min	1 oz. (28 g) Mosaic CryoHops, dry hop 3 days
1 oz. (28 g) Citra CryoHops, dry hop 6 days	

ADDITIONAL ITEMS

1 lb. (454 g) dextrose @ 60 min

YEAST

Omega Yeast OYL-052 DIPA Ale

BREWING NOTES

Mash at 152°F (66.7°C). Boil 60 minutes. Start fermentation at 66°F (18.9°C) and raise to 72°F (22.2°C) on day 4. When fermentation is complete, add first dry hop addition and condition for 3 days. Then add the second dry hop addition and hold another 3 days. Keg, carbonate, and enjoy!

EXTRACT VERSION

Replace malts with 3.8 lb. (1.72 kg) rye liquid malt extract, 3 lb. (1.36 kg) Maris Otter liquid malt extract, 1.5 lb. (680 g) Munich liquid malt extract, and 1.5 lb. (680 g) pale liquid malt extract. Dissolve extracts and dextrose completely in warm reverse osmosis water, top up to desired boil volume, and proceed with the boil.



Liquid Breakfast Maple Stout

Recipe courtesy Shaun Bader, Brewer's Choice, Brew for Good 2019

If you don't have a large enough French press to accommodate all of the coffee, you can split the coffee preparation across two smaller ones.

Batch volume: 11 US gal. (41.6 L)
Original gravity: 1.072 (17.5°P)
Final gravity: 1.025 (6.3°P)
Color: 60 SRM

Efficiency: 88%
Bitterness: 21 IBU
Alcohol: 6.3% by volume

MALTS

15 lb. (6.80 kg) pale ale malt
 2.5 lb. (1.13 kg) chocolate malt
 2 lb. (907 g) Munich 10°L malt
 1.75 lb. (794 g) roasted barley
 1.5 lb. (680 g) Weyermann Carafla II malt

1.0 lb. (454 g) Briess Victory malt
 1.0 lb. (454 g) Vienna malt
 1.0 lb. (454 g) flaked oats
 0.4 lb. (181 g) acidulated malt

HOPS

2 oz. (57 g) Glacier, 5.5% @ 60 min

1 oz. (28 g) Willamette, 5% @ 5 min

WATER

Ca 68 ppm, Na 13 ppm, SO₄ 55 ppm, Cl 100 ppm

ADDITIONAL ITEMS

1 lb. (454 g) lactose @ 10 min
 2 tablets Whirlfloc @ 10 min
 4 oz. (118 mL) natural maple flavor, added at packaging

6 oz. (177 mL) vodka
 10 Tbsp. (150 mL) dark roast coffee beans
 6 Tbsp. (90 mL) chocolate-flavored coffee beans

YEAST

White Labs WLP007 Dry English Ale Yeast

BREWING NOTES

Use the indicated water profile for all 16 gal. (60.6 L) of brewing water (to treat 16 gal. reverse osmosis water, use 6 g gypsum, 2 g table salt, and 10 g calcium chloride). Mash 60 minutes at 156°F (68.9°C), targeting a mash pH of 5.2. Boil 60 minutes, adding hops, lactose, and Whirlfloc as indicated. Chill to 65°F (18.3°C), pitch yeast, and ferment to completion.

One to two days before packaging beer, prepare coffee. Grind whole coffee beans using a coarse grind setting and add to a large French press. Add 6 oz. (177 mL) vodka and stir to sanitize. Heat 6 cups (1.4 L) reverse osmosis water to 165°F (73.9°C) and add to French press. Refrigerate 1–2 days.

Add coffee and maple flavor at packaging.



→ type vibe with fun booths, unique set-ups, and timed releases for high-alcohol and extra-special beers and meads.

"We are incredibly humbled by the turnout we got for the event and by the generosity of our guests," said event organizer and homebrewer Josh Janos. "It's an amazing feeling to take something we love doing—homebrewing—and be able to use it to make a positive impact on our local community."

While the event was full of wonderful brews, there were two big winners. Shaun Bader of the Primary Fermenters homebrew club won Brewer's Choice for his Liquid Breakfast Maple Stout. Shaun will have his beer brewed professionally at Clockwerks Brewing in Minneapolis, with a release party that also benefits Think Small. Paul Forgey won People's Choice for his Four-Two-Oh NEIPA. Both winners have generously shared their recipes with Zymurgy readers.

Follow Brew for Good on Facebook and Twitter under the handle @brewforgood for information and updates on next year's event, or visit brewforgood.org.





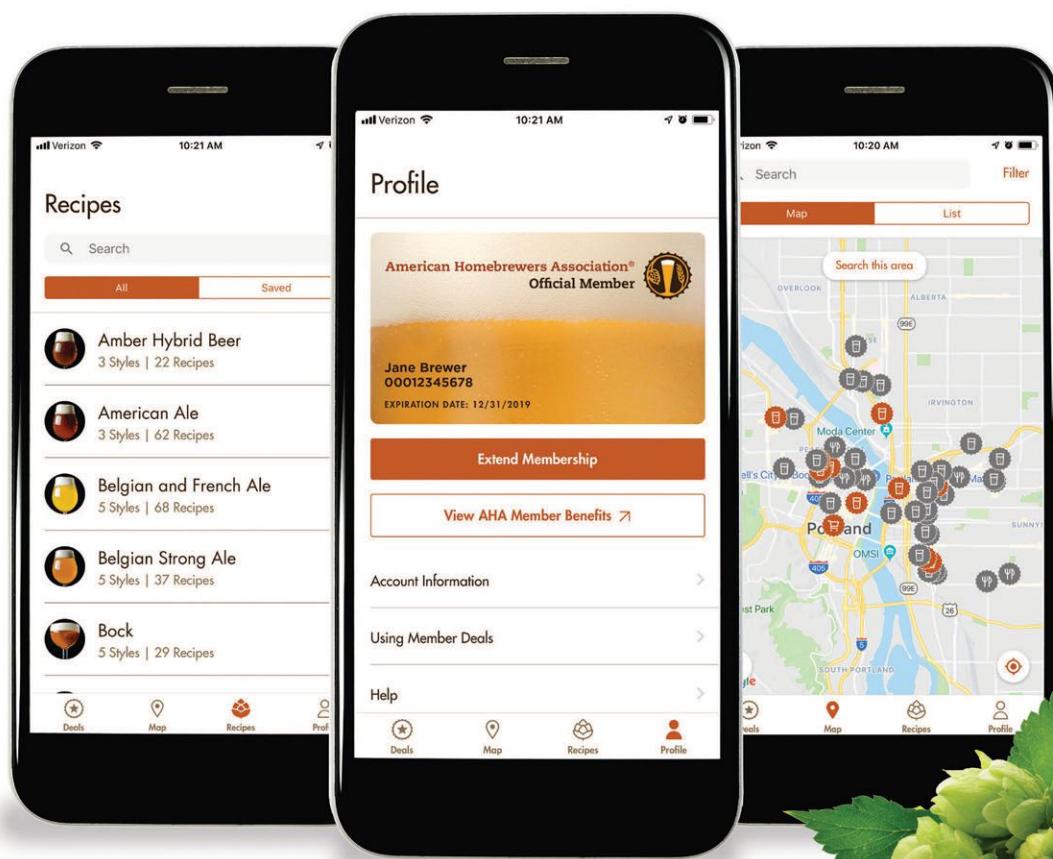
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The New Brew Guru Is Here!



The final updates to our rebuilt Brew Guru® are now available for both Apple and Android devices. If you haven't updated to the latest version of the app (released in early August), you'll want to do so: the new app is much faster, looks better, and when you are on the move, it'll let you know about nearby AHA Member Deals.

If you haven't yet checked out Brew Guru, do it now—you're missing out! The app is free, and you can use it to access your digital membership card, find nearby breweries and homebrew shops, save money at more than 2,300 AHA Member Deals businesses, find medal-winning rec-

ipes in just about every style imaginable, renew your membership, and check out articles from the AHA. It's awesome!

Nomembers can download the app for free and get a complimentary month-long trial membership to experience AHA benefits without obligation.

HOME BREW CON

This past June, 2,400 AHA members descended on Providence, R.I., for the 2019 AHA Homebrew Con™. The event was packed to the gills with fun, friends, and education. For me, the highlight was seeing the creativity and energy that went into the club booths, not to mention the

incredible beers, meads, and ciders clubs were serving, at this year's Club Night. There's just nothing else like it. You really have to experience Club Night in person to understand.

Recordings of the keynote address and the educational sessions are now available for all AHA members to view. Check out the Seminars page under the How to Brew Beer tab on HomebrewersAssociation.org to watch recordings from this year's Homebrew Con, plus past years' recordings—it's a treasure



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trove of expert knowledge accessible exclusively to members of the AHA.

The 2020 Homebrew Con takes place June 18–20 at the Gaylord Opryland in Nashville, Tenn. Make your plans now to join us next year in Music City!

Look for more details on HomebrewCon.org as we get closer to the event.



NATIONAL HOMEBREW COMPETITION

At Homebrew Con 2019, 208 judges, assisted by 36 stewards, evaluated 1,257 National Homebrew Competition (NHC) Final-Round entries, setting a new record for Final-Round entries judged. Entries in the Final Round had previously won first, second, or third place among the 9,189 entries spanning 34 NHC categories judged at 13 First-Round judge centers in March and April of this year. The homebrewers who earned one of the 102 medals awarded in the Final Round of the competition can take pride in being among the best of the best in homebrewing. Find all the gold medal-winning recipes from the 2019 competition in this issue of *Zymurgy*. Medal-winning recipes from previous NHCs are available exclusively to AHA members via the Brew Guru app and on HomebrewersAssociation.org.



AHA GOVERNING COMMITTEE RECOGNITION AWARD

From the stage at Homebrew Con just prior to the keynote address, AHA Governing Committee chair Roxanne Westendorf

announced Chris P. Frey (aka Crispy Frey) as the recipient of the 2019 AHA Governing Committee Recognition Award. Members who have attended Homebrew Con likely know Crispy by the brightly colored sports coats he dons throughout the event. The membership first elected Crispy to the Governing Committee in 2004. He served as chair of the Governing Committee from 2008 to 2012 and was one of the two Governing Committee representatives on the Brewers Association Board of Directors from 2010 to 2019. Throughout his 15 years on the Governing Committee, Crispy inspired his fellow GCers to do more for AHA members.

In his professional life, Crispy worked in insurance for the Ford Motor Company. His expertise in insurance led, after many years of effort, to the launching of the AHA's homebrew club insurance program. In 2011, Crispy worked with his friend Doug Geiss, a state representative in the Michigan legislature, to pass a bill updating the state's homebrew law to allow homebrew club meetings and other homebrewer events to take place at breweries, pubs, or other establishments with on-premises liquor licenses. Crispy co-chaired, along with fellow Governing Committee member Fred Bonjour, the local committee for the 2014 Homebrew Con in Grand Rapids, Mich.

Crispy finished his last term on the Governing Committee at the end of May this year. We miss his presence on the committee but know that Crispy continues to work on behalf of the homebrewing community from his new home in Asheville, N.C.



RADEGAST CLUB AWARD

During the National Homebrew Competition awards ceremony at Homebrew Con, the AHA honors one club every year with the Radegast Club of the Year Award (originally proposed by former AHA Governing Committee member Drew Beechum as the Awesome Club of Awesomeness Award). This award is given to a club that sets itself apart as being awesome within its own community through philanthropic efforts, endeavors to further diversify the hobby, and promotion of homebrewing in its area.

The 2019 Radegast Club of the Year was awarded to a group that truly embodies the camaraderie and joy of homebrewing: Quality Ale and Fermentation Fraternity (QUAFF) from San Diego, Calif.

QUAFF was founded in 1989, and from there it helped kickstart the San Diego craft brewing revolution. As QUAFF celebrates its 30th anniversary in 2019, what stands out as special about the club throughout its history is its boundless enthusiasm for its members' shared passion for homebrew.

In recent years, QUAFF helped foster a community of homebrewers across the border in Mexico and trained new Beer Judge Certification Program judges there.

When a QUAFF member's nine-year-old daughter was diagnosed with cancer, the club rallied to turn the malt won from the 2017 AHA National Homebrew Competition Homebrew Club Award into a charity brew that, in conjunction with local breweries and craft beer venues, raised over \$15,000 for the cause. When that member's daughter succeeded in her fight against cancer, QUAFF recommitted to turn the malt won as the 2018 Homebrew Club Award winner into an even larger charity brew and raised over \$20,000 for the families of children who are fighting the disease.

For these efforts and more, the AHA is honored to name QUAFF the 2019 Radegast Club of the Year.

To learn more about the Radegast Club of the Year Award and QUAFF, see the community section of HomebrewersAssociation.org.



HOMEBREW SHOP OF THE YEAR AWARD

Also announced during the 2019 Homebrew Con awards ceremony was this year's recipient of the AHA Homebrew Shop of the Year Award, which went to Bitter & Esters in Brooklyn, N.Y.

Now in its second year, the Homebrew Shop of the Year Award received 323 nominations from American Homebrewers Association members, covering 120 different shops. The nominees were judged by the members of the AHA Governing Committee based on these criteria:

- Local homebrew community support
- Education
- Customer service and engagement
- Promotion of homebrewing to the public
- Responsible business practices

Bitter & Esters participates in nearly every homebrewing and beer event in its local community. They provide top-notch education, training, and demonstrations, and they have been known to connect homebrewers throughout the community with bottle shares and local club involvement. They create a community space in which folks can come hang out for hours to craft recipes, taste malts, and talk beer. They sponsor community initiatives, help coordinate competitions, and foster an environment for people of all genders, ethnicities, and skill levels. Bitter & Esters helped launch a local female-led homebrew club, and they built an inclusive environment for all homebrewers. The owners and staff are well educated and friendly, always providing thoughtful responses and promoting lively discussions among their customers.

According to one of the AHA members who nominated Bitter & Esters, "The focus on inclusivity, a thorough customer experience, community, end-to-end education, and brewing on premise in our city raises

the bar and creates a model for other shops to emulate."

Nominations for the 2020 Homebrew Shop of the Year Award will be accepted from AHA members in January.



LEARN TO HOMEBREW DAY

The AHA's 21st annual AHA Learn to Homebrew Day is coming up Saturday, November 2. Help us grow the community of homebrewers by inviting friends and family over and showing them just how easy it can be to make their own beer. Participating is simple: just check out the Events section of HomebrewersAssociation.org for details.

As you're preparing for Learn to Homebrew Day, keep in mind that homebrewing can be intimidating for the uninitiated, so I recommend keeping things simple by demonstrating how to brew an extract batch. Extract brewing requires the smallest equipment investment and is easy for students of the hobby to grasp.

While you are waiting for the kettle to heat up, get your brewers-in-training to download Brew Guru and start a trial AHA membership.

GOVERNMENT AFFAIRS UPDATE

In New York, the State Senate passed S5509, which would amend the alcoholic beverage control law to allow homebrew supply shops to apply for licenses to sell beer for off-premises consumption. Unfortunately, the corresponding bill in the General Assembly died in committee when the legislative session ended June 19.

In Ohio, the Legislative Service Committee has proposed draft homebrew legislation. Key stakeholders and legislators are working on revisions to the bill to hopefully have it introduced later in 2019.

Until next time, happy brewing!

Gary Glass is director of the American Homebrewers Association.

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Oh, a Weiz Guy, Eh?

Dear Zymurgy,

I am a happy homebrewer and a proud AHA member of two years. I love your association and what it represents. I have read one of Charlie Papazian's books and hope to read more—Charlie's passion is hard to overlook, and I hope I get a chance to meet him to share a pint and some stories. I love getting new issues of *Zymurgy* in the mail, too. So much cool!

I have just joined a homebrew club, the Weiz Guys, here in Loveland, Colo., and am excited to be around like-minded folks.

The beer I am about to enjoy in the pic is my Spring Thaw amber ale. I brewed it on a particularly warm last day of February that was soon followed by lots of snow and cold days. I had a lot of fun experimenting with crystal malts to add color and malt notes.

Thanks for what you do and keep up the good work. What you folks do, and the help you provide, gives us what we need to make a hobby into a passion.

Travis Hogenson
Weiz Guys
Loveland, Colo.



Travis

A LOW-GRAVITY QUERY

Dear Zymurgy,

I really enjoy the publication. I have a question about the Honey Squished IPA recipe that appeared in the Nov/Dec 2018 issue. The original gravity (OG) is 1.056, and the final gravity (FG) is 1.006 using White Labs WLP008 East Coast Ale yeast. Is the indicated FG correct? A final gravity of 1.006 seems awfully low, and I have never been able to get WLP008 to attenuate that much. Just wondering if I'm missing something.

Thanks,
James Watson

Bob Negro, who provided the recipe, responds: I looked back at my brewing notes for that recipe and confirmed the FG as 1.006. I agree that sounds abnormally low for that strain. I looked at all the other recipes [that use it] and found only one other where I broke out of the teens for the FG. It may have been an anomaly in that particular brew, and I could only verify it by brewing it again. I believe an FG anywhere between 1.010 and 1.018 would be a more likely result. Did you try brewing it? I would be interested in your results. Thanks for the input, and cheers!

BREWIN' COMPANIONS

Homer and Archer, my assistant brew heelers, are dedicated to the craft, always carefully watch the mash temperature, and let me know if the pump ever leaks sweet, tasty wort!

Thanks for the great content,
Charles Hilton
Asheville, N.C.



Homer and Archer



Kassie

Kassie, the brew poodle, carefully overseeing the mash. We're making a Czech Pilsner.

John Brice
North Augusta, S.C.

Molly likes to keep watch on brew day. She's also good at guarding the kegerator. Thanks for the informative articles and, of course, the brew pets feature.

George Randels
Stockton, Calif.

I can't have a dog or cat, so this is my brew buddy here in the UK!

Cheers,
Claude Carrier
St. Ives, Cambridgeshire, UK



Molly

Tucker has kept a watchful eye on all the brew day activities at our house for the past eight years. A scratch behind the ears on the way to check the mash is his favorite part!

Jason Smith
Zymurgy Art Director
Lafayette, Colo.



DEAR ZYMURGY
Send your Dear Zymurgy letters to zymurgy@brewersassociation.org. Letters may be edited for length and/or clarity.



Brew Buddy



Tucker

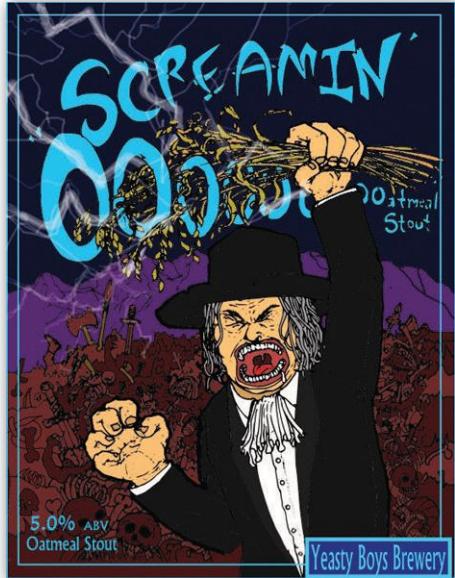
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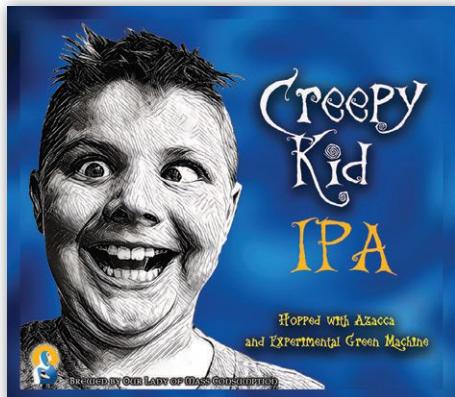
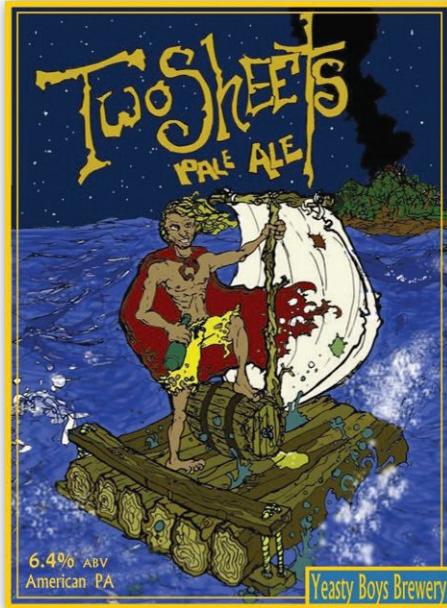


HOMEBREW LABEL SUBMISSIONS

My son Matt made these labels to accompany my entries into the 2008 California Del Mar Fair homebrew contest. The sailor pilots my pale ale, Two Sheets, in tribute to Full Sail, the inspiration for the beer. I gave Matt no direction for the label for Screamin Oooatmeal Stout, and he went as dark as the beer. His labels fared better than my beer at the fair (see what I did there?), scoring a blue ribbon for the Two Sheets label and a third place ribbon for the Screamin Oooatmeal Stout label.

David Sleipness
South Sound Suds Society
Olympia, Wash.

Homebrewing for 27 years
AHA member for 3 years



My 10-year-old grandson and assistant brewer Hayden noticed other family members were getting beers named after them, and he wanted one of his own. He had already gained the nickname Creepy Kid, so Creepy Kid IPA was an easy choice.

I was lucky to catch an eye crossing for the label photo, something he has yet to do again! The label won first place at the 2018 Kentucky State Fair and was a runner-up in GrogTag's 2017 Homebrew Label Awards.

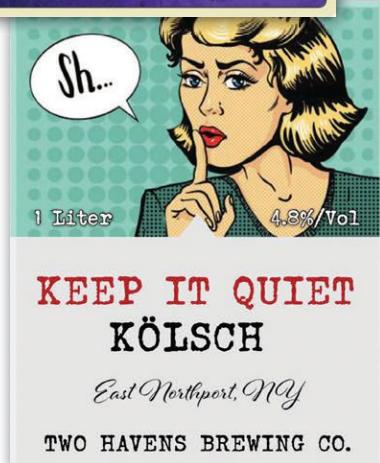
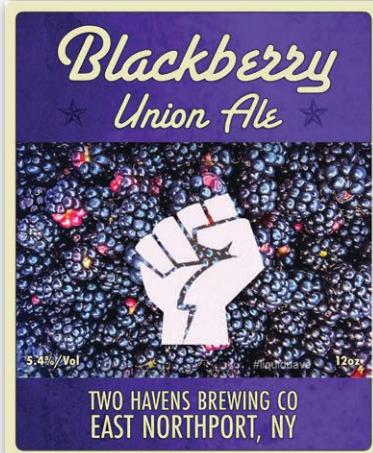
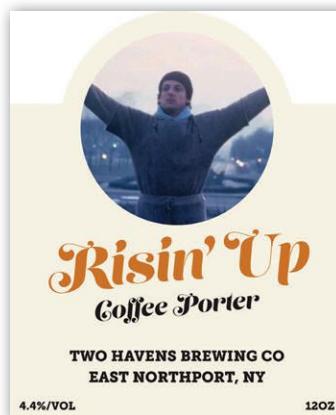
Hayden has a T-shirt with the label printed on it, and even two years later he tells total strangers that he has a beer named after him!

Kenny Lyons
Louisville Area Grain and Extract
Research Society (LAGERS)
Louisville, Ky.

Blackberry Union Ale was our first effort at fruit addition. After jamming in as many blackberries as possible, we learned that less is more. It ended up tasting more like blackberry syrup than beer, but it was still a hit at my annual Halloween party!

Risin' Up Coffee Porter was inspired by the 70s and 80s rock playlist that provided inspiration on that particular brew day, and Keep it Quiet Kölsch refers to a story from one of our brewers who told us to keep it on the down low!

Cheers,
Dave Oksenhorn
East Northport, N.Y.



SUBMIT YOUR LABEL

Do you make custom labels for your homebrew? Want it featured here in the pages of Zymurgy for all to see your work?

Send them to us at HomebrewersAssociation.org/magazines/submit-bottle-label and we will take it into consideration!



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AN INTENSE QUESTION

I just read Martin Brungard's article on wort boiling in the May/June 2019 issue. I understand why reducing boil intensity might be advantageous but am concerned that there might be reduced hot break formation as a result. Has Martin found any adverse consequences with less vigorous boils?

Thanks,
Jeff Muse
St. Louis, Mo.

Martin Brungard responds: Indeed, there is a concern about boil vigor with respect to hot break formation. Several researchers have found that vigor is necessary for good break

production, but there are at least two ways to have "vigor." The first is by turning up the heat to create a more active boil. The second is to circulate the wort to increase the frequency of break-forming collisions. An article by Reed and Jordan reports that good wort circulation can make up for low boil vigor with respect to break formation. (Reed, R. J. R. and Jordan, G. [1991] Proc. 23rd Congr. Eur. Brew. Conv., Lisbon, p. 673.)

In *The Chemistry of Beer*, Roger Barth points out that protein coagulation occurs faster when a large surface area is in contact with the wort. He contends that a vigorous boil with a large number of bubbles is necessary. However, I find that substantial hot break is formed after about 15 minutes of boiling.

As I've only produced about 150 batches of beer, I consulted with Denny Conn, who has brewed more than 500. Denny concurred with the observation that substantial hot break is formed after about 15 minutes of boiling. So "faster" is not necessarily a concern when your boil duration is around an hour.

As mentioned in my article, wort circulation is key when reducing heat input to the kettle. Having your heat source located off the kettle's centerline is a good way to encourage a strong rolling boil. Pumping and mixing also improve circulation, but I would caution you not to get carried away with this, as it can chop up the protein flocs (the egg-drop-soup-looking stuff) into finer particles that won't settle as well in the kettle.

→ In another example illustrating the importance of mashing and wort chemistry, the kettle wort pH needs to be in the 5.2 to 5.4 range for good hot break to form. Seeing that egg-drop soup in the kettle is a satisfying thing.

BEST BOTTLES FOR COMPETITION

If I am submitting homebrew to competitions and I want to recycle commercial beer bottles instead of buying new empty ones, what is the best brewery to stockpile bottles from? These days most bottles are embossed with logos or are oddly shaped, which disqualifies them from entry.

Obviously screw-cap bottles do not work well with regular caps. Also, I feel like unpasteurized products present a slight but possible danger of contamination. I have generally been using Bell's bottles, but I wonder if anybody has other recommendations?

Cheers!
Alex Wasowicz

Zymurgy editor-in-chief Dave Carpenter responds: Hey Alex, thanks for your question.

I'm like you: I prefer to buy bottles that already have beer in them and then enjoy the contents before filling them back up with homebrew. For just keeping beer around the house, I really like sturdy 500 mL bottles (sometimes called "Euro" bottles) because I brew 20-liter batches and these make the math easy on bottling day. They aren't always suitable for competitions, though. As you note, breweries often use unique bottles to differentiate themselves in a sea of products, and many have switched over wholly or in part to cans, which makes finding regulation bottles even harder.

Competitions will likely have differing requirements, but the National Homebrew Competition rules and regulations are a good place to start. You can find those at HomebrewersAssociation.org/nhc.

I wouldn't worry about contamination from unpasteurized beer, as long as the original product used a regular *Saccharomyces* yeast,

e.g. your basic ales and lagers. If you thoroughly clean the bottles and follow your normal sanitation protocol, you should be just fine. I would, however, think twice about using a bottle that had previously contained *Brettanomyces*, *Lactobacillus*, *Pediococcus*, or a diastaticus-type *Saccharomyces* strain. Even though you could theoretically get those squeaky clean, it might be more trouble than it's worth.



OF YEAST AND GRAVITY

I'm a student brewer and have been reading older issues of Zymurgy for knowledge. Love them. Will adding additional yeast to high-gravity wort just make it higher in alcohol? Would higher alcohol levels kill additional yeast unless it was Champagne yeast?

Pete Pearce
Santa Monica, Calif.

We'll assume you're asking about adding yeast to beer that appears to have already completed fermentation. Maybe it stalled at a gravity higher than you wanted? If there are fermentable sugars remaining in solution, and if you pitch a large volume of alcohol-tolerant yeast, then adding additional cells may increase the alcohol. Those are two big ifs, though (and a may).

There's a difference between pitching alcohol-tolerant yeast into fresh wort and pitching it into beer. Fresh wort is rich in nutrients and (hopefully) oxygen, both of which promote healthy yeast and healthy fermentation. Pitching those same yeast cells into a nutrient-poor, high-alcohol environment like finished (or nearly finished) high-gravity beer won't work nearly as well.

Many beer yeasts can work at elevated alcohol concentrations and can compete with Champagne yeast in those regimes. White Labs WLP099 Super High Gravity Ale Yeast is of English lineage and is said to ferment up to 25% ABV. The Hurlmann yeast (available as Swiss Lager or as Fermentis Saflager S-189) can go at least as high as 14%. To achieve unusually high alcohol levels always means pitching a lot of yeast up front and often means tricking it into continuing longer than it might normally prefer. That can mean gradually increasing the temperature as fermentation approaches final gravity or even "feeding" the yeast sugar in stages.

In Belgian-style ales, it's not uncommon to start fermentation with all-malt wort and reserve the sugar additions until a day or two into fermentation when the yeasts are in a feeding frenzy.

Note that if there are no fermentable sugars remaining in the beer, then it doesn't matter how much yeast or what strain you pitch. Fermentation is done. You might knock out a few more gravity points by adding something exotic like *Brettanomyces* or a diastaticus-positive yeast that can consume dextrins, but then you change the fundamental nature of the beer, and not necessarily for the better.

Conducting a forced fermentation test alongside the main fermentation is a great way to know how far your primary yeast can potentially attenuate a given wort. Just draw off a small portion of the wort and over-pitch it with the same strain you use for the big batch. Keep the sample warm and stir frequently. Your goal is to force it to ferment as far as possible. When it's done (it'll wrap up in a day or two), the final gravity of your sample is the limit of fermentation of the main batch.



FRUIT FERMENTATION TIME

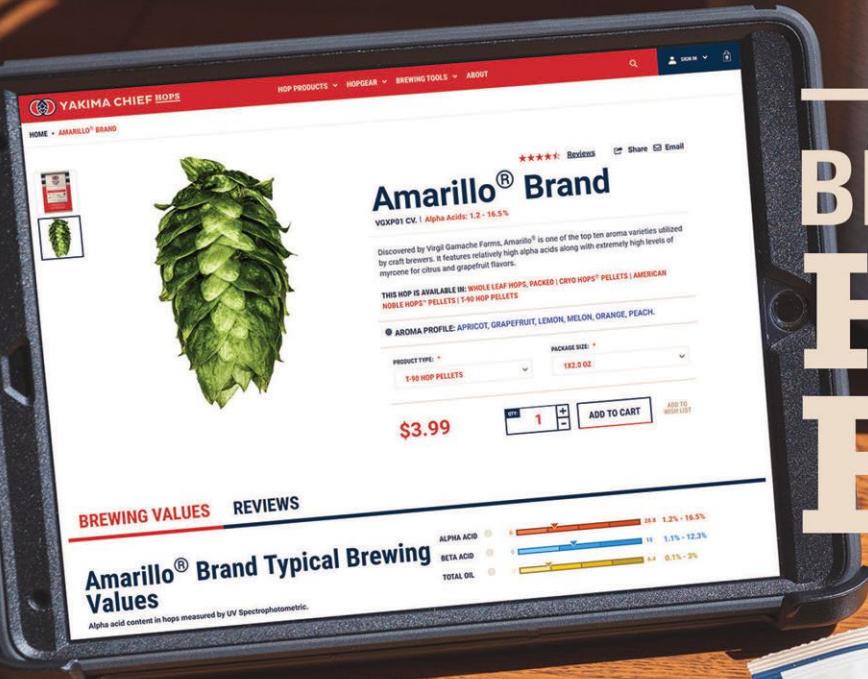
Is it possible to add the pulp of fresh fruit (possibly in a muslin bag) to the fermentation bucket a day or two before kegging, or is that not enough time to get the flavor into an IPA?

Ronan Murphy
Dublin, Ireland

Hey Ronan, you'd get some fruit flavor from a couple days of steeping before kegging, but to really make use of that fresh fruit we'd recommend letting it sit a week if you can.

More importantly, fresh fruit will introduce sugar and start a renewed fermentation that might last longer than a day or two. If you were bottling, you'd want to let it ferment out completely, but a keg can take higher pressure. If you keg while there's still some fermentation, you might wait to hook up the gas line until after activity has died down, or you could use a spunding valve set at your desired pressure. Chilling the keg promptly would reduce yeast activity, too. 🍃

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Acetaldehyde



You may be familiar with the term “green beer,” and I’m not referring to the sorry tradition of dyed domestic lager on St. Paddy’s Day. Green beer is a brew that has finished fermenting but requires a maturation or conditioning step before it can be transferred and enjoyed.

If you have tasted a beer at this stage, you have likely experienced acetaldehyde. If you have tasted a certain well-known, mass-produced light American lager, you have also experienced acetaldehyde. This flavor is common in beer, but when it makes an unexpected appearance or overstays its welcome, it can be problematic. What is acetaldehyde, what causes it, and how can it be prevented?

Different palates perceive acetaldehyde (CH_3CHO) in slightly different ways, but the most common descriptor is fresh or rotten Granny Smith apple. Some compare it to the flesh and seeds of a pumpkin or melon. Others may associate acetaldehyde with more synthetic aromas, such as latex paint or Sharpie markers. It also has been described as “cider-like” due to its sensory affiliation with apples.

Other aldehydes are found in beer, too, such as trans-2-nonenal, which is a paper-like compound formed in aged beer. While aldehydes may smell and taste different from one another, they share a common property on the palate: aldehydes tend to create a drying, somewhat astringent effect from a

chemical reaction that occurs between saliva proteins and the aldehydes themselves.¹

This drying effect can be a helpful hack for those who may have trouble identifying acetaldehyde or those who lack the functioning olfactory receptors to perceive the compound. The term for the latter condition is anosmia, and approximately three percent of the population is specifically anosmic to acetaldehyde.¹

One of the most common defects in beer, acetaldehyde is produced by yeast during anaerobic fermentation. In a healthy fermentation, this compound is simply an intermediate that is later converted to ethanol, facilitated by an enzyme called alcohol dehydrogenase. In unhealthy fermentations, yeast may

not complete this last step, leaving significant levels of acetaldehyde behind in the beer.

In fact, for every 1% alcohol by volume produced in a beer, 8 to 10 mg/L of acetaldehyde is formed before it converts to ethanol.¹ Acetaldehyde's detection threshold—the lowest concentration at which the compound can be detected—is approximately 5 mg/L, or 5 parts per million (ppm),¹ so there is potential for offensively high levels to remain in finished beer.

Most professionals agree that, with a few exceptions, acetaldehyde indicates defective fermentation or poor control of oxygen during processing and packaging. Several factors may contribute to these conditions.

ZINC

Yeasts use zinc for various metabolic and structural processes. While zinc is naturally occurring in barley wort, it is generally not present at sufficient levels, requiring that brewers supplement wort to achieve the appropriate concentration. Furthermore, the "bioavailability" of zinc should be considered, and that depends on the stage at which it is added to wort.

Many brewers add zinc to the kettle during boiling, where the ions may bind to trub and become unavailable to yeast. The recommended method for adding zinc

“
Be sure to
taste your
beer every
step of the
way.

is to make a solution with water, boil to sterilize, and add to cooled wort directly in the fermenter.² Optimal zinc concentrations are between 0.1 and 0.4 mg/L.² Above this concentration, zinc can be toxic to yeast.²

YEAST HEALTH AND PITCH RATE

Yeast health is an especially important consideration for those who reuse yeast from former batches rather than pitch fresh yeast for every brew. To prepare a healthy fermentation, it is essential that there are sufficient living yeast cells available to perform the task. Most yeast suppliers guarantee a cell count in each pitchable package, but its treatment during transit and subsequent storage may affect viability, which is expressed as a percentage of living cells relative to the total population. It is important that yeast be stored, prepared, and pitched within the parameters recommended by suppliers.

YEAST STRAIN

Saccharomyces yeasts vary greatly in terms of acetaldehyde reduction,³ and while many factors may only become clear with trial and error, there are a few important specifications that yeast suppliers can provide.

Flocculation, yeast cells' tendency to clump together and drop to the bottom of the fermenter, can correlate to acetaldehyde reduction. Highly flocculent yeast strains may readily drop from the beer, leaving too few suspended cells to effectively reduce acetaldehyde into ethanol.³

Another factor to consider is ethanol tolerance. It is believed that yeast evolved



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to produce ethanol as a defense mechanism against other, less ethanol-tolerant competitors.² While modern brewers push the limits in alcohol production, high levels of ethanol can be toxic to yeast,³ causing death and leaving residual acetaldehyde in finished beer. If brewing a stronger beer, be careful to choose a strain with an appropriately high ethanol tolerance, and follow the supplier's recommendations for pitch rate and yeast treatment.

ZYMOMONAS INFECTION

Responsible for the condition known as "cider sickness," *Zymomonas mobilis* is a lesser known spoilage organism that produces acetaldehyde and rotten-egg-smelling hydrogen sulfide.¹ *Zymomonas* can only metabolize glucose and fructose,² so it more commonly infects beers brewed with sugary adjuncts or fruit than it does all-malt formulations. *Zymomonas* most commonly affects cidersmakers, but brewers of all fermented beverages are encouraged to maintain sanitary conditions to prevent microbial contamination.

DISSOLVED OXYGEN IN PROCESSING AND PACKAGING

While acetaldehyde is most generally associated with fermentation-related issues,

there is an additional cause for which yeasts and microbes do not play a role. Just as acetaldehyde is reduced to ethanol at the end of the fermentation cycle, the opposite reaction can occur in finished beer containing high levels of dissolved oxygen.¹ In other words, in the presence of oxygen, ethanol can simply convert back to acetaldehyde. This is especially problematic in high-alcohol beer aged in barrels or packaged with poor oxygen control.

One last acetaldehyde-producing mechanism, relevant to brewers and beer enthusiasts alike, takes place in our livers. As our bodies process adult beverages, ethanol is reduced to acetaldehyde, and it builds up to toxic levels causing nausea, headache, and drowsiness. Sound familiar? That's right. Acetaldehyde is the cause of the hangover.

Acetaldehyde causes many headaches, some more preventable than others. As brewers, you can control acetaldehyde in your beer by taking these critical measures:

- Enrich wort with proper nutrients.
- Ensure healthy yeast and fermentation conditions.
- Maintain processes that are sterile and oxygen free.

Finally, seek out the opportunity to learn this flavor and other defects first-

hand. Gather a group of friends to share an off-flavor kit, and be sure to taste your beer every step of the way.

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MALIBOUX	ID. 0-35 C.	0.50 C.	

Hors ville, le port en sus

En ville, on ne sert à domicile que les commandes d'au moins douze bouteilles, si ce n'est à titre d'échantillon.

"During my research as a professional historian based in the Netherlands, I stumbled upon a newspaper ad from 1893 promoting long-lost Dutch beer styles."



Lost Belgian Beers:
**Liège
Saison**

By Roel Mulder

"Revisiting beers from the 15th, 17th, and 19th centuries meant using unusual grains and herbs and a few old methods as well."



In both my professional and private lives, 2013 was an eventful year. During my research as a professional historian based in the Netherlands, I stumbled upon a newspaper ad from 1893 promoting long-lost Dutch beer styles I had never heard of. I wanted to know what beer types like *princesse*, *minnebier*, and *nieuwlicht* tasted like. Thus began my quest for finding old beer recipes and, while I was at it, researching my country's beer history as a whole.

At that time, I also started all-grain homebrewing using homegrown hops. This enabled me to do something I hadn't imagined when I planted the rhizomes: recreate some of the historical beers I had found.

Brewing beers from centuries past can be tricky: you have to translate the recipes into something that is workable right now,

using today's tools and ingredients, while staying close to the character of the originals. Also, the old recipes generally yielded big batches, so scaling them down to homebrew proportions is necessary.

The results were, however, fascinating. Revisiting beers from the 15th, 17th, and 19th centuries meant using unusual grains and herbs and a few old methods as well. For instance, the buckwheat, oats, and wheat in an 1825 white beer completely blocked the filter bed, which prompted me to push a basket into the grain from above. When the wort flowed into the basket, I used a ladle to spoon it out. Use of such a basket, called a *stuikmand*, was common practice in some Dutch and Belgian breweries well into the 20th century.

Brewing historical beer can give you the unique sensation of tasting something our ancestors consumed in past centuries. You can almost picture yourself as a medieval commoner, an 18th-century country house owner, or an early-20th-century harbor worker because you're drinking their beer. You get to taste unusual combinations of ingredients brought together using ancient brewing methods, which is inspirational to any brewer.

Trying to define these beers using today's style guidelines can be an exercise in futility. Many of these old styles, such as the *princesse* beer provided here, only taste like themselves. An 1866 Dutch recipe, it's an all-brown-malt beer with a lot of spices. It's a unique beer that, since its rediscovery, has been brewed again by several Dutch brewers and even as a one-off by San Francisco's Anchor Brewery, to celebrate the 30th anniversary of the In de Wildeman pub in Amsterdam.

Belgium

Belgium is deservedly famous for its long and unique beer heritage. Here, complex and seemingly primordial wild beers such as gueuze, lambic, and Flemish oud bruin have been preserved. It's a country where arguably the best beer is brewed by monks, thereby preserving a millennial monastic tradition. Naturally, after having written a book on Dutch beer history, I turned my attention to Belgium. After all, it's a country that for me is only an hour's drive away.

As it turned out, finding lost Belgian beer styles wasn't all that hard. In the 19th century, many regions and cities had their own beers. Some, like *uytzet*, *caves*, *gri-sette*, *Diest*, and *gerste* have not survived the ages, but fortunately brewing literature has preserved their recipes in reasonable detail. All you need is a decent grasp of the country's main languages: for reasons that are too complex to describe here, most historical literature and sources are in French, while much of today's literature is in Dutch.

It may come as a shock that Belgian beer, widely celebrated today, was quite unknown to the outside world a hundred years ago. Belgium now exports over half of its beer, but its exports were close to zero a century ago. Instead, there was a rising influx of English and German beer, both of which were stronger and considered to be of better quality. Belgians who could afford it drank foreign beer—and drink they did, at a whopping per-capita consumption of 220 liters per year. Belgians drank the most beer of any nation in the world.

The demise of many of the old native styles was in no small part caused by the demand for stronger beer types, like Pilsner: one of the first successful Belgian Pilsners was Stella Artois, which was introduced in 1926. At the same time, Trappist monks started to upgrade their breweries from pretty household-like affairs to professional plants producing much heavier beers than they ever had, often modeled after dark ales from Scotland. A prime example was Westmalle Dubbel, which was created in 1922. Belgium also developed an amber beer type, today known as *spéciale belge*, mainly to emulate the success of English pale ale. Even stout was a very popular beer style with Belgian brewers for a while.

In the end, a few native beer styles narrowly escaped extinction. White beer (*witbier*), a style that had been around since the late Middle Ages, was rescued from certain death in 1966 by a local milk seller, Pierre Celis, arguably Belgium's first craft brewer. The decline of styles like gueuze and Flemish oud bruin was stopped by increasing interest from the 1970s onwards, aided by the writings of Michael Jackson. You know the rest: Belgian beer became a worldwide phenomenon. But for this article, I wanted to zoom in on a beer style that has often been misunderstood: saison.

"A Hoppy Farmhouse Ale"

At the end of the 20th century, saison was relatively obscure. Only a handful of breweries, mainly in the province of Hainaut in western Wallonia (the French-speaking part of Belgium), were making it. It was



Princesse Beer 1866

This traditional Dutch beer style was one of the many pleasant finds during my search for lost beer recipes. Its malty profile and unusual blend of spices make for a unique beer. Originally, it was made from 100 percent diastatic brown malt. To be on the safe side, I used a 50/50 blend of Munich malt and Pilsner malt here. If your Munich malt is light enough, and has enough diastatic power, you could try a 100 percent Munich malt grist.

Batch volume: 4.89 gal. (18.5 L)
Original gravity: 1.042 (10.5°P)
Final gravity: 1.010 (2.6°P)
Efficiency: 70%

Bitterness: 40 IBU
Alcohol: 4.0% by volume
Color: 8.6 SRM

MALTS

4 lb. (1.81 kg) Munich malt
4 lb. (1.81 kg) Pilsner malt

HOPS

1.4 oz. (39 g) Hallertau [or similar]
 4% a.a. @ 60 min

YEAST

2 sachets Fermentis SafAle S-33 or similar

ADDITIONAL ITEMS

0.9 oz. (26 g) crushed coriander seed @ 15 min
0.9 oz. (26 g) orange peel @ 15 min
0.9 oz. (26 g) licorice root @ 15 min

BREWING NOTES

Mash at 152°F (66.7°C) for 60 minutes or until an iodine starch test indicates full conversion. (If you opt for 100 percent Munich malt, the lower diastatic power compared to other base malts may require extra time to complete saccharification.) Lauter, sparge, and collect wort. Boil 60 minutes, adding hops, coriander, orange peel, and licorice root as indicated. Chill to 63°F (17.2°C), pitch yeast, and ferment at that temperature until specific gravity stabilizes at or near 1.010 (2.6°P). Bottle or keg with 2.6 vol. (5.2 g/L) CO₂. This beer should be ready to enjoy four weeks after brew day.

EXTRACT VERSION

Replace malts with 5.5 lb. (2.5 kg) Munich liquid malt extract. Dissolve extract completely in warm reverse osmosis water and proceed with the boil.

beer writer Michael Jackson who in the late 1980s brought it to the attention of New York-based importers Vanberg and DeWulf.

Until then, the family-owned Dupont brewery in the village of Tourpes had mainly been known for its abbey-style Moinette. But this was about to change. Their saison slowly gained an ever-increasing band of followers thanks to its fruity, spicy, well-hopped character that expressed a distinct flavor from its funky yeast profile. Dupont's saison came with the backstory that it had once been conceived as a beer farmers brewed in winter for consumption by farm workers during summer.

It was probably Vanberg and DeWulf's Don Feinberg who came up with the term *farmhouse ale*, to explain the beer to his bewildered costumers.

"When I first imported Saison Dupont, beer lovers stateside did not 'get' the brew. People asked: is it a wheat beer? Is it a lambic? I told them it was a hoppy farmhouse ale."

In fact, no Belgian would have thought of calling saison an ale, as the word has no real equivalent in French or Dutch. To Belgians, there is only beer, and they reserve the word *ale* for British types like pale ale and Scotch ale. Or at least they did, until recently, when they realized that using the English word on their labels helped to sell their beer abroad.

Cementing the fame of both saison as a style and the term *farmhouse ale*, was Phil Markowski's 2004 book *Farmhouse Ales: Culture and Craftsmanship in the Belgian Tradition*. Saison went on to

Brew
This!



Luiks Beer 1690

This is my interpretation of an early Dutch imitation of fresh Liège beer, from the city of Dordrecht. In Holland, spelt wasn't often used in beers, but for Liège beer they made an exception. No mashing temperatures were specified, other than that the mash should "bite a little on the hand." The boiling time is relatively short for that period.

Batch volume: 4.89 gal. (18.5 L)
Original gravity: 1.074 (18°P)
Final gravity: 1.018 (4.6°P)
Efficiency: 71%

Bitterness: 45 IBU
Alcohol: 7.5% by volume
Color: 5 SRM

MALTS

7.3 lb. (3.3 kg) spelt malt
4.6 lb. (2.1 kg) unmalted wheat
2 lb. (907 g) Pilsner malt

HOPS

3.7 oz. (105 g) Hallertau (or similar),
4% a.a. @ 60 min

YEAST

2 sachets Fermentis SafAle S-33 or similar

BREWING NOTES

Mash at 152°F (66.7°C) for 60 minutes or until an iodine starch test indicates full conversion. Lauter, sparge, and collect wort. Boil 90 minutes, adding hops as indicated. Chill to 63°F (17.2°C), pitch yeast, and ferment at that temperature until specific gravity stabilizes at or near 1.018 (4.6°P). Bottle or keg with 2.6 vol. (5.2 g/L) CO₂. This beer should be ready to enjoy within four weeks of brew day.

become an outright worldwide hit that is now brewed from Trinidad to Tokyo. Today, BeerAdvocate counts over 12,000 different saisons brewed worldwide, and Untappd lists no fewer than 43,390.



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Of course, I wanted to know more about the origins of saison, so I started digging. It turns out the historical truth is more complex than referring to saison as simply "an ale from the farm." For one thing, rural brewing may sound idyllic, but Belgium wasn't all that pastoral in the 19th century, when saison was first mentioned. It was the most industrialized country in continental Europe, and the most urbanized as well.

To our modern eyes, the Dupont brewery may look distinctly rural, but it had a steam engine huffing and puffing in the yard as early as 1867. We know from contemporary literature that Hainaut brewers obtained their barley from Flanders, France, and even the Danube area on the other side of Europe. These were not self-sufficient farmers brewing a little beer on the side—these were relatively large-scale operations, at least in their day.

In fact, historical sources do not even mention saison much in Wallonia. As it happens, in the 19th century saison was associated with a different Belgian region: Liège.

I'll Have a Liège Beer

Today, Liège is a large industrial city, situated along the river Meuse. Once it was the capital of a semi-independent prince-bishopric that included the famous brewing village of Hoegaarden. At the beginning of the 19th century, Liège developed into an early industrial hotspot because of its coal mines and iron and steel works. If you go there today, you'll find remnants of both eras: a proud episcopal palace and crumbling factories and mines. The only major beer location is the AB-InBev plant in nearby Jupille, which mainly produces Jupiler, a pale adjunct lager well known across Belgium and in neighboring countries.

Once, however, Liège had its own beer style and was actually quite famous for it. "A good Spelt beer is made there," it was written in 1685, "which is very healthy and which is not only drunk locally, but is also much esteemed and sought-after far beyond." In fact, Liège beer was so popular that much further down along the



Liège photochrome
late 19th century
© Wikimedia Commons

Meuse, in Holland, the spelt beer of Liège was imitated and became a beer style of its own. A few late 17th century recipes of this *Luiks bier* (in Dutch, Liège is known as Luik) have survived, and in 2015, they were turned into a ready-to-brew recipe by Dutch historian Leen Alberts.

This light-colored or amber Liège beer consisted of no less than 55 percent malted spelt and 25 percent unmalted wheat. Spelt was an important brewing grain in the region, and late 18th-century brewing records from Maastricht, 30 km downstream from Liège, describe brews with no less than 96 percent spelt. The beer was consumed relatively fresh, as were almost all beers of that period. But that was about to change.

The knowledge—one would be tempted to call it the art—of improving beers by letting them age, is a phenomenon that gained popularity in the 18th century. In England, this was done with porter: brewers kept it for months in enormous vats in their yards, enabling *Brettanomyces* and lactic bacteria to create unique flavors.

Similar processes were adopted by Dutch brewers. As early as 1745, Rotterdam brewers reported that when heavy Liège beer was kept for a long time, through a secondary fermentation, it would become “a spirituous drink, not unlike wine.” In the late 18th century, brewers in Brussels developed a unique aged beer that was spontaneously fermented: lambic.

Liège brewers followed suit. They created an aged version of their fresh spelt beer and brewed it in the favorable season: winter. It was usually consumed after a few months of ripening. In local dialect, this aged Liège spelt beer was called *bir di saison*, or *bière de saison* in proper French. In its oldest mention, dating from 1823, it was described as “excellent beer brewed in Liège that can be kept.”

Initially, saison simply meant a version of another beer that was “brewed in season.” Our notion of saison as a distinct beer style hadn’t taken root yet, and across Belgium, you could find beers like *grisette de saison* and *brune de saison*, which simply meant aged grisette and brown beer, respectively. But according to 19th century Belgian sources, the term *bière de saison* almost exclusively indicated saison from Liège.

Brewing Accounts

Several 19th- and early 20th-century descriptions of brewing Liège saison still exist. Fairly typical is the account by French engineer Georges Lacambre from 1851. He depicts Liège saison as an amber-colored beer, brewed in win-



Saison de Liège 1851

An interpretation of the recipe given by Georges Lacambre in his reference work *Traité complet de la fabrication des bières et de la distillation*. I have replaced the 6 to 8 hours of boiling with an addition of some dark malt.

Little is known of the original yeast profile: the historical 60 to 63 percent attenuation seems poor to our eyes, but for its day, this beer was relatively well attenuated. A saison- or Brett-like profile seems appropriate, but to get that historical flavor, try to keep attenuation low by creating more unfermentable sugars in the mash. This helps simulate the fairly uncontrolled conditions that would have been found in a traditional Belgian brewery.

Batch volume: 4.89 gal. [18.5 L]

Original gravity: 1.048 [11.9°P]

Final gravity: 1.018 [4.6°P]

Efficiency: 70%

Bitterness: 40 IBU

Alcohol: 4% by volume

Color: 8 SRM

MALTS

4.2 lb. (1.9 kg) spelt malt

4.2 lb. (1.9 kg) unmalted wheat

14 oz. (400 g) Weyermann Caramunich III

HOPS

2.8 oz. (78 g) Hallertau (or similar), 4% a.a. @ 60 min

YEAST

2 sachets Fermentis SafAle S-33 or similar

ADDITIONAL ITEMS

Rice hulls or wheat husks, as needed for lautering

BREWING NOTES

Mash at 158°F (70°C) for 60 minutes. This high mash temperature will leave a relatively high proportion of unfermentable sugars in the finished beer.

Lauter, sparge, and collect wort. Filtering might be a problem, so use rice hulls or wheat husks as a filter aid. Another option is the traditional way: push in a basket (I used the plastic basket from a salad spinner), let the wort flow in, and just spoon it out.

Boil 60 minutes, adding hops as indicated. Chill to 63°F (17.2°C), pitch yeast, and ferment at that temperature until specific gravity stabilizes at or near 1.018 (4.6°P). After primary fermentation, condition for 4 to 6 months before bottling or kegging with 2.6 vol. (5.2 g/L) CO₂. This beer should be ready to enjoy within 16 to 24 weeks after brew day.

ter and kept for four to six months. It was made of malted spelt and unmalted wheat, in equal proportions, though some brewers used only spelt. In keeping with the Belgian brewing methods of the time, the grains were piled up rather thick, and in this pre-steam age, six able-bodied men were needed to stir the contents of the mash tun. Not a lot of wort would come out of the filter bed on its own, so baskets were pushed into the grain from above so the wort could be taken out with spoons. It was fairly hoppy beer made with fresh hops.

In the second half of the 19th century, saison must have changed somewhat. One sign was that in 1882, a group of Liège-based saison lovers wanted to form an association, with the sole purpose of teaching

the current generation what a saison was supposed to taste like. In any case, its gravity slowly dropped, from as much as 1.051 in 1851 to about 1.028 in the early 20th century. No doubt this is the reason why a double saison was introduced to the market, and I even found the odd triple saison. The beer continued to evolve. Spelt and wheat started to be replaced by barley, and by 1905, saison was described as a barley beer with adjunct additions such as rice, corn, and invert sugar.

Liège's yeast profile is hard to ascertain. As far as I know, no strains have been preserved. Though a 1905 text claims it was a low-attenuation yeast, other sources place the attenuation at 60 to 63 percent, which is in the mid to high range for that time. Other Belgian beer styles of that period,

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notably white beer, usually had only 50 to 55 percent attenuation.

In 1914, the German army invaded Belgium and started the First World War, a conflict that devastated Belgium and its breweries. All over the country, the Germans requisitioned brewing equipment for copper. After the war, breweries either modernized or closed down for good. This spelled the end of many a beer style as well, and Liège saison was one of them.

Only in Hainaut, on the other side of the country, was saison preserved. There, the style somehow merged with the countryside provision beers that were already there. The result was a relatively sour keeping beer that resembled gueuze in many ways. Labels proudly boasted that that it had been "aged in cellars" and that it needed "to be kept lying down and to be served in a basket."

In the end, this developed into a more highly hopped version that was produced year-round: the Dupont saison that we now all know and love. But that's another story.

Roel Mulder is a Dutch historian writing about beer history. He has written a book about Dutch beer including historical recipes and is currently researching the origins of the many Belgian beer styles. 



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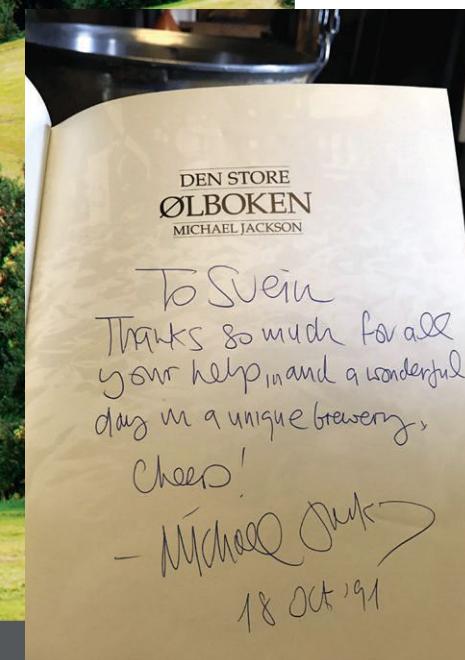
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A Day with Lars on the Kveik Trail

Farmhouse breweries used to line
both sides of the Dyredalen Valley.



Michael Jackson, the Beer Hunter, was here.

By Stan Hieronymus

he first Sunday of last September, Lars Marius Garshol settled into a seat on a train bound for Bergen, Norway's second-largest city. He pulled out a notebook and began to write about what he had learned during a particularly good day in the Dyrvedalen Valley.

"I'm glad I got to meet Svein. That was a big hole in my portfolio," he said.

Svein Rivenes brushed up against fame in 1991 when beer writer Michael Jackson visited, later sharing the experience in a London newspaper column. The encounter didn't exactly make Rivenes a rock star, but he has a collection of clippings from magazines that established him as Norway's best-known farmhouse brewer in the 1990s.

Leaving Bergen in the morning, Garshol talked about having taken a similar path into the Voss region in May 2014. "It's amazing all that has happened in four years," he said.

Garshol has been central to understanding that *kveik*, a family of yeast strains with origins stretching back centuries, may ultimately be more disruptive to brewing than something like brut IPA. He also introduced readers of his blog (garshol.priv.no/blog) to novel brewing topics such as raw ale, baking

mash in an oven, the yeast scream, "roaring the beer" (which has nothing to do with the yeast scream), and considerably more. He's dug through records from Norway, Sweden, Denmark, Finland, Estonia, Latvia, Lithuania, Russia, the United Kingdom, Germany, and Austria to help make sense of a brewing world that wasn't exactly kept secret, but that has been overlooked.

He's written about the practices he found in a book that will be available from Brewers Publications in spring 2020. British beer writer Martyn Cornell has already suggested that Garshol's "writings have made him the Michael Jackson of *gårdsøl* ('farm ale')."



Kveik stands ready to ferment Vossøapl.

A Kveik Primer

Perhaps it is best to begin by establishing three important things kveik is not:

- A beer style
- A substitute for saison yeast
- A single-strain yeast

The word *kveik* has two meanings in western Norway. One is to *breathe new life into something, such as a fire being kindled*. The other is simply yeast. Etymologically, it comes from the same root as the English “quick” in the sense of being alive, as in the expression “the quick and the dead.”

Norwegians more often use the word *gjær* to mean yeast. In the Voss region, brewers often say *kveik* to refer to yeast that has been shared within the region for generations and *gjær* for yeast acquired from a yeast supplier.

Several suppliers now offer multiple members of the *kveik* family for sale, and commercial and homebrewers alike find them attractive not just because of the flavors and aromas they create, but because of their unique brewing qualities. *Kveik* yeasts ferment beer at shockingly high temperatures without producing off flavors, making them particularly suitable for brewers who do not have the resources to control fermentation temperatures.

Depending on the strain, *kveik* yeasts may be pitched at 86 to 108°F (30 to 42°C) and will ferment high-gravity beers in about 48 hours, lower gravity beers even quicker.

These yeasts are non-phenolic, so more like British or American ale yeasts than German weissbier strains or Belgian varieties used for abbey beers and saisons. More technically speaking, *kveik* yeasts are phenolic-off-flavor- (POF-) negative and do not produce 4-vinyl-guaiaacol, the clove-like, peppery character prominent in weissbiers, some abbey beers, and various saisons. Genetic sequencing has established they should be placed on the Beer 1 side of the family tree of yeast, but they have attributes that make them distinct from other Beer 1 strains.

Because there are differences within the *kveik* family, brewers should be aware of the source of the *kveik* they use. For instance, the #1 Gjernes *kveik* (which Lars Garshol obtained from Sigmund Gjernes during the May 2014 trip) may be pitched at 102°F (38.9°C) and produces aromas of orange peel and spice. The #3 Stranda makes banana and melon aromas. Garshol provides information in his blog, and more will appear in his forthcoming book in spring 2020.

For more on yeast genetics, see Loren Miraglia’s article “The Origin of (Ale Yeast) Species” in the Mar/Apr 2018 issue of *Zymurgy*.

The Other Half of The Beer World

Garshol, a software engineer by trade, lives outside Oslo. He began blogging in 2005 about both beer and technology, writing about the beer scene in Latvia one week, and big data and the semantic web the next. More recently, most of what he has posted has been about beer, especially as it relates to farmhouse brewing.

His beer focus began to change in 2010 after his wife gave him a book by Danish maltster Per Kölster, one of the founders of the New Nordic Beer movement. Kölster wrote about farmhouse beers in Lithuania, inspiring Garshol to visit Vilnius when he had a weekend off.

“The first beer I had was amazing, massive straw [character],” he said. “It felt like the beery equivalent of being dropped from a crane, face first into a bale of straw that had baked in the sun all day. This beer was on my mind for days and days afterwards.” Other beers were equally mystifying, and he determined that people brewing them had no idea about what is generally considered modern brewing.

Returning home, he realized he had heard stories about farmhouse brewing in Norway. “Why didn’t I look into this before?” he asked himself. After nine months of planning, he and two friends left Bergen in a rental car, stopping first in Voss to brew and collect *kveik*. They continued north to Stjørdal, spending a week that left their heads spinning.

Garshol wrote about it in his blog: “We were all astonished that this isn’t better known. As Martin (Thibault) put it, ‘this isn’t exactly the Congo.’ Indeed, we’re talking about one of the richest countries in the western world. It’s more or less overrun with tourists every summer, and Norwegians travel all over the globe. And still, in the middle of a global craze for beer that’s good and different, the traditional beer remains almost secret, in places even in danger of dying out completely. And, despite how many people would be dying to try it once they learn of it, you can’t actually buy the beer at all.”

He and his friends recognized there was a whole culture they didn’t know about. “It was just stunning,” he said. “Exciting, and embarrassing. I just had to learn more.” By the spring of 2015, “I came to the conclusion that commercial brewing was only half the beer world.” He’s written his book to tell the story of the other half.

Garshol talked about these discoveries heading north out of Bergen. Although he would collect information for his book

Brew
This!



Terje Raffevold's Kornøl

This version of raw ale is brewed north of the Jostedalen glacier in western Norway in the three traditional districts Sunnfjord, Nordfjord, and Sunnmøre. Terje Raffevold's recipe is typical. The name literally means "grain beer," making it clear how it differs from "beers" made from syrup, juniper berries, and so on. Historically, these beers were brewed from barley, although on the coast the poor would mix in oats when necessary. Today, most people use a mix of 50 percent pale malts and 50 percent Pilsner malts, but there are still a few brewers who make their own malts.

Raw ale wort is not boiled. Because the process has no hot side, brewers must sanitize every bit of equipment that will touch the wort, including the lauter tun. When brewing raw ale, it's important to have a mash that's long enough and/or hot enough to properly pasteurize the mash, since there is no boil. The hotter the mash, the shorter it can be, but it's difficult to be precise about the exact relationship. Adding a hot sparge water infusion at the end of the mash also helps.

Kornøl is always made with a boiled juniper infusion and lautered through juniper. Norwegian farmers use *Juniperus communis*, which is common in Europe but not in North America. It can be found in Canada and a few places in the United States. The hops can be boiled with a little wort, or the hot wort can just run through the hop bag. In either case, the hop character should be very low and usually not detectable at all. Juniper, rather than hops, balances the flavor. In the glass, these beers look like hefeweizen with no head: yellow, hazy, and opaque with a small coarse head. The aromas are variable, but one should detect boiled juniper, raw ale aromas, strong straw and grain flavors from the malts, and tropical fruitiness from the kveik. The mouthfeel should be full, both from the sugar and from the protein from the raw ale, and also from the kveik yeast. It should also be somewhat mealy from the lack of filtration and the raw character. Carbonation should be low, like British cask ale.

Fermentation time should be two to three days, after which the beer is racked and then stored cool. Alcohol strength is usually 5.3% to 7.6% for the main beer, with final gravities from 1.013 to 1.024. Since the 1990s, quite a few local brewers have begun to boil the wort. Some will boil for an hour, but others boil only 10 to 15 minutes to sterilize the wort.

Batch volume:	6.6 US gal. (25 L)
Original gravity:	1.075 (18.2°P)
Final gravity:	1.018 (4.6°P)
Bitterness:	Unknown
Color:	5 SRM
Alcohol:	7.5% by volume

MALTS

9 lb. (4.08 kg) pale malt
9 lb. (4.08 kg) Pilsner malt

BREWING NOTES

Use only the outermost tips on the juniper; don't use thick branches. Put the juniper in the kettle and boil it for a little while. Take off the juniper infusion for the mashing and let it cool for a while.

Mash in at an initial temperature of 165°F (74°C) and mash for at least an hour at 165°F (74°C). The lauter tun filter should be juniper branches. Run off the wort through a bag containing the hops, cool the wort, and transfer to the fermenter. Add hot juniper infusion as necessary. Ideally, lautering should be very slow—if not, you may want to extend the mash by an hour.

Traditionally, one should start the yeast with the first wort (which is also the strongest) and then pitch the starter after a few hours. With a rapid, modern lauter this can be difficult, in which case creating a yeast starter from dried malt extract (DME) may be a good alternative.

Cool the wort to 86°F (30°C) and pitch the yeast. Insulate the fermenter to assure a high fermentation temperature: 95°F (35°C) is just fine.

HOPS

2 oz. (60 g) Saaz during lautering

YEAST

Kveik #5 Hornindal, available as Omega Yeast Labs OYL-091 Hornindal Kveik and Escarpment Laboratories Hornindal Kveik Blend

ADDITIONAL ITEMS

Juniper branches (try to find *Juniperus communis*): 1 small branch for the infusion, 3 small branches for the lauter tun



Lars Garshol and Bjørne Røthe survey juniper Røthe has collected. He always gets too much, he says.

Top harvest the yeast after 40 hours, and rack after 48 hours.

Target an original gravity of 1.075 with a final gravity of 1.018 after 40 hours for a resulting 7.5% ABV. Cellar the beer cold to stop fermentation.

"In the old days, if you served weak beer it meant you were poor or a crappy brewer," Garshol said. To tell a brewer "you must live by a lake" was an insult that meant the beer tasted watered down.



The building Bjørne Røthe brews in dates back to the 18th century.

during the day, he had organized this trip as a courtesy to me, and to Joe Stange, who writes about beer for many publications. The three of us had spoken at Bergen Ølfestival during the previous two days.

Sjur Rørlein met us at the train station. In addition to farming, he teaches courses on traditional malting and brewing, and he organizes the Voss Ølfestival in the fall. "It's in his blood," Garshol said. When Rørlein was growing up, he said, there were 40 or 50 farms on his side of the valley and 14 of those farmers brewed beer. Now there are fewer farms and only three make beer. He stopped the car at a spot with a view across much of the broad valley and pointed. "There were two breweries there," he said,

before pointing to another area. "Three breweries there."

Rørlein talked about when all the barley used from brewing was grown and malted in the valley, then pointed to another farmer. "They made good beer down there. Now they brew maybe two, three times a year," he said. "My grandfather, he was never out of beer."

To emphasize the farm brewing connection, Garshol described when the owner of one of the biggest farms in western Norway died in 1350. The document that describes the division of his estate listed three copper kettles among his possessions. Those three kettles were valued at eight cows.



Bjørne Røthe's boil.



From the Vikings?

Svein Rivenes apologized because he had none of his own beer to share. An aching hip had kept him from brewing for some time. Standing in the building beside his house, he happily discussed how he had learned to brew, how he brewed, and—of course—about the time Michael Jackson came to visit. Garshol translated, smiling and nodding as he listened to stories he'd long been waiting to hear.

Rivenes is a storyteller. He described in detail how his grandfather would dip a ring of straw into the slurry of *kveik* (yeast) left after brewing, then hang it high in the rafters of the barn to let it dry. This preserved the yeast to use in future

brews. The fact that birds nesting in the rafters would sometimes defecate on the straw ring of yeast did not bother him. His grandfather would simply knock off the crap and toss the ring into waiting wort. Rivenes was laughing by the time Garshol finished translating.

He also talked about when Jackson came to visit and wrote (in part):

He showed me the stream where he had tied a sack of barley so that it would germinate—a primitive form of malting. On the hillside we cut juniper bushes to use in his next brew.

As soon as a fire was set under the kettle and the smoke issued like a signal from the chimney, neighbours started arriving to help. Each brought samples of beer, so that we could quench our thirsts in the best of the brewhouse. “This is our equivalent of a pub,” said Svein.

The scale of activity rendered the term “home-brewing” insufficient: Svein had 700 litres in his kettles, and I would call that “community brewing.” By law, farmers can brew as much as they like, so long as they use barley they have grown themselves. I heard stories of illicit truckloads of barley-malt arriving in the middle of the night. “Don’t the police stop it?” I asked a community brewer in another town. “Not here,” he replied. “I’m the chief constable.”

Jackson also wrote that every farmer would “say that this precious resource (his yeast) has been in the family ‘for as long as we can remember, probably from Viking times.’” Rivenes chose his words carefully, explaining that the yeast would have been passed around the valley. (When a farmer’s yeast began to produce sour beer, he could get a healthy batch from a neighbor, a practice made more difficult as the number of farmer brewers shrank.) He looked particularly thoughtful, then said, “To claim this comes from the Vikings, I cannot do that.” Again, he was laughing before Garshol finished translating.

Jackson had taken *kveik* from Rivenes back to England to be used in a beer that would be called Norvig Viking Ale. Rivenes had also provided detailed instructions about how to make a beer like he did. He later tasted a sample of the beer. Garshol asked him if it tasted like his own.

He shook his head.

No translation was needed.

And Then, *Oppskåke*

Bjørne Røthe had been brewing for hours when we entered one of several small buildings that surround his farmhouse. This one, which he also uses as a smokehouse, has a cupboard with 1776 carved

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Bjørne Røthe's Vossaøl

Bjørne's original recipe was for 120 liters (31.7 US gal.), which is a full US barrel and a bit more than most North American homebrewers can comfortably produce. We have scaled Bjørne's recipe down to a more manageable volume and estimated the vital stats.

Batch volume: 6.6 US gal. (25 liters)

Original gravity: 1.097 (23.1°P),
estimated

Final gravity: 1.020 (5.1°P),
estimated

Bitterness: Unknown

Color: 7 SRM, estimated

Alcohol: 10.4% by volume,
estimated

YEAST

Kveik #2 Rivenes preferred but not commonly available. A good substitute is Kveik #1 Sigmund's Voss, available as Omega Yeast Labs OYL-061 Voss Kveik, The Yeast Bay Sigmund's Voss Kveik, East Coast Yeast ECY43 Nordic Farmhouse, and Inland Island Yeast INIS-441 Norwegian Farmhouse

MALTS

11.5 lb. (5.2 kg) pale malt
11.5 lb. (5.2 kg) Pilsner malt

HOPS

3 oz. (85 g) East Kent Golding
or
Northern Brewer at start
of boil

ADDITIONAL ITEMS

Juniper branches (try to find *Juniperus communis*)

BREWING NOTES

Heat juniper infusion in the kettle. Pour it on the malts. Add new water to the kettle (leaving the same juniper there), then heat that. This is the sparge water. (When Bjørne runs off wort, he tops up with this thinner infusion.)

The lauter filter is juniper branches. You want only the tips, no berries, for both the infusion and the sparge water.

The mash liquor is 158°F (70°C) when Bjørne starts ladling it onto the mash, and 167°F (75°C) at the end, because the fire heats the infusion while he ladles it on. The temperature of the mash is not known.

Mash one hour, then lauter very slowly, about half an hour for the 25-liter batch.

Boil for 6 to 7 hours, until 6.6 gal. (25 L) remain. It's not clear how much wort there is before the boil begins because it starts immediately when there is enough wort to cover the bottom. Add hops when boil begins.

Cool wort to 99°F (37°C) and pitch kveik yeast. The fermenter is insulated so the beer will stay warm during fermentation. Ferment 3 days.

Bjørne does not measure original or final gravity. Sigmund Gjernes uses about the same process, but less malt. Bjørne uses 420 g of malt per liter, while Sigmund uses 333 g. Sigmund's beer is roughly 8.5%, so this beer is probably 10–11% ABV.

EXTRACT VERSION

Use 9 lb. (4.08 kg) pale liquid malt extract and 9 lb. (4.08 kg) Pilsner liquid malt extract in place of the malted grains. Dissolve extracts with hot juniper-infused water to a volume of 6.6 gal. (25 L) and boil 15 minutes to sterilize. Cool and pitch as above.

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Svein Rivenes, probably the best-known Norwegian farmhouse brewer in the 1990s.



Lars Garshol, on a train ride back to Bergen, makes notes about what he's learned. From there he will fly to Oslo.



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into the front of it. The building next door, which has been renovated and can serve as a guest house, dates to the 17th century. These buildings made it easier to imagine a continuum of farmhouse brewing that has spanned centuries.

Out front, Garshol inspected a trailer full of juniper as Røthe explained that he always cuts too much. Juniper infusions are used in many Norwegian households to clean wooden vessels and, likewise, by brewers. Røthe has also used the infusion for his strike and lautering water, slowly filtering wort through juniper branches before using a ladle to transfer it into the kettle where wort is already boiling.

During five to six hours of boiling, about 300 liters (almost 80 gallons) of wort would be reduced to 150. Although the recipe includes only pale malt, the final beer would be reddish brown, thick, sweet, and strong. Traditionally, farmhouse brewers didn't measure gravity, so they didn't know just how much alcohol beers contained. The ones Rørlein did measure, that his neighbors judged acceptably potent, were 10 to 12 percent alcohol by volume. "My record is 12.99 percent," he said.

"In the old days, if you served weak beer it meant you were poor or a crappy brewer," Garshol said. To tell a brewer, "You must live by a lake," was an insult that meant the beer tasted watered down.

Røthe's grandfather made beer, but his father did not, and the brewing equipment sat idle for 20 years. He learned to brew from his uncle. "They say it tastes like my grandfather's beer," he said. Chatting as Røthe used a small pan to skim foam off the boiling wort ("removing the headache"), Garshol explained that brewers to the north, who make "raw ale" without boiling the wort at all, call those in the Voss region "again boilers." Røthe had never heard of brewing without boiling, a reminder that farmhouse brewing encompasses multiple traditions that don't always intersect.

One tradition, called the *oppskåke*, is common across much of western Norway, and it is a party that does not require an invitation. The word means "shake up" because it refers to racking beer immediately after primary fermentation. When using *kveik* to ferment beer, that means after only a few days. *Oppskåke* has come to mean something more. "People aren't invited. They just show up," said Rørlein. They sample generous pours of the beer and chat about it. They know when to stop by because they saw smoke coming out of the brewery three or so days before.

That's a party we wish we could have stuck around to see.

Resources

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Stan Hieronymus is a professional journalist and amateur brewer who has made beer his beat since 1993. His travels have taken him to breweries in every state in the country. The editor at RealBeer.com, he's penned hundreds of articles for periodicals and publications and has co-authored four books with his wife, Daria Labinsky: Brewing Local (2016), For the Love of Hops: The Practical Guide to Aroma, Bitterness and the Culture of Hops (2012), Brewing with Wheat (2010) and Brew Like a Monk (2005) for Brewers Publications and contributed to several other publications, including 1001 Beers You Must Taste Before You Die.

Drinking in the Cradle of Humankind





Ancient Meads and Beers of Ethiopia

By David J. Schmidt

The wedding band played a minor-key melody, a bouncing, otherworldly tune that could have been from the distant future or the ancient past. I sat at a table with a dozen other *faranji* (foreigners) who had come to Ethiopia for our friend Tesfaye's wedding. While he lives in the States, his roots run deep in this land. The other 200 elegantly dressed guests, all locals, danced and milled about the picturesque resort on the shore of Lake Kuriftu.

The scents of lakeside vegetation and fresh African rain mixed with the rich aromas of the wedding feast: piquant berbere spices, stewed vegetables and meats, sour *injera* flatbread. While the people at my table drank commercial brands of beer, wine, and whiskey, I set my sights on an unusually shaped bottle with no label. Bulbous with a long, thin neck, it contained an opaque liquid the color of dark gold. This was the moment I had been waiting for—I was about to try traditional *t'ej*.

There could be no better place to drink homemade mead than here in Ethiopia, home to some of the world's oldest brewing traditions, and the birthplace of humanity itself.

Mead, Beer, and Fermented Bread

While many associate mead with Scandinavian countries, a much older tradition of brewing honey wine exists in the heart of Africa. Traveling to Ethiopia is like going back in time. This is a culture stretching back to Biblical times, and one of only two African countries that were never colonized. More generally, we all have roots here—anthropologists trace our first human ancestors to Ethiopia.

I poured myself a glass of the wedding mead and took a sip. It was slightly viscous, with the mellow, sweet flavor of unfermented honey, aromatic undertones, and an aftertaste of live yeast. I stared at the bottle and considered how ancient that strain of yeast might be. For all I knew, it may have survived since the time of the ancient Solomonic emperors.

"How do you like the *t'ej*?" One of Tesfaye's cousins stood by my chair, beaming. He had come to check on our table.

"Delicious. Where did you get it?"

"My uncle made it. And my cousin made another batch."

I asked him about a second unmarked bottle on the table that held a dark, tawny liquid.

There could be no better place to drink homemade mead than here in Ethiopia, home to some of the world's oldest brewing traditions, and the birthplace of humanity itself.



Brewing T'ej and T'alla

Brewing *t'ej* and *t'alla* is far from a precise science. Recipes can vary from town to town and family to family, and they are often jealously guarded. The recipes accompanying this article are close approximations that can be replicated by most people living outside of Ethiopia.

The key ingredient that may be difficult to come by is the bittering agent *gesho*. The smell is subtle and herbaceous, not tannic, overbearing, or bitter. It is sold in two forms: *enchet*, a collection of dry sticks and bark, and *kitel*, the loose leaves of the plant, which imparts a more pungent flavor with lower volume.

If you live in the right part of the world, you may have a sizeable Ethiopian and/or Eritrean community near you, where you can find a traditional market that sells *gesho*. Large diasporas exist in New York; Washington, DC; Los Angeles; San Diego; Toronto; and many other cities across North America, as well as in the UK, Israel, Sweden, and Australia. Otherwise, you may have to order your *gesho* online. Bruno Market of Oakland, Calif., sells it on its own website (brundo.com) and on Amazon.

Yeast is a similarly tricky issue. Many Ethiopians brew *t'ej* with the wild yeast that exists on the *gesho* and in the air. I do not recommend trying this unless you are willing to move to Ethiopia for a couple of months. Luckily, scientists have identified the dominant strain in *t'ej* as *Saccharomyces cerevisiae*: any American ale yeast will do just fine. If you really want the touch of authenticity, you can buy some homemade *t'ej* from an Ethiopian market and cultivate yeast from it.

Ale yeast tops out at around 9% ABV, leaving unfermented sugars from the honey. This will give the *t'ej* its authentic sweet flavor, unlike a dry mead, which uses a wine or Champagne yeast and might take 6 to 12 months to fully ferment.

For a simple *t'ej* recipe, see "Brewing Up a Storm" in the Sept/Oct 2016 issue of *Zymurgy*.

"That's *t'alla*," he replied. I took a sip and detected the semi-sweet taste of unhopped malt. Years ago, I had brewed a beer without hops out of curiosity. This one tasted similar, although a slight bitterness lingered at the end. I exhaled through my nose and noticed subtle, smoky notes.

As I would later learn, *t'alla* is a low-gravity beer brewed from any combination of barley, wheat, maize, sorghum, or teff, a native species of lovegrass. The smoky flavor came from the fermentation vessel, a pot smoked over olive wood or rosewood. The bitterness came from *gesho* (*Rhamnus prinoides*), an Ethiopian species of buckthorn.

"This *t'alla* has a lot of teff in it," Tesfaye's cousin told me. "It's the same grain that *injera* bread is made from."

The staple of Ethiopian food, *injera* is a flat, spongy pancake used to pick up bites of food, as fundamental as tortillas are to Mexican cuisine. It is made from fermented teff, which gives it a mild, sour taste. I smiled. These were natural-born brewers—even their daily bread was sourdough.

Where the Ancient is Modern

I stuck around the capital city of Addis Ababa for two more weeks. Like many Ethiopian weddings, Tesfaye's consisted of a never-ending series of lavish parties hosted by different families, a dizzying string of banquet halls, live bands, feasts, bottles, and dancing.



A week after the wedding day, his aunt hosted a party in a residential neighborhood just outside of Addis, in the Oromia territory. We ate on a covered outdoor patio decorated with traditional decorations and festive grass on the ground. The bride and groom sat at a low table at the head of the patio, wearing traditional Oromian outfits. Glass bottles of brown *t'alla* stood on every table.

I sat with Tesfaye's father and uncle, both of whom had studied in the Soviet Union and spoke excellent Russian. I poured us glasses of *t'alla*, and we toasted our health in Russian—*na zdorovie*—and Amharic—*le t'enachen*. This batch was more bitter than the one from the wedding, the aromatic flavor of *gesho* more pronounced. We chatted in Russian about their time studying abroad. These highly cultured men could discuss the current events and pop cultures of a dozen different nations, their conversations seamlessly jumping between English, Russian, and Amharic.

At every party, a different cousin or aunt or uncle would brew another batch. Bottles of *t'ej* and *t'alla* stood on the tables alongside top shelf wine and Johnny Walker Black Label. In Ethiopia, the ancient and the contemporary coexist side by side. More accurately, the “ancient” never ceased to be contemporary—it simply survived the passage of eons, thriving and intact.

I planned on staying in the country for a month, so I needed to watch my budget. As the days of wedding festivities started to wind down, I moved into a cheap hotel in the red-light district of Addis. I would later learn that the neighborhood was called “Chechnya,” named after the Russian war zone.

Communal Drink, Communal Food

Shortly before Tesfaye and his cousins headed back to the States, they invited me on a road trip to the south of the country. We piled into a minivan and drove 8 hours due south. After making a couple pit stops for Walia beers

and coffee, we reached the charming lakeside town of Hawassa. Wild monkeys filled the trees, like squirrels in any North American town. I had heard rumors of crocodiles and hippos being spotted in the water and declined an invitation to swim in the lake.

By this point in my stay, I had discovered my favorite hangover food: *firfir*, shredded *injera* stir-fried with spices. It was comfortingly similar to the *chilaquiles* I often eat for breakfast in Mexico and really took the edge off. Another local hangover remedy was unpasteurized raw milk—not filling, but surprisingly effective.

In general, however, people appeared to drink without any food to soak it up. Nobody snacked in the bars, and street food was almost entirely absent. After five or six glasses of *t'ej* or Habesha beer, I would have killed for some good *tacos al pastor*. Hell, even a bag of salt and vinegar chips would have sufficed. The closest thing to a bar snack was the occasional bowl of *q'olo*, roasted barley grains, on the table. I asked Tesfaye why nobody snacked in bars. “We don't take mealtime lightly here,” he replied. “Food is sacred.”

There is an inherent egalitarianism in the Ethiopian culture of eating and drinking. In his excellent book, *A History of the World in 6 Glasses*, Tom Standage describes the solidarity involved in sharing a bottle with others—all drinks are equal. In this land of brewers and meadmakers, the

Brew
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In Ethiopia, the ancient and the contemporary coexist side by side. More accurately, the “ancient” never ceased to be contemporary—it simply survived the passage of eons, thriving and intact.

T'ej

This recipe makes approximately 1.3 gallons (4.9 liters) of t'ej. The general ratio should be one part honey to three parts water *by volume*. The 4 lb. (1.8 kg) of honey in this recipe equals a little more than 5 cups (1.8 kg of honey is about 1.2 L).

Batch size: 1.3 US gal. (4.9 L)
Original gravity: 1.104 (24.6°P)

Final gravity: 1.030 (7.6°P)
Alcohol: 10% by volume

HONEY

4 lb. (1.8 kg) honey

BOTANICALS

Use 0.4 lb. (181 g) enchet (sticks) or 6 Tbsp. (88 mL) kitel (leaves)

WATER

1 gal. (3.8 L) tap or bottled water

YEAST

Neutral American ale yeast

BREWING NOTES

Mix the honey and water in your brew kettle and bring the temperature to 160–170°F (71.1–76.7°C) for 10 minutes to pasteurize. If you would like to sterilize the gesho, briefly dip it into a separate pot of boiling water to avoid imparting too many astringent flavors to the brew. (I threw caution to the wind and pitched it in dry.) Tie the gesho in a mesh bag and put it in when you pitch the yeast. Ferment for 10–14 days. Remove the gesho, stir the t'ej, and seal it up again. Let it ferment for 3–4 more weeks. You can always taste it after a couple weeks; if the sweetness is to your liking, refrigerate and serve at any point.

VARIATION: Cheater T'ej

Does all of this sound too hard? Dissolve 1/3 cup honey in 2 cups water (85 mL honey in 500 mL water). Add one bottle of white wine, chill, and call it a day.

same principle applies to food. Everyone eats from the same plate—round, like the traditional African homes and churches. It is even common for men to hand-feed each other bites of food. I stopped thinking of eating or drinking as a solitary activity. As we sat around a circular platter and fed each other, we would clink our glasses of beer or t'ej. The toast of “*le t'en-achen*” literally translates as “to our health.” We are all in this together.

The Camelot of Africa

“If you want to see the real Ethiopia,” Tesfaye told me before he left for the States, “get out of Addis. Go north, to Gondar. It’s the historic capital of the country.”

I took a domestic flight to Gondar, a tranquil mountain town of cobblestone streets and ancient churches. A brisk breeze blew through the surrounding pine trees. The jewel in Gondar’s crown is Fasil Ghebbe, a cluster of ancient castles that rival anything Europe has to offer. My tour guide at the castles, Samuel, would become a close friend.

We shared a mutual love of language, culture, history, and, of course, drinking.

After a day exploring the relics of the Amhara empire, we retreated to the hilltop Goha Hotel with a panoramic view of the city. We shared a plate of roasted goat meat, washed down with bottles of t'ej and Walia lager. Samuel offered to show me more sights that week—the wild baboons of the Simien mountains, the port city of Gorgora, the ancient stone “Devil’s Bridge,” and the German-style biergarten of Dashen brewery.

“You had me at ‘brewery,’” I said. We clinked glasses.

When we returned to my guest house in Gondar at night, Samuel asked the employee if he had any *arreke*, homemade liquor. “Sure,” the young man said. “I’ve got a bottle somewhere back here.”

It reminded me of so many scenes I had experienced around the world. A friend in Russia pulls out a bottle of homemade *samogon*. In southern Mexico, it’s *aguardiente*. In the state of Georgia, it’s corn moonshine. This is not the culture of saying, “I managed

 Brew
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T'alla

Feel free to experiment with all-grain variants of this. You can stick to the lighter malts, which are the most commonly used when people make large amounts of *t'alla* for celebrations. For more complex flavors, try steeping teff, maize, wheat, and/or sorghum with the wort. If you want to mimic the smoky flavor of the traditional *t'alla* vessel, you might try substituting in some darker malt. This recipe uses honey, which many forms of *t'alla* call for. The key ingredient is gesho in place of hops.

Batch size: 5 US gal. (18.9 L)
Original gravity: 1.063 (15.4°P)

Final gravity: 1.014 (3.6°P)
Alcohol: 6.6% by volume

MALTS & HONEY

6 lb. [2.72 kg] pale dry malt extract
1 lb. [454 g] caramel/crystal 60°L
1 lb. [454 g] British crystal 70–80°L
1 lb. [454 g] honey @ 0 min

BOTANICALS

Use 0.4 lb. (181 g) enchet (sticks) or 6 Tbsp. (88 mL) kitel (leaves)

YEAST

American ale yeast (or natural yeast harvested from previous batch of *t'alla*)

BREWING NOTES

Heat 5 gal. (15.1 L) water to 160–170° F (71.1–76.7°C), add malt extract and steeping grains, and steep 30 minutes. Remove steeping grains and bring to a boil. Boil 30 minutes. Dissolve honey in the wort and add gesho in a mesh bag. Top up with additional water to 5 gal. if necessary, chill to 68°F (20°C), aerate, pitch yeast, and ferment for 10–14 days.

to buy a bottle of something made in a distant factory." Rather, they say, "This is something I made. I created life. Let us drink it together." It is a brewer's culture.

Drinking with Hippos

After four days of touring the Gondar area, I told Samuel I wanted to see the ancient island monasteries of Lake Tana before leaving the country. He offered to go with me for no charge. This was not a business transaction. We were now *wendemoch*—brothers.

We rode a bus for 5 hours to Bahar Dar, a resort town on the south end of the massive lake. In addition to the town's gorgeous tropical beauty, it is famous for the nearby island monasteries, some of which are older than a millennium. The monks have learned to be self-sufficient and ferment their own teff grain to make *injera*. One priest gave us a few flat loaves of it. When I dropped one, Samuel picked it up and brushed it off. "Don't worry," he said, taking a bite. "It is holy ground."

"Le t'enanchen," I said as I took a bite.

At sunset, we found a small bar on the end of a lakeside pier and ordered beers. Samuel pointed out a group of wild hippos frolicking

in the water nearby. I had been in Ethiopia for a month and had to remind myself that it was a remarkable thing to see wild hippos. Their exoticness was overshadowed by the reverence this land inspired. The historic Orthodox faith and the ancient brewing culture made it feel less like an exotic safari and more like a homecoming. In this ancient land of barley and mead, I was among family.

Saying Goodbye

I flew back to Addis just in time to visit the National Museum before my flight home. I wanted to see the bones of Lucy, to render homage to our distant hominid ancestors. I descended the stairs into the basement of the museum, a solemn, softly lit chamber where the skeletons were kept. All the visitors spoke in respectful, hushed tones, as if in a mausoleum or cathedral. All of us were quietly awed by this birthplace of our species.

When I took a taxi to the airport that night, I noticed countless construction projects in the Bole neighborhood. The country is undergoing rapid transformations as foreign investment and modernization thrust many citizens out of the past and into the 21st century. Yet, the indom-

itable spirit of pride remains. Change may be inevitable, but nothing will erase the Ethiopian identity. These ancient traditions will not be lost.

And *t'ej* and *t'alla* will live on.

The author dedicates this article to all the fine people of Ethiopia who showed immense hospitality and kindness, especially Tesfaye and his family, and Samuel Tadesse of Gondar. Also, many thanks to Harry Kloman of the University of Pittsburgh for his handy tips for brewing *t'ej* in the U.S. (ethiopiantej.wordpress.com).

David J. Schmidt is an author, homebrewer, translator, and professional storyteller who splits his time between Mexico City and San Diego. He is the author of numerous books in English and Spanish, and of various short stories, novellas, articles, and inappropriate messages scrawled on cocktail napkins. Schmidt speaks 11 languages and has spent the past 15 years traveling throughout rural Mexico and Africa in search of remote, ancient folk brews. Schmidt cohosts the podcast *To Russia with Love* and can be found on Facebook, YouTube, Twitter, and *HolyGhostStories.com*.



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2019 American Homebrewers Association National Homebrew Competition Overall Winners

Samuel Adams Ninkasi Award



& Homebrewer of the Year



Mark Peterson

Queen Creek, AZ
Arizona Society of Homebrewers

The Samuel Adams Ninkasi Award goes to the winningest brewer in the Final Round of the National Homebrew Competition [NHC].

Homebrewer of the Year goes to the brewer of the best-of-show beer from 29 categories.

Mark Peterson grew up in the small town of Pflugerville, Texas, just north of Austin. In high school, he was privileged to study as an exchange student in Germany, where he was introduced to quality beer, some not easily found in the States. He appreciated simple beers like Pilsner, witbier, Oktoberfest, and hefeweizen. Later, in college, he enjoyed what German beers he could find on a student's budget.

After he graduated and landed a job in the semiconductor industry, Peterson was happy to learn that his company had business in Europe, which promised easy exposure to great beer again.

In 2005, Peterson's neighbor Shawn Lavin introduced him to homebrewing. While Lavin was a casual weekend homebrewer, Peterson was hooked from his very first brew, a hefeweizen he made while his neighbor looked over his shoulder. The only part of homebrewing he did not like was bottling, so he soon invested in a kegerator.

Oktoberfest 2006 was the first of many celebrations at which Peterson's friends and neighbors could not get enough of his special brews. After some prodding, Peterson entered five of his beers in a small-town homebrew contest in the summer of 2007. Four of them placed, including a runner-up

for best of show. Peterson was hooked and there was no looking back.

He joined the Austin Zealots homebrew club. Here, he met several people, like Keith Bradley, who took him under their wings and helped him learn the secrets of brewing great beer. With much study and experimentation, Peterson became well known in the Texas brewing community and the Lone Star Brewing Circuit, winning many medals and taking several best-of-show awards. He and his wife even named one of their daughters Amber after one of his favorite beer styles. In 2014, he and his family moved to Arizona, where he joined the Arizona Society of Homebrewers. By 2015, Peterson was recognized as the Arizona Homebrewer of the Year, and his American porter took gold at the 2016 NHC.

People often ask what his secret is to brewing great beer. He simply says, "Keep it simple and brew beer you like." His favorite is German beer, and he very seldom brews anything other than Belgian and German styles. He has learned the most when he's needed to replicate a brew and has had to match pH, gravity, temperatures, and other key numbers.

Peterson enjoys experimenting with yeast by introducing different strains to the same wort, trying different fermentation temperatures, and exploring yeasts from different companies. His engineering background taught him to take prolific notes in case he needs to go back and problem solve. He also credits an online course, "Chemistry of Beer" from Oklahoma University, for expanding his knowledge of brewing science.



Meadmaker of the Year



Michael Wilcox

Wichita, KS

Kansas City Bier Meisters

Meadmaker of the Year goes to the maker of the Best of Show mead from three mead categories.

Michael Wilcox had no intention of ever submitting either of his winning entries in NHC. He appreciates what *Zymurgy* does with recipes from the National Homebrew Competition and knows some people like to emulate them. But, as in previous years, that won't be easy here.

He explains, "Originally, I made four beers and a cider to enter into the National Homebrew Competition. Then I got very sick for a very long time, couldn't finish those entries, and at the deadline was forced to choose from the very limited amount of already-bottled stuff I had on hand. What I selected are very special to me and unique, but I'll try to give some thoughts to let readers make their own interpretations."

BLEND WITH FRIENDS

Wilcox likes to blend, especially alongside his favorite people. He says in defense of these projects, "There is nothing wrong with blending, and I did so long before I ever competed. When at a previous NHC a decade ago, I found out that three-times [sic] Ninkasi winner Gordon Strong did a lot of blending, so I started entering competitions, too. I picked up more blending tools from reading Gordon's *Brewing Better Beer*, which in my opinion, you should own if you are competing."

On several occasions, Wilcox found himself frustrated with judges when they evaluated his Polish-style meads, as they tended to look for sherry-like oxidized flavors that weren't there. "I was tempted to try to put

“
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together something that could be mistaken for sherry, but it was only after tasting Carvin [Wilson]'s mead that I decided to make it happen. At the Portland Homebrew Con in 2018, I judged his date mead with 2013 Meadmaker of the Year Mark Tanner, and we both found it incredible, featuring significant oxidation, but it was all "good" oxidation. Age had just softened it to the point that it needed acidity to balance. Both Gordon Strong and I lamented not having some lime juice or something similar to brighten it back into something other-worldly. I also had something different in mind..."

Wilson gave Wilcox two bottles of his mead—one to keep, and one to ship to Strong—but that second bottle never quite made it to the post office. Explains Wilcox, "I needed more than one bottle, so while Gordon probably thinks I forgot to ship it to him, the truth is I just confiscated it in the name of science. Sorry, not sorry. Two bottles were barely enough, and immediately upon tasting a sip mixed with one of my old meads, I knew I could make the sherry mead happen with further tweaks."

BLENDING TECHNIQUE

Blending is a tool that anyone can use with beer, cider, wine, or mead, even if they have no intention of ever entering a competition. Blending widens the number of styles you can create with limited time, budget, or available fermenters and can add complexity and open up entirely new flavor possibilities. It's a bit like painting—with skillful combination, a few primary colors suddenly become a full spectrum. But before you can start blending mead, you need to establish a baseline of colors to add to your palette. For this reason, Wilcox suggests new meadmakers make a lot of mead.

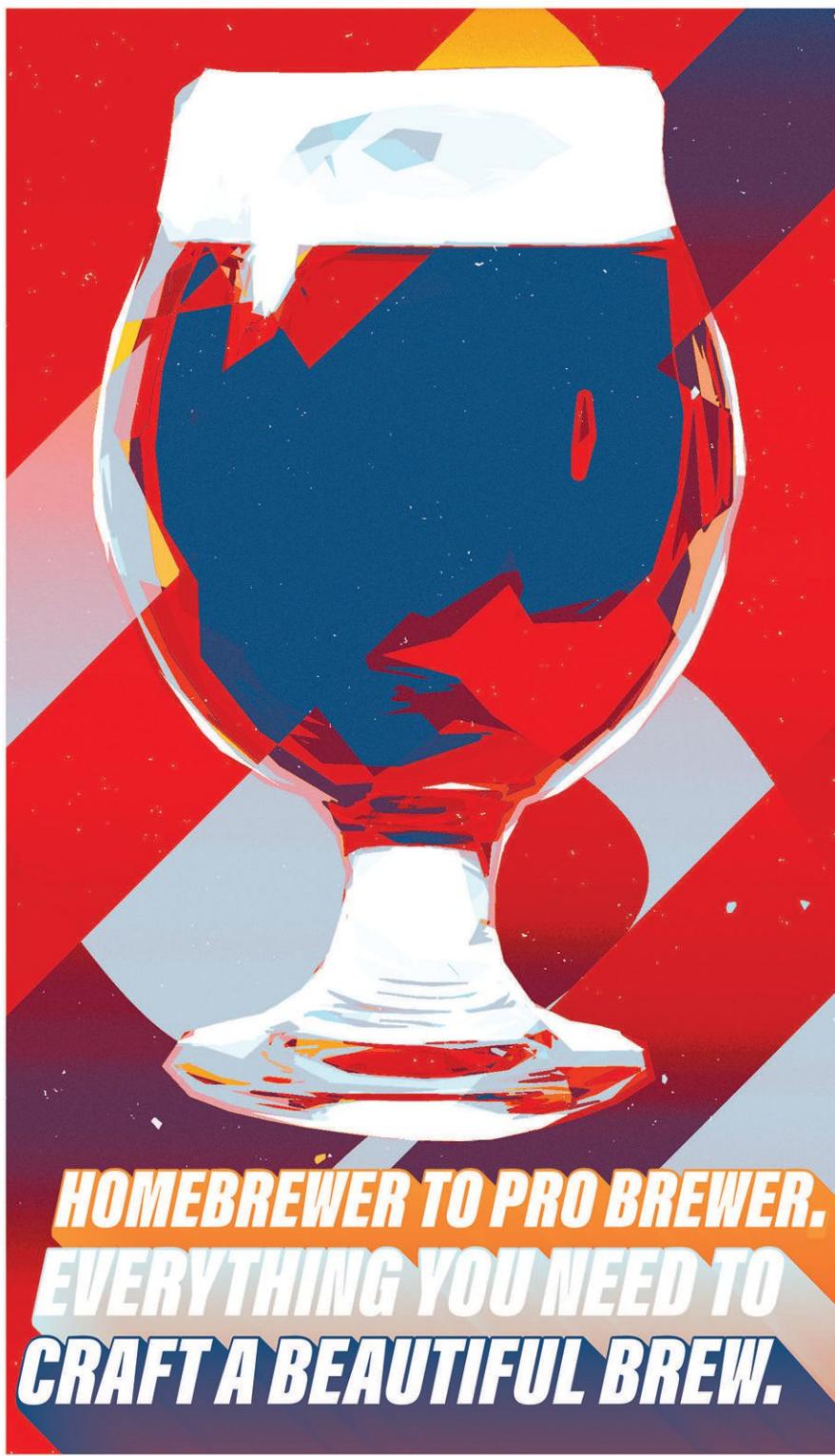
"For one, the more you make, the better you'll get at it," he says. "Also, it often gets better with time. You're all familiar with that last bottle of a favorite batch of beer that was finally tasting amazing but is now gone—it's no different with mead. If you want to experiment with pouring things together into your glass, go ahead. But if you want to be serious about blending, you should know your components. That means ingredients, alcohol level, final gravity, and often things like pH."

To some degree, it also takes experience and planning. You might get lucky, but some thoughtful analysis of what you're blending can really pay off.

"You will have more success if you have a goal in mind," he explains. "Many times, this means being able to break down a flavor and aroma into its individual components and then build it back up. For this mead, I had to have a pretty good idea what range of characters appear in sherry.

"To try this, simply go buy a bottle of some kind of (usually) fortified dessert wine, read the label, and see which flavor components listed are noticeable, and which ones aren't. Does it remind you of anything else? Not just beverages, but food, spices, other aromas? Write those things down, as well as their level of intensity. Being a BJCP Beer Judge (and Mead Judge and Cider Judge) is useful for this, as it teaches you to pay attention to what you're drinking. Becoming BJCP certified definitely improved my brewing, as I was able to break down styles and then brew them accurately."

Once you have a good library of meads to draw from, Wilcox suggests targeting flavor combinations you favor with the meads you've made: "If you've made a lot of mead and tasted a beverage or food that intrigues you, simply start mixing things you've made together until you've got something that approximates it."



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If you don't have a huge variety of mead to work from, you can still get ideas by mixing purchased beverages and making your own versions. "Start slow and at a low volume—in a single glass, for example—and scale upwards after you have a good result," he says. Wilcox also feels strongly about making an effort to describe flavors and aromas as accurately as possible, drawing on descriptive language from the food world.

"Calling something 'sherry-like' is a fairly wide description, and not particularly useful on its own," says Wilcox. "Sherry can range from light and pale with characters of almond, acetaldehyde, and smoked meat on the dry end, with caramel and more body and deeper color in the middle, to intense caramelized sugars, dark dried fruit, and body almost like syrup on dessert versions. Almost all seem to be fortified, and alcohol can be fairly high, but age will soften booziness, especially with dessert versions with ample residual sugar to balance the sweetness."

"Nuttiness is a common indicator of sherry, but the character varies significantly, generally from almond to hazelnut and eventually walnut as they get richer and darker. In short, there is no one single definitive sherry character and no one way to make this mead; thus anyone with a decent catalog of mead stored can mix together their own version. I'd love to try anyone's take on this project."

As an example of the planning stages necessary for successful blending, Wilcox describes exactly what he was after in creating his best-of-show mead.

"In this case I was after high residual sugar and loads of dark, dried fruit, caramel and toffee without burnt characters, almost like molasses but nothing as harsh or heavy as blackstrap. I wanted nuttiness that included hazelnut and especially walnut, and I wanted noticeable alcohol without booziness, as I didn't want to fortify anything."

As a general rule, blends may not immediately have the stability and longevity of their component parts, so a brief aging period to let things settle out is also a consideration for the would-be mead blender.

"When I mix beverages, I either serve them immediately, or give them at least a week in the fridge. When mixing things of different gravity, alcohol, pH, or fining treatments, you may encounter sediment forming within a day or two, even if each component of the blend originally seemed clear. A bit of time in the fridge before bottling can help settle any sediment that forms."



THE COMPETITION

Together with a slight late oak treatment (French, medium toast), Wilcox entered his winning mead as “Dwojniak with raisin, dates, barrel, and intentional oxidation, aged to mimic a dessert sherry.”

Over the years he’d asked former NHC organizer Janis Gross and current organizer John Moorhead for an increase in the number of characters to describe mead entries, and he appreciates their compliance with this request. He believes using those 90 characters wisely can be very important to adequately describe what you did.

“I didn’t mention specific honey or the figs, as I didn’t want the kinds of judges who treat ingredients as check boxes to ding some mystical missing character,” he confides. “I was thinking of something in the style of a rich Pedro Ximenez sherry, that you’ll often see abbreviated PX, but I didn’t want pedantic judges claiming it was missing some elusive PX character. What matters is it tastes like a dessert sherry and is fricking awesome.”

“If you want to mimic this, find a sherry you enjoy, and spend time breaking down the flavor to its components. Also, make a lot of mead with a lot of honey varieties. This will give you a library of blending components to work from.”

“Final gravity of the blend is in the range of 1.080, and at 14 to 15 percent ABV, it’s

on the low end of the range for sack mead. There is a bit less of Scot’s two meads in the blend than the other three, but if I’d had more, I’d have used more.

“I knew Scot and I would not be in Providence for the awards, so I kept Carvin and Scot’s names off the First-Round results to have a better chance of surprising Carvin. Scot and I watched the results from his pro brewery in Iowa. I bottled in 187 mL bottles because I barely had enough, but one can tell from only one ounce that this mead is spectacular.”

“Scot and I had already won a Meadmaker of the Year award, and while this year included Carvin’s first trip to the stage, it won’t be his last. His mead is phenomenal, and Scot and I were glad to be able to watch it.”

“I’ve already asked both Carvin and Gordon to partner with me on a Homebrew Con seminar for 2020 entitled ‘Building a Medal Winner,’ where we’d present the thought process of breaking down and building up a mead flavor profile, adjustments, blending, and anticipating and reacting to judge feedback. In short, the exact process I used on this blended mead. Obviously if Scot is available, I’d welcome him too. If there’s interest, I’ll look for people to partner with on similar seminars for cider and beer eventually. See you in Nashville!”

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Cidermaker of the Year



Michael Wilcox

Wichita, KS

Kansas City Bier Meisters

Cidermaker of the Year goes to the maker of the Best of Show cider from two cider categories.

"Where do you get your apples?"

This is the second most-common question Wilcox gets from fellow hobbyists. And he understands—cider and perry are more

regional products than beer or mead. Anyone can buy Maris Otter, Munich malt, or orange blossom honey, and ferment. Not everyone has access to cider apples and perry pears.

"I'm not the only one who wishes there were a Bob's Cider Apple Emporium in every city where we could go browse among everything from Ashmead's Kernel to Yarlington Mill, to make an awesome blend," he laments. "But there is no such place, so my answer to the question about apples (or in this case, pears) is, 'I go wherever it's necessary.' I've put tens of thousands of miles on my cars over more than a decade with this hobby. If you don't live where these kinds of fruit grow, make friends with those who do, and visit them in the fall."

This is the attitude many hobbyists must have if they are looking for cider-specific fruit—the stuff cidermakers call perry pears and bittersweet or bittersharp apples high in tannin.

He continues, "Apples and pears don't grow everywhere, and there's a good chance what cider- and perry-specific fruit is grown intentionally is owned by a pro cidermaker. You can grow your own if your climate is correct, but orchard trees don't produce instantly, and pears in particular

may take a long time to get through their juvenile stage to start bearing fruit.

"I've only fermented a handful of gallons of true perry pear juice of a known variety, with limited success. Funny varietal names abound like Huffcap and Butt. Fortunately, many pear trees can live a very long time. You've all probably heard the phrase by now: 'You plant pears for your heirs."

Pears also generally share the same trait most apple varieties do: they don't grow true from seed. Seeds will produce a different pear than the fruit they came from.

"Put all this together with the long history of fruit growing in this country, and with the tendency of wildlife to spread seeds, and you have a lot of wild seedling pears growing out there, some of them already very old," Wilcox states.

"Most will get cut down and removed. Most will never be worth fermenting. Some, I found painfully, grow thorns—perhaps they hybridized with ornamental or Asian pear varieties? But play the odds and eventually you may find a winner. Ask around among locals to greatly increase your odds.

"Your search can be hot or cold or bug infested, or all the pears can be 40 feet up in the air. But they are out there. Sometimes with small fruits the size of golf balls. Sometimes screamingly high in acid. Some seemed promising but never seemed to ripen from rock-like hardness. Some were incredibly bitter. A few just wanted to press into slime. Are we having fun yet?"

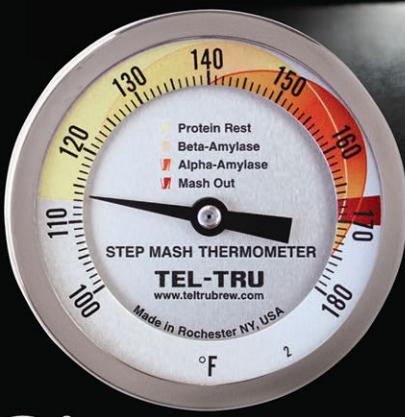
His suggestion for would-be pear hunters in the northern third or so of the USA is to look for them while on October walks and hikes. Or to go even earlier in the summer just to scout things out and then return in early fall to see what they are ripening into.

"In addition to friends who have found forgotten but promising pears at the edges of property they've bought or inherited, we've had success picking through wildlings stumbled upon in state forests and at the edges of old farmsteads or even by the side of country roads. Northern states like Washington, Oregon, Michigan, and New York have given the most success. Other than for a lucky few, this is not a hobby for staying at home."

"I'M DIRTY, TIRED, AND FELL OUT OF A FEW TREES, BUT I FOUND PEARS. NOW WHAT?"

Once you've found your pears, they often need ripening. Wilcox leaves them in a cool, dry area and checks them regularly.

"Pears like to rot from the inside out and all at once, so if you are not paying attention or only feeling the outside surface for ripeness, you can have a rotten bunch of fruit slime almost overnight—suboptimal.



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“
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the fall.”

I've had some success softening occasional stubborn hard pears with freezing. As a consequence of this process, I've sometimes done a bit of unintentional freeze concentration and been happy with the results, so at this point I often like to concentrate my pear (and sometimes apple) juice by perhaps 10 points, for example from 1.060 to 1.070. I don't know if the concentration of flavor and aroma has helped in competition, but I just liked how it turned out.”

He admits there are still gaps in his knowledge. “I know a bit about apple tannins, but pear tannins are a big mystery to me. I do know they can reduce a bit, whereas apple tannins are fairly stable. For this reason, I've saved a few pears that originally seemed unlikely to ever be edible, including in the winning batch. What was incredibly tannic and quite bitter softened to something delicious and refreshing. Thus, when dealing with tannic pears, I generally extend maceration overnight (leave the milled pears in a refrigerated area before pressing the next morning).

“But often wild pears are still a bit unapproachable. Sometimes the solution

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is dilution, and this is the approach I used here. Use what you have available. I use whatever is ripe, while especially looking for a big heady aroma—floral, fruity, or even a bit spicy. If you've got a judge who can't stop putting their nose in their glass of your cider or perry, you're already half-way to winning.

"For this batch I diluted the wildings 50 percent with a combination of Seckel and Forelle, delicious small dessert pears that are fairly widely available even in grocery stores. They can also make a very nice New World perry on their own."

"WTH HAPPENED TO MY PERRY?!?"

Even for the perry masters, with such a variation in fruit heritage and quality, perry making is a difficult art, so don't feel bad if you suffer the occasional failure. It happens to the best of them.

"Yeah, welcome to the club," Wilcox admits. "My success rate on perry has ranged from abysmal to mediocre. The successes have been spectacular, so I generally try to ferment perry in 1-gallon batches, to get a better chance of some success. I'll blend later when it is called for."

Tendency towards vinegar can be a problem. Unlike apples, pears tend to have significant levels of citric acid, which is targeted by lactic acid bacteria, and these bacteria produce acetic acid. Basically, acetic acid is a positive flavor trait until it exceeds

the detection threshold, after which it quickly becomes negative.

"I slightly sulfite every batch and my tendency towards using highly acidic juices means my sulfite levels can be fairly low. If your juice is low in acid, there may be no level of sulfite that will protect you from spoilage. The takeaway here is that I'm just doing my best and often fail. It happens; learn from it."

Wilcox generally prefers to ferment apple juice to dryness and then adjust later if required. In contrast, perry will retain a little sweetness when fermented, and he often likes to emphasize that quality.

"I will often sweeten cider or perry one to three gravity points with juice or ice cider to give judges something more of what they are expecting, but otherwise I'll just use simple syrup. FG of 1.010 is a favorite of mine for perry, while my cider wheelhouse is more like 1.004."

"This batch was quite acidic and moderately tannic, with mostly soft astringency, fairly low bitterness, and 1.010 with a moderately low level of carbonation. I'm not certain the OG of each blend component, but assume in the range of 1.065 and we'll be very close."

"With my preference for moderately high-acid beverages, I find a pétillant level of carbonation is usually better than sparkling. There is a very slight funkiness, not really like wild yeast, but more akin to the

savory kinds of characters one might get fermenting Kingston Black apples. I guess you have to taste it to know what I mean."

"Generally, I ferment standard cider with DV10 yeast in the 50s to low 60s Fahrenheit (12–17°C), and have made probably half my perry with this yeast, too. Sometimes, however, I use Cote des Blancs, as with this yeast it is fairly simple to arrest fermentation early by simply lowering the temperature below 50°F (10°C). The only problem with this yeast is that it's more prone than DV10 to becoming unhappy and producing hydrogen sulfide."

"I FOUND NO TANNIC PEARS AND I FEEL BAD. WHAT ELSE CAN I DO?"

Wilcox concludes with a few final thoughts on pear varieties, more tinkering with blending options, and some sage advice on not taking things too seriously.

"First of all, New World perry is delicious on its own," he assures. "You don't need tannin to make a great perry. But you can also approximate the taste of tannic pears by adding tannin. I wouldn't enter a doctored perry like this into competition, but if you're just trying to make something balanced that tastes great, you can use wood, tea, spices—there are even some finishing tannins available now to explore."

"Finally, how about we forget about 'traditional' perry and make a 'pider,' a mix of apple and pear juices? Personally, I have regular access to some beautiful Manchurian crabapples with intense, soft tannins and not much bitterness. They also help raise sugar and acidity to my preferred levels. Ten percent of these crabapples added to a dessert pear juice makes a nice pider."

"I've also done 70 percent dessert pear, 10 percent Ashmead's Kernel apples, and about 20 percent Yarlington Mill apples for something with a more even apple/pear combination of flavors. And you know those awful stinking Bradford pears I wish would just die? I've sawed off (yeah they can be *that* woody) the skins of several handfuls of them and included them in the press to get some of their astringency added to my final batch."

"Tannin is out there and a beautiful part of the structure of many beverages (think red wine), so go find it. This batch is my best and almost completely gone. I've saved a very few bottles to eventually share with cider luminaries like Dick Dunn, Gary Awdey, and Jeff Carlson, to get their thoughts. The rest of you, go make your own."

And, in case you're wondering, the number one question Wilcox gets is "Did you bring any samples to share?"



Gambrinus Club Award



Battleground Brewers Guild Greensboro, NC

The Gambrinus Club Award, now in its 11th year, recognizes clubs that achieve the most success in the National Homebrew Competition. Clubs are awarded six points for Final-Round gold medals, four points for silver medals, and two points for bronze medals. The award goes to the club with the highest total number of points per number of Final-Round entries.

To be eligible, at least five club members must enter the First Round. At least two of those members must advance to the Final Round, where at least one must place in the top three.

The Battleground Brewers Guild (BBG) was founded in 2000 and is located in Greensboro, N.C. It is a small but passionate club dedicated to brewing great beer and building long-lasting friendships. The club hosts various events for its members throughout the year, including group brews, tasting seminars, educational sessions, a Spring Festival, the Skirmish in the Triad homebrew competition, and—their biggest event—an annual Oktoberfest.

The club's active brewing scene sees members getting together for group brews and collaborating with local breweries for special projects. Several former members have gone on to open breweries, and the club actively partners with other homebrew clubs in the area to create a vibrant and thriving homebrew and craft beer culture.

The Battleground Brewers Guild is part of the Southeastern Homebrewers Association (SHA), which is comprised of 26 clubs from Tennessee, Virginia, Georgia, South Carolina, and North Carolina. The annual Skirmish in the Triad is one of the yearly qualifying events for clubs and brewers to compete for Club of the Year and Brewer of the Year. Last year, Battleground Brewers Guild's Metts Potter was the SHA

Brewer of the Year, and BBG has produced other brewers of the year.

The Battleground Brewers Guild's annual Oktoberfest attracts more than 100 members and guests for a night to share homebrew, listen to live German music, catch up with old friends, and enjoy a wealth of authentic German food. During Oktoberfest, the club hosts a people's choice competition for the best German-style beer. It's a fierce battle among the club's brewers. The winner is announced that night and presented with the coveted Pretzel Stein award to hold for the coming year and defend at the next Oktoberfest.

BBG is a small club, but members maintain a focus on education and helping one another improve as brewers. In doing so, BBG members build lasting friendships with each other, engage with their local community, and have a great time doing it.

it as a true art form through information, education, and dedicated practice."

To support this mission, ASH holds monthly meetings at various locations around the Phoenix Valley. With around 200 members, homebrewers may join for varying reasons, so the club's board aims for a balance of events and content to support three main focuses.

HOSTING AND PROMOTING COMPETITIONS

ASH hosts two competitions each year that are open to all homebrewers, regardless of club affiliation or location: the Arizona Spring Classic and the Arizona Fall Classic. Both competitions accept all BJCP beer, mead, and cider styles based on the 2015 BJCP Style Guidelines.

Additionally, ASH hosts several small members-only mini competitions. Entries to these are limited to specific BJCP styles. The member with the most competition points at the time of the club's holiday party wins ASH Homebrewer of the Year, along with some great prizes.

SHARING AND DEVELOPING HOMEBREW KNOWLEDGE

Each year, ASH works to keep the content of its general meetings fresh and educational. This year's content has included expert seminars on yeast by Imperial Yeast, hops by 24 Hour Hops, and yeast management by Pedal Haus Brewery. Other topics include homebrewing for competition, kegging, and becoming a BJCP judge. ASH also typically hosts a dedicated series for BJCP judge training.

FOSTERING SOCIAL ASPECTS OF HOMEBREWING

ASH hosts three festival-style events for members each year: Springfest, Fallfest, and a winter holiday party. Brewing with other homebrewers is also core to the club's mission, so ASH organizes quarterly brewing events around the Valley for novice and expert brewers to talk homebrew, share knowledge, and simply enjoy some homebrew. Twice a year, ASH charters a bus for club members to escape the Phoenix Valley and head to Tucson and Flagstaff for brewery excursions.

ASH members had a particularly great year in the 2019 NHC competition, with member Mark Peterson winning both the prestigious Samuel Adams Ninkasi Award and Homebrewer of the Year. His medals, in combination with other medal-winning ASH members, helped propel the Arizona Society of Homebrewers to victory and the NHC Homebrew Club Award.

NHC Homebrew Club Award



Arizona Society of Homebrewers Phoenix, AZ

The NHC Homebrew Club Award is awarded to the club whose members collectively win the most points in the Final Round of the National Homebrew Competition (NHC).

In 2019, the Arizona Society of Homebrewers (ASH) won the prestigious NHC Homebrew Club Award, with five members bringing home medals in the Final Round: one gold, three silver, and two bronze.

The Arizona Society of Homebrewers was founded in 1995 and continues to thrive today, with many founding members still active in the club. ASH's mission is "to preserve and promote the time-honored tradition of homebrewing, and to recognize



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2019 American Homebrewers Association National Homebrew Competition Gold Medal Recipes



Homebrew Con 2019 was held June 27 to 29 at the Rhode Island Convention Center in Providence. The three-day conference and expo—the largest of its kind for amateur crafters of mead, beer, and cider—continues to draw large numbers of homebrewers and craft beer enthusiasts. This year's event saw 2,400 attendees descend on Providence. While the National Homebrew Competition is a central feature of Homebrew Con, the conference also offers attendees educational opportunities, with more than 60 seminars on beer styles, brewing processes,

ingredients, recipe formulation, sensory analysis, fermentation, and more.

During this year's National Homebrew Competition awards ceremony, 102 medals were awarded in 34 categories. The most entered category of these was, unsurprisingly, Category 17: Specialty IPA—with 475, this category had more entries than most homebrew competitions. Rounding out the top five most entered categories were Category 25: Spiced Beer (430 entries), Category 2: Pale European Beer (394 entries), Category 22: Strong Belgian Ale (389

entries), and Category 13: British and Irish Stout (369 entries).

In addition to category style awards, six major awards recognizing overall excellence were presented. The Samuel Adams Ninkasi Award goes to the entrant accumulating the most points in the Final Round of competition, while the overall best-of-show winner for beer is crowned Homebrewer of the Year. This year, both of these awards went to Mark Peterson of Queen Creek, Ariz.

There are also awards for the best-of-show winners in mead and cider. Michael Wilcox of Wichita, Kans., wowed the field



NHC competition coordinator John Moorhead.

by winning Cidermaker of the Year and Meadmaker of the Year (accompanied by Scot Schaar and Carvin Wilson). Wilcox had previously won Meadmaker of the Year in 2018 and shared Cidermaker of the Year with Amy Satterlund in 2017.

The NHC Homebrew Club Award goes to the club accumulating the most total points in all categories of beer, mead, and cider in the Final Round of competition. This year that club was the Arizona Society of Homebrewers (ASH). Finally, the Battleground Brewers Guild of Greensboro, N.C., took home the Gambrinus Club Award, which is presented to the club that garners the most

Final-Round points per total number of club entries.

The vast diversity of entries this year demonstrated that the creativity and skill of amateur brewers in North America and beyond know no bounds. American Homebrewers Association director Gary Glass commented, "Over the years, we've seen homebrewers push the envelope for what beer can be. Homebrewer ingenuity is on full display in the National Homebrew Competition with Specialty IPA and Spice Beer topping out all other categories. Congratulations to this year's winners of the National Homebrew Competition for their achievement and

their commitment to the greatest hobby there is—homebrewing."

Once again, we discussed the finer points of the massive undertaking that is the National Homebrew Competition with competition coordinator John Moorhead.

Zymurgy: What justified the move from 33 categories in 2018 to 34 categories this year, and what effect did it have on the competition?

John Moorhead: Each year, I sit down with the American Homebrewers Association Competition Subcommittee to discuss entry counts and see if adjustments need to be made. In 2018, smoke-flavored and wood-aged beers shared a category, but they are vastly different kinds of beer. We decided they should be broken out separately to do justice to the brewers and better exemplify what makes world-class examples of each. Separating smoked-flavored beers from wood-aged beers also removed any subjective bias that might stem from judges' individual preferences for one style over the other.

It didn't add many total entries to the First Round, but it did add 39 entries and 12 more judges to the Final Round. We do not add categories without seriously considering the judge requirement and additional cost it has on the Final Round.

Z: What were some of the highlights for you at Homebrew Con in Providence this year?

JM: Judging over 1,200 entries in a day. I'm not sure there's any other homebrew competition that does this. It's insanity and orchestrated chaos, and I'm so proud and impressed every year. Outside the competition, seeing people I haven't seen since the previous year's Homebrew Con is always fun and a reminder why we, the AHA, put so much hard work and effort in to this conference for our membership, our friends. One last highlight is the awards ceremony. The energy and intensity is unlike any other gathering at the conference.

Z: What obstacles do you encounter with alcohol shipping policies imposed by various carriers? How do entrants circumvent these restrictions to get their entries into First-Round judge centers?

JM: Don't ask questions you don't want answers to. There is confusion between legality and policy with shipping. It is against the law to ship alcohol with the United States Postal Service (USPS). It is against company policy for many private carriers to ship alcohol, but not outright illegal.





There's inherent risk in shipping alcohol, but there are ways to mitigate some of that risk, and most entrants do not experience issues. A good method is to not use ground shipping (although it is cheaper), package your entries well, pay for and print the shipping label at home, and drop off the package at a collection point.

The Final Round had some complications, but those were eventually resolved. FedEx Ground franchises out its business regionally, and the FedEx Ground distribution hub that services Rhode Island had a brief, two-day internal policy to not deliver any package to the receiving location after finding a leaky package. This affected a small contingency of entrants.

The issue began on the first Friday of the shipping window. I spoke with the FedEx Corporate Escalation Department, Legal Department, Customer Service, and the management of the distribution hub over the weekend, and the distribution hub was told to stop seizing packages the following Monday. To accommodate the disruption, we extended the shipping window to allow entrants to resend their entries and accepted drop-offs up to Tuesday, June 25, two days before judging.

Z: Were you surprised to see a jump in the number of entries received from countries outside the USA? Is the NHC becoming an international competition? Don't longer shipping times put international entrants at a disadvantage?

JM: The international entry count has been steadily growing, albeit slowly. As international AHA membership grows, international entries to NHC also increase. I'd hesitate to call it an international competition outright, but if the trend continues, I suspect we'll see international entries become a larger percentage of overall entry count. I don't see an inherent disadvantage to international shipping, just different sets of challenges and obstacles. Shipping internationally is tricky because you're dealing with shipping carriers' policies and US Customs. However, international entrants still manage to get their entries through without issue and within the shipping deadline. We had a few international entries win in the Final Round!

Z: What were some of the most memorable aspects of this year's competition?

JM: We added a 13th First-Round site and an additional category this year, making this the largest beer competition in the world. The most memorable, or terrifying, event



was an April Fool's joke one of the First-Round organizing teams played on me.

Z: As the average quality of entries increases, does it become more difficult for judges to come to a consensus on category gold medals? Or does their ever-increasing skill compensate?

JM: Great question. The overall quality has certainly increased, which is a testament to the skill and passion of homebrewers. The Final Round is a competition of First-Round award winners, so higher-than-average quality is expected. There are certainly heated debates over which entries should take gold, but we've also reduced bias and

entry-championing by separating scored judging from the mini best-of-show judging panels. Judging is a subjective activity that operates within the confines of relatively objective guidelines, and I think it's important and valuable to have respectful debates on which entry should take a gold medal. It's a huge deal.

Thanks, John, for all your hard work managing this amazing event! And now let's check out the gold medal recipes from all 34 of this year's categories.

Amahl Turczyn is associate editor of Zymurgy.





2019 NATIONAL HOMEBREW COMPETITION

Category 1

PALE AMERICAN BEER

330 entries

Sponsored by:

Five Star Chemical & Supply, Inc.



Brooks Conley

**with Greg Gustin & Jackie Flynn
Stevenson Ranch, CA**

"Joker's #1"

1A American Light Lager

Batch volume: 12 US gal. (45.4 L)

Original gravity: 1.035 (8.8°P)

Final gravity: 1.003 (0.8°P)

Bitterness: 12 IBU (Rager)

Color: 2 SRM

Alcohol: 4.2% by volume

Efficiency: 84%

MALTS

10.5 lb. (4.76 kg) Great Western California Select 2-row malt
2.8 lb. (1.27 kg) flaked rice

HOPS

1.3 oz. (37 g) Hallertau Hersbrucker, 4% a.a. @ 60 min
1 oz. (28 g) Saaz, 3.5% a.a. @ 30 min

WATER

Ca 44 ppm, Mg 5 ppm, Na 10 ppm,
SO₄ 80 ppm, Cl 50 ppm

ADDITIONAL ITEMS

10 mL ULTRA-FERM amyloglucosidase added to mash

YEAST

White Labs WLP840 American Lager Yeast

BREWING NOTES

Mash 2 qt./lb. at 149°F (65°C) for 90 minutes. Add ULTRA-FERM at start of mash. The low mash temperature, enzyme, and rice really help dry out the beer. Target 5.2 mash pH. Increase to 168°F (76°C) for mash out and sparge. Boil 90 minutes, adding hops at 60 and 30 minutes. Chill to 50°F (10°C), oxygenate well, and pitch yeast starter. Ferment at 51°F (11°C) for 7–10 days. Let free rise to 62°F (17°C) for 5 days, then slowly cool to 32°F (0°C) over the next week. We are fanatical about limiting cold-side

oxidation and use CO₂-filled mylar balloons to prevent airlock suck-back while chilling. (Thank you to Marshall at Brülosophy for the balloon idea.) Closed-pressure transfer to CO₂-purged kegs and force carbonate to 2.8 vol. (5.6 g/L) CO₂. Lager for at least 3 weeks. Clean, sanitize, repeat. Cheers!

EXTRACT VERSION

Substitute 7.5 lb. (3.4 kg) extra-light dry malt extract for pale two-row malt. Substitute 2 lb. (907 g) rice extract syrup for flaked rice. Dissolve sugar and extracts completely in RO water, then top off to desired boil volume. Proceed as above. Color will be slightly darker than all-grain recipe (3 SRM).

RUNNERS UP

Silver Medal: Richard Romanko of East Pittsburgh, PA, Three Rivers Underground Brewers (TRUB), Cream Ale

Bronze Medal: Todd Slater of Thousand Oaks, CA, with Matt Castellino, Thousand Oaked Homebrewers, Blonde Ale

BREWING NOTES

Single infusion mash at 152°F (66.7°C) for 60 minutes. Mash out at 168°F (75.6°C). Lauter, add first wort hops, and bring to a boil. Boil 90 minutes, adding hops as indicated. Chill to 50°F (10°C), pitch yeast, and oxygenate 1 minute. Hold temperature at 50°F (10°C) for 5 days and slowly ramp to 65°F (18.3°C) over 4–6 days. Hold at 65°F (18.3°C) until fermentation is complete, then begin to slowly chill beer to the mid 40s °F (6–8°C) or colder. Rack to a keg and carbonate to 2.5 vol. (5 g/L) CO₂. **Pro tip:** Serve young as a hazy Kellerbier, and after a month of lagering in the keg, the beer will mature into a clear Dortmunder. Serve in a 2 L boot, preferably.

EXTRACT VERSION

Substitute 13.25 lb. (6 kg) Pilsner malt extract syrup for Pilsner malt. Steep remaining grains in 160°F (71°C) RO water for 30 minutes. Remove grains, rinse, and dissolve extract completely in resulting wort, then top off with RO water to desired boil volume. Proceed as above.

RUNNERS-UP

Silver Medal: Metts Potter of Browns Summit, NC, Battleground Brewers Guild (2019 Gambrinus Club Award Winners), Munich Helles

Bronze Medal: Russell Berger of Portland, OR, Portland Brewers Collective, Helles Exportbier

Category 2

PALE EUROPEAN BEER

394 entries

Sponsored by:

Cargill Craft Malt



Gregory Irving

**with Mike Yingling
North Royalton, OH**

"Old Helen"

5C Helles Exportbier

Batch volume: 10 US gal. (37.9 L)

Original gravity: 1.052 (12.9°P)

Final gravity: 1.012 (3.1°P)

Bitterness: 28 IBU (Tinseth)

Color: 5 SRM

Alcohol: 5.3% by volume

Efficiency: 67%

MALTS

19 lb. (8.62 kg) German Pilsner malt
1 lb. (454 g) dextrin malt
1 lb. (454 g) melanoidin malt

HOPS

1 oz. (28 g) Hersbrucker leaf, FWH
1.2 oz. (34 g) Magnum leaf @ 60 min
2 oz. (57 g) Hallertauer Mittelfrüh pellets @ 12 min
1.5 oz. (43 g) Hersbrucker leaf @ 3 min

YEAST

White Labs WLP833 German Bock Lager Yeast



Category 3

PILSNER

286 entries

Sponsored by:
Liquid Integrity

**Philip Verdieck
with Janine Weber
Houston, TX**

Foam Rangers Homebrew Club

"SunRaker"
5D German Pils

Batch volume: 5 US gal. (18.9 L)
Original gravity: 1.050 (12.5°P)
Final gravity: 1.010 (2.5°P)
Bitterness: 48 IBU
Color: 4.1 SRM
Alcohol: 5.1% by volume
Efficiency: 65%

MALTS

10 lb. (4.54 kg) Avangard Pils malt
 4 oz. (113 g) Victory malt
 2 oz. (57 g) acidulated malt

HOPS

1 oz. (28 g) Magnum, 13.2% a.a.
 @ 60 min
 1 oz. (28 g) Hallertau, 3.6% a.a.
 @ 10 min
 0.75 oz. (21 g) Czech Saaz, 2.8% a.a.
 @ 0 min
 1 oz. (28 g) Hersbrucker, 2.3% a.a.
 dry hop in primary on day 6

WATER

Double RV-filtered tap water

YEAST

4 qt. starter Wyeast 2124 Bohemian Lager

ADDITIONAL ITEMSClarity Ferm and yeast nutrient @ 20 min
Phosphoric acid to adjust pH to 5.4**BREWING NOTES**

Target a mash pH of 5.4. Mash at 149°F (65°C) for 1 hour. Mash out at 169°F (76°C) for 10 minutes. Sparge with 175°F (79°C) water. Ferment at 50°F (10°C) for two weeks, then raise temperature to 58°F (14°C) and hold until primary fermentation is complete. Then raise to room temperature for a 2-day diacetyl rest.

EXTRACT VERSION

Substitute 10.25 lb. (4.65 kg) Pilsner malt extract syrup for Pilsner, Victory, and acidulated malts. Dissolve extracts completely in RO water. Proceed as above.

RUNNERS-UP

Silver Medal: Jerry Mitchell of Saint Peters, MO, Garage Brewers Society, German Pils

Bronze Medal: Ryan Shearburn of San Jose, CA, Czech Pale Ale

Category 4

AMBER EUROPEAN BEER

365 entries

Sponsored by:
Gambrinus Malting

**Sean McCambridge
Lake Winnebago, MO**

"Winnebago International Amber Lager"
2B International Amber Lager

Batch volume: 6.5 US gal. (24.6 L)
Original gravity: 1.056 (13.8°P)
Final gravity: 1.010 (2.6°P)
Bitterness: 31 IBU (Tinseth)
Color: 9.7 SRM

Alcohol: 5.6% by volume
Efficiency: 75%

MALTS

10 lb. (4.54 kg) 10°L Munich malt
 2 lb. (907 g) Vienna malt
 8 oz. (227 g) white wheat malt
 1.5 lb. (680 g) German Pilsner malt

HOPS

1.2 oz. (34 g) Hallertauer pellets, 4.8% a.a.
 @ 60 min
 1.2 oz. (34 g) Hallertauer pellets, 4.8% a.a.
 @ 30 min
 0.7 oz. (20 g) Hallertauer pellets, 4.8% a.a.
 @ 15 min

WATER

filtered tap water

YEAST

2 L starter White Labs WLP800 Pilsner Lager Yeast

BREWING NOTES

Mash in 5 gal. (18.9 L) at 152°F (67°C) for 60 minutes. Batch sparge 4 gal. (15.1 L) at 200°F (93°C). Ferment at 50°F (10°C) for 7 days. Raise to 68°F (20°C) over roughly 3 days and hold at that temperature until fermentation completes. Keg at 40°F (4°C) and carbonate with 15 psi (1 bar) CO₂ for 2 weeks or until desired carbonation is reached. Fine with gelatin. Lager for at least 2 weeks before drinking.

EXTRACT VERSION

Omit Pilsner malt. Substitute 2 lb. (907 g) Vienna malt extract syrup for the Vienna malt, 8 lb. (3.63 kg) Munich malt extract syrup for the Munich malt, and 1 lb. (454 g) wheat malt extract syrup for the wheat malt. Dissolve extracts completely in RO water, then top off to desired boil volume with RO water. Proceed as above.

RUNNERS-UP

Silver Medal: Tim Gerbracht of Vienna, VA, GRIST, Vienna Lager

Bronze Medal: Kevin Lemme of Carmel, IN, Vienna Lager



2019 NATIONAL HOMEBREW COMPETITION

Category 5

DARK EUROPEAN LAGER

241 entries

Sponsored by:

Briess Malt & Ingredients Co.



Frank Taddeo
Royersford, PA

Bruclear Homebrew Club

"May the Schwartz Be With You"
8B Schwarzbier

Batch volume:	5.5 US gal. (20.8 L)
Original gravity:	1.056 (13.8°P)
Final gravity:	1.015 (3.8°P)
Bitterness:	30 IBU
Color:	28 SRM
Alcohol:	5.3% by volume

Efficiency: 75%

MALTS

6 lb.	(2.72 kg) German dark Munich malt
4 lb.	(1.81 kg) German Pilsner malt
6 oz.	(170 g) UK chocolate malt
6 oz.	(170 g) 40L American caramel/crystal malt
3.5 oz.	(99 g) American roast barley
3.5 oz.	(99 g) Weyermann Carafla Special II malt
2 oz.	(57 g) German acidulated malt

HOPS

1.4 oz.	(40 g) Hallertau Mittelfrüh pellets, 4% a.a. @ 60 min
0.5 oz.	(14 g) Hallertau Mittelfrüh pellets, 4% a.a. @ 20 min
0.5 oz.	(14 g) Hallertau Mittelfrüh pellets, 4% a.a., whirlpool 10 min

YEAST

2.5 L starter Wyeast 2206 Bavarian Lager

BREWING NOTES

Single infusion mash at 154°F (68°C) for 45 minutes. Target 5.3 pH. Mash out at 170°F (77°C), lauter, then boil for 90 minutes. After flameout, chill to 170°F (77°C), add whirlpool hops, and allow 10 minutes of contact time. Chill to 50°F (10°C) and pitch yeast starter.

Ferment at 50°F (10°C). On day 6, raise temperature to 65°F (18°C) over 2 days. Hold at 65°F (18°C) for 2 more days and then cold crash to 50°F (10°C) over 2 days. Force carbonate to 2 vol. (4 g/L) CO₂.

EXTRACT VERSION

Omit acidulated malt. Substitute 4.5 lb. (2.04 kg) Munich malt extract syrup for Munich malt and 3.5 lb. (1.59 kg) Pilsner malt extract syrup for the Pilsner malt. Steep remaining grains at 160°F (71°C) in RO water for 30 minutes. Drain, remove grains, dissolve extract completely in RO water, then top off to desired boil volume. Proceed as above.

RUNNERS-UP

Silver Medal: Joshua Strupp of Franklin, WI, with Dan Kramer, Beer Barons of Milwaukee, Czech Dark Lager

Bronze Medal: Mark McQuade of Endicott, NY, with Tamara McQuade, Schwarzbier



ON THE WEB

Find past winners' homebrew recipes on our website @ HomebrewersAssociation.org/homebrew-recipes

Category 6

STRONG EUROPEAN LAGER

269 entries

Sponsored by:

Rahr Malting



Justin McClenahan
Silver Spring, MD
The Brewing Network
"Odin's Beard"
9C Baltic Porter

Batch volume:	12 US gal. (45.4 L)
Original gravity:	1.086 (20.7°P)
Final gravity:	1.016 (4.1°P)
Efficiency:	72%

Color: 30 SRM

Bitterness: 43 IBU

Alcohol: 8.7% by volume

MALTS

25 lb.	(11.34 kg) Swaen Pilsner malt
6 lb.	(2.72 kg) BestMälz Munich dark malt
2.5 lb.	(1.13 kg) Simpsons Golden Naked Oats
1.5 lb.	(680 g) pale chocolate malt
1 lb.	(454 g) Weyermann Caramunich malt
12 oz.	(340 g) Thomas Fawcett roasted barley
2 lb.	(907 g) light brown sugar @ 15 min

HOPS

1.5 oz.	(43 g) Magnum, 14% a.a., FWH
0.5 oz.	(14 g) Magnum, 12% a.a. @ 40 min
2 oz.	(57 g) Sterling, 7.5% a.a., whirlpool/steep 20 min

WATER

Ca 50, Mg 10, Na 33, SO₄ 57, Cl 44, HCO₃ 142

YEAST

White Labs WLP833 German Bock Lager

White Labs WLP838 Southern German Lager

BREWING NOTES

Target a mash pH of 5.4. Mash at 156°F (69°C) for 60 minutes or until conversion is complete. Mash out at 168°F (75°C). Sparge, collect runnings, and add the first-wort Magnum hop addition to the kettle. Boil for 90 minutes, adding Magnum hops with 40 minutes remaining and the brown sugar with 15 minutes remaining. Conduct a 20-minute whirlpool after knockout with the Sterling hops. Chill to 50°F (10°C) and pitch yeast. (Note the recipe calls for two different lager strains, but feel free to experiment!) Allow to free rise to 54°F (12°C). Raise temperature for a diacetyl rest at 65°F (18°C) and hold 3 days. After the diacetyl rest is complete, transfer to secondary or dump yeast and slowly reduce temperature to 38°F (3°C). Lager for 30 days. Keg or bottle with 2.6 vol. (5.2 g/L) CO₂.

PARTIAL MASH VERSION

Substitute 17 lb. (7.71 kg) Pilsner malt extract syrup for all but 2 lb. (907 g) of the Pilsner malt, and 4 lb. (1.81 kg) Munich →



Category 7

GERMAN WHEAT BEER

200 entries

Sponsored by:
StickerYou

**Sean Manrique
with Indy Montoya
San Lorenzo, CA**

"Bigfoot's (D)elight"
10A Weissbier

Batch volume:	11 US gal. (41.6 L)
Original gravity:	1.046 (11.4°P)
Final gravity:	1.010 (2.6°P)
Efficiency:	72%
Color:	4 SRM
Bitterness:	15 IBU
Alcohol:	4.7% by volume

MALTS

13 lb.	(5.90 kg) German white wheat malt
10 lb.	(4.54 kg) German Pilsner malt

HOPS

2 oz.	(57 g) Hallertauer, 4.8% a.a. @ 60 min
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WATER

We run water from the garden hose and

→ malt extract syrup for all of the Munich malt. Mash 2 lb. (907 g) Pilsner malt with the remaining grains at 155°F (68°C) for 45 minutes. Remove grains, rinse, and dissolve extracts completely in the resulting wort. Top off to desired boil volume with RO water, and proceed as above.

RUNNERS-UP

Silver Medal: Hank Keller of Cypress, TX, Foam Rangers Homebrew Club, Dark Doppelbock

Bronze Medal: Derek Springer of San Marcos, CA, Society of Barley Engineers, Helles Bock

through a water filter for both mash and sparge water. Then we add Five Star 5.2 pH stabilizer to the mash water.

YEAST

1 L starter White Labs WLP300
Hefeweizen Ale

ADDITIONAL ITEMS

8 oz. (227 g) rice hulls

BREWING NOTES

Single infusion mash at 154°F (67.8°C) for 60 minutes. Recirculate and raise temperature to 168°F (75.6°C). Fly sparge and boil for 60 minutes. After flameout, run wort through plate chiller and directly into carboy. Aerate

with oxygen stone and pitch yeast. Ferment at 60°F (15.6°C) for 2 weeks. Cold crash at 35°F (1.7°C) for 1 week. Rack into keg with pure CO₂ through racking cane. Force carbonate. Counterpressure bottle using beer gun with pure CO₂. Beast Bay Brewers high five, chest bump, and kiss each bottle before sending them out to competition.

RUNNERS-UP

Silver Medal: James Rupert of Germantown, OH, Middletown Area Society of Homebrewers (MASH), Dark Weizenbock

Bronze Medal: Paul Brown of Pinole, CA, Diablo Order of Zymiracle Enthusiasts (DOZE), Weissbier

Category 8

PALE BRITISH ALE

243 entries

Sponsored by:
Alternative Beverage

**Patrick Leon with Nick Corona
San Diego, CA**

QUAFF (Quality Ale and Fermentation Fraternity)

"Craictastic"
11A Ordinary Bitter

Batch volume:	6 US gal. (22.7 L)
Original gravity:	1.039 (9.8°P)
Final gravity:	1.010 (2.6°P)
Bitterness:	33 IBU
Color:	8.3 SRM
Alcohol:	3.8% by volume
Efficiency:	60%

MALTS

10.5 lb.	(4.76 kg) Golden Promise pale malt
8 oz.	(227 g) dextrin malt
4 oz.	(113 g) 120°L crystal malt (in sparge)
0.38 oz.	(11 g) 60°L crystal malt (in mash)

HOPS

1.33 oz.	(38 g) East Kent Goldings, 6% a.a. @ 60 minutes
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0.33 oz.

(9 g) East Kent Goldings,
6% a.a. @ 30 minutes

0.75 oz.

(21 g) East Kent Goldings,
6% a.a. @ flameout**WATER**

Ca 86 ppm, Mg 6 ppm, Na 12 ppm,
SO₄ 155 ppm, Cl 20 ppm, HCO₃ 80 ppm

ADDITIONAL ITEMS

1 tablet	Whirlfloc @ 15 min
4.3 g	yeast nutrient

YEAST

2.5 L starter White Labs WLP013
London Ale Yeast

BREWING NOTES

Single infusion mash at 155°F (68°C) for 60 minutes. Sparge over 4 oz. (113 g) 120°L crystal malt, then boil for 60 minutes. Begin whirlpool just before flameout. Chill to 68°F (20°C) and pitch yeast starter. Ferment at 60°F (16°C) for day 1, 62°F (17°C) days 2–3, 64°F (18°C) days 4–5, and 67°F (19°C) days 6–10. Cold crash when fully attenuated. Force carbonate to 2 vol. (4 g/L) CO₂.

EXTRACT VERSION

Omit dextrin malt. Substitute 7.5 lb. (3.4 kg) pale malt extract syrup for pale malt. Steep crystal malt in a grain bag at 160°F (71°C) in RO water for 30 minutes. Remove grains, dissolve extract completely in steeping water, then top off to desired boil volume with RO water. Proceed as above.

RUNNERS-UP

Silver Medal: Brandon Holladay of Sandy, UT, with David Marsh, Brewing Asshats of Utah (BRAU), British Golden Ale

Bronze Medal: Brian Phad of Lockport, IL, Plainfield Ale and Lager Enthusiasts (PALE), Strong Bitter



2019 NATIONAL HOMEBREW COMPETITION

Category 9

SCOTTISH & IRISH ALE

222 entries



**Zack Rice
with Aaron Reif
West Des Moines, IA**

Iowa Brewers Union

"Iowa Brewers Bevvy"
14A Scottish Light

Batch volume: 5.2 US gal. (19.9 L)
Original gravity: 1.040 (10°P)
Final gravity: 1.011 (2.8°P)
Efficiency: 72%
Color: 18 SRM

Bitterness: 23 IBU
Alcohol: 3.8% by volume

MALTS

4.5 lb. (2.04 kg) Muntons Maris Otter malt
 2 lb. (907 g) Simpsons Golden Promise pale malt
 1 lb. (454 g) 40°L caramel malt
 8 oz. (227 g) Munich malt
 8 oz. (227 g) Vienna malt
 5 oz. (143 g) 120°L caramel malt
 5 oz. (143 g) chocolate malt 350 SRM
 2 oz. (57 g) acidulated malt

HOPS

1 oz. (28 g) East Kent Goldings, 6% a.a.
 @ 60 min

WATER

Ca 48 ppm, Mg 16 ppm, Na 22 ppm,
 SO_4 75 ppm, Cl 46 ppm, HCO_3 36 ppm

YEAST

1.5 L starter Wyeast 1098 British Ale

BREWING NOTES

Start with Aaron Reif's 2017 gold-medal-winning Scottish Light recipe. Throw away the recipe and start from scratch. Go to the

homebrew store for Wyeast 1728. If it's not in stock, do what we did and go with 1098 instead. Robobrew mash at 1.82 qt./lb. (3.8 L/kg), recirculating for 60 minutes at 158°F (70°C). Ramp up to 168°F (76°C) over 10 minutes and then sparge with 168°F (76°C) water. Boil 60 minutes. Cool to 67°F (19°C), pitch yeast, and ferment at 67°F (19°C) for 10 days, or until fully attenuated.

PARTIAL MASH VERSION

Substitute 4.13 lb. (1.87 kg) Maris Otter pale malt extract syrup for Maris Otter and Golden Promise pale malts. Mash remaining grains at 155°F (68°C) in RO water for 30 minutes. Drain, remove grains, dissolve extract completely in RO water, then top off to desired boil volume. Proceed as above.

RUNNERS-UP

Silver Medal: Mark Peterson of Queen Creek, AZ (2019 Samuel Adams Ninkasi Award Winner), Arizona Society of Homebrewers (2019 NHC Homebrew Club Award Winners), Scottish Heavy

Bronze Medal: Dennis Mitchell of Chandler, AZ, Arizona Society of Homebrewers (2019 NHC Homebrew Club Award Winners), Irish Red Ale

Category 10

AMERICAN PALE ALE

312 entries

Sponsored by:

BJ's Restaurant & Brewhouse



**Andy Howell
Clarksville, TN**
Clarksville Carboys

"Big Boi's Booty Sweat"
18B American Pale Ale

Batch volume: 13.5 US gal. (51.1 L)
Original gravity: 1.059 (14.5°P)
Final gravity: 1.012 (3.1°P)
Bitterness: 60 IBU (Tinseth)
Color: 6.5 SRM
Alcohol: 6.2% by volume
Efficiency: 84%

MALTS

19 lb. (8.62 kg) pale two-row malt
 5.38 lb. (2.44 kg) pale wheat malt
 14 oz. (397 g) 40°L caramel malt
 as needed acidulated malt to hit mash pH

HOPS

0.5 oz. (14 g) Warrior, 15.9% a.a. @ 60 min
 1.5 oz. (42 g) Citra, 13.2% a.a. @ 5 min
 1.5 oz. (42 g) Mosaic, 12% a.a. @ 5 min
 2 oz. (28 g) Citra Cryo, 22.2% a.a., whirlpool
 2 oz. (28 g) Idaho 7, 12.8% a.a., whirlpool
 2 oz. (28 g) Mosaic Cryo, 25.3% a.a., whirlpool
 1.5 oz. (42 g) Vic Secret, 21.0% a.a., whirlpool
 2 oz. (28 g) Mosaic, dry hop 6 days
 4 oz. (113 g) Citra, dry hop 3 days
 4 oz. (113 g) Idaho 7, dry hop 3 days

ADDITIONAL ITEMS

1 tablet Whirlfloc @ 15 min
 2 tsp. White Labs Yeast Nutrient @ 15 min
 2 tsp. gelatin in keg

YEAST

2 L starter White Labs WLP090 San Diego Super Yeast

BREWING NOTES

Single infusion mash at 149°F (65°C) for 60 minutes. Target 5.2 pH. Mash out at 168°F (76°C) for 10 minutes. Lauter then boil for 60 minutes. Cool to 180°F (82°C), add whirlpool hops, and allow 15 minutes contact time. Chill to 68°F (20°C) and pitch yeast starter. Ferment at 68°F (20°C). When fermentation is 75% complete, add first round of dry hops. When fermentation is complete, reduce temperature to 63°F (17°C) and add second round of dry hops. After 3 days, cold crash. Dissolve 2 tsp. (10 mL) gelatin in 10 oz. (300 mL) water, add to beer, and keg. Force carbonate to 2.5 vol. (5 g/L) CO₂.

EXTRACT VERSION

Omit acidulated malt. Substitute 16.5 lb. (7.48 kg) pale malt extract syrup for pale malt, and 5 lb. (2.27 kg) wheat malt extract syrup for wheat malt. Steep crystal malt in a grain bag at 160°F (71°C) in RO water for 30 minutes. Remove grains, drain, and dissolve extracts completely in the wort, then top off to desired boil volume with RO water. Proceed as above.

RUNNERS-UP

Silver Medal: Keith Soergel of Monterey, CA, MASH831, American Pale Ale

Bronze Medal: Ben Gaylord of Denver, CO, with Jill Gaylord, American Pale Ale



Category 11

**AMBER &
BROWN AMERICAN ALE**

281 entries

Sponsored by:High Gravity Homebrewing
& Winemaking Supplies**Justin Westcott****Federal Way, WA**

Browns Point Homebrew Club

"Possibility and Promise Pacific Amber"
19A American Amber Ale

Batch volume: 5.2 US gal. (19.9 L)
Original gravity: 1.057 (14.0°P)
Final gravity: 1.011 (2.8°P)
Efficiency: 63%

Color: 11 SRM
Bitterness: 35 IBU
Alcohol: 6.1% by volume

MALTS

10 lb. (4.54 kg) US pale 2-row malt
 2.2 lb. (1.02 kg) Weyermann Carared malt
 8 oz. (227 g) 80°L crystal malt
 8 oz. (227 g) melanoidin malt

HOPS

0.5 oz. (14 g) Cascade, 7.8% a.a. @ 60 min
 0.5 oz. (14 g) Centennial, 8% a.a. @ 20 min
 0.5 oz. (14 g) Cascade, 7.8% a.a. @ 15 min
 1 oz. (28 g) Amarillo Gold, 7.7% a.a. @ 5 min
 0.5 oz. (14 g) Centennial, 9.9% a.a. @ 5 min

WATER*Add to mash*

4.2 g calcium chloride, 2.2 g baking soda,
 1.3 g gypsum, 1 g Epsom salt

Add to boil

3.8 g calcium chloride, 1.2 g gypsum, 0.9 g Epsom salt

ADDITIONAL ITEMS

1 tablet Whirlfloc @ 15 min
 2.2 g yeast nutrient @ 15 min

YEAST

Imperial A07 Flagship

BREWING NOTES

Mash at 152°F (66.7°C) for 60 minutes. Mash out at 168°F (75.6°C). Sparge at 168°F (75.6°C). Ferment at 64°F (17.8°C) for 14 days and then condition at 65°F (18.3°C) for an additional 30 days. Force carbonate to 2.6 volumes.

EXTRACT VERSION

Substitute 6 lb. 5 oz. (2.86 kg) pale malt extract syrup for pale malt. Steep remaining grains at 160°F (71°C) for 30 minutes. Remove grains, rinse, dissolve extract completely in resulting wort, then top off with RO water to desired boil volume. Proceed as above.

RUNNERS-UP

Silver Medal: Jason Bryant of Reston, VA, Wort Hogs, American Amber Ale

Bronze Medal: Derek Springer of San Marcos, CA, Society of Barley Engineers, American Amber Ale

Category 12

BROWN BRITISH BEER

259 entries

Sponsored by:

Alternative Beverage

**Ryan Celia**
Easton, PA

Lehigh Valley Home Brewers

"Sket"
13C English Porter

Batch volume: 6 US gal. (22.7 L)
Original gravity: 1.049 (12.2°P)

Final gravity: 1.013 (3.3°P)
Bitterness: 30 IBU (Tinseth)
Color: 29 SRM
Alcohol: 4.7% by volume
Efficiency: 71%

MALTS

6.5 lb. (2.95 kg) Maris Otter pale malt
 2 lb. (907 g) brown malt
 1 lb. (454 g) 10°L Munich malt
 0.8 lb. (363 g) 90°L crystal malt
 0.7 lb. (317 g) amber malt
 8 oz. (227 g) chocolate malt

HOPS

1.05 oz. (30 g) Challenger pellets, 5.1% a.a. @ 60 min
 1 oz. (28 g) Willamette pellets, 5.8% a.a. @ 20 min

YEAST

1 L starter Wyeast 1335 British Ale II

BREWING NOTES

Mash at 155°F (68°C) for 60 minutes. Fly sparge until you collect 7.25 gal. (27.4 L) of wort. Boil 60 minutes. Chill to 63°F (17°F)

and pitch yeast starter. Ferment at 65°F (18°C) for 3 days then raise to 67°F (19°C). Ferment at 67°F (19°C) for 3 more days then raise to 70°F (21°C) and hold until fermentation is complete. Force carbonate to 2.1 vol. (4.2 g/L) CO₂.

EXTRACT VERSION

Substitute 4.5 lb. (2.04 kg) Maris Otter pale malt extract syrup for pale malt and 1 lb. (454 g) Munich malt extract for Munich malt. Steep remaining malts at 160°F (71°C) for 30 minutes in RO water. Remove grains, drain, and dissolve extract completely in resulting wort, then top off with RO water to desired boil volume. Proceed as above.

RUNNERS-UP

Silver Medal: John DiSpirito of East Meadow, NY, Association of Long Island Homebrew Clubs, Dark Mild

Bronze Medal: Ross Druckenmiller of Revere, MA, Boston Wort Processors, Dark Mild



2019 NATIONAL HOMEBREW COMPETITION

Category 13

BRITISH AND IRISH STOUT

369 entries



**Josh Baas
with Jeff Rorison
Elk Grove, CA**

"Sticky Faucet Oatmeal Milk Stout"
16B Oatmeal Stout

Batch volume: 10.75 US gal. (40.7 L)
Original gravity: 1.077 (18.7°P)
Final gravity: 1.032 (8°P)
Efficiency: 72%

Color: 40 SRM
Bitterness: 40 IBU
Alcohol: 5.5% by volume

MALTS

13 lb. (5.90 kg) US 2-row pale malt
 5 lb. (2.27 kg) flaked oats
 2 lb. (907 g) flaked barley
 1.7 lb. (794 g) chocolate malt
 1.5 lb. (680 g) 60°L crystal malt
 1.5 lb. (680 g) Munich malt
 1.5 lb. (680 g) roasted barley
 1 lb. (454 g) black patent malt

HOPS

1.75 oz. (50 g) Magnum, 14% a.a. @ 60 min
 1.75 oz. (50 g) Styrian Goldings, 5.4% a.a.
 @ 10 min

YEAST

3 L starter White Labs WLP002 English Ale

ADDITIONAL ITEMS

5 lb. (2.27 kg) Oreo cookies, medium
 crushed @ 15 min
 4 lb. (1.81 kg) lactose @ 15 min

BREWING NOTES

Mash at 156°F (69°C) for 60 minutes while constantly recirculating. Target 5.2 pH. Mash out at 168°F (76°C) for 10 minutes, then begin runoff and sparge. Boil for 60 minutes. With 15 minutes left in boil, add lactose and Oreo cookie pieces. Chill to 67°F (19°C), pitch yeast, and oxygenate for 90 seconds at a rate of 2 L/min. with pure O₂. Ferment at 67°F (19°C) for 7 days, then raise temperature to 70°F (21°C) and hold for 3 days. Cold crash to 33°F (1°C) and hold for 5 days. Force carbonate to 2.5 vol. (5 g/L) CO₂.

EXTRACT VERSION

Due to the large amount of adjunct, an extract version of this recipe is not recommended.

RUNNERS-UP

Silver Medal: Gregory Irving of North Royalton, OH, Society of Northeast Ohio Brewers, Tropical Stout

Bronze Medal: Maggie Seitz of Fort Myers, FL, with Tom Seitz, Hangar 41 Brew Club, Foreign Export Stout

Category 14

AMERICAN PORTER & STOUT

304 entries

Sponsored by:
Deschutes Brewery



**Matt Knight
with Mike Joshi
Milford, CT**
Brew Haven

"Mid-Sember Knight's Dream"
20A American Porter

Batch volume: 10 US gal. (37.9 L)
Original gravity: 1.067 (16.4°P)
Final gravity: 1.021 (5.3°P)

Bitterness: 27 IBU
Color: 38 SRM
Alcohol: 6% by volume
Efficiency: 79%

MALTS

17.5 lb. (7.94 kg) Maris Otter pale malt
 2 lb. (907 g) flaked oats
 1.5 lb. (680 g) chocolate malt
 1.25 lb. (567 g) 40°L crystal malt
 1.13 lb. (510 g) Weyermann Carafa I
 8 oz. (227 g) black patent malt
 8 oz. (227 g) acidulated malt

HOPS

1.2 oz. (34 g) Magnum, 12.4% a.a.
 @ 60 min

WATER

Ca 120 ppm, Mg 10 ppm, SO₄ 92 ppm,
 Na 27 ppm, Cl 165 ppm, HCO₃ 208 ppm

YEAST

SafAle US-05 American dry ale yeast

BREWING NOTES

Mash grains at 152°F (67°C) for 60 minutes. Mash out at 165°F (74°C). Lauter, then boil 60 minutes. Chill, aerate and pitch yeast at 66°F (19°C). Keg and force carbonate at 14 psi (0.97 bar).

PARTIAL MASH VERSION

Omit acidulated malt. Substitute 12.5 lb. (5.67 kg) Maris Otter pale malt extract syrup for all but 2 lb. (907 g) of the pale malt. Mash 2 lb. pale malt with remaining grains in RO water at 155°F (68°C) for 45 minutes. Rinse grains, dissolve extract completely in resulting wort, then top off to desired boil volume with RO water. Proceed as above.

RUNNERS-UP

Silver Medal: Marshall Erb of Madison, WI, Madison Homebrewers & Tasters, American Stout

Bronze Medal: Divesh Lakhi of Cedar Rapids, IA, American Stout



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Category 15

IMPERIAL STOUT

226 entries

Sponsored by:

New Holland Brewing Co.

**Joseph Formanek****Bolingbrook, IL**

Urban Knaves of Grain

"Four Tsarinas and Two Tsarovich's Imperial Stout"
20C Imperial Stout

Batch volume: 5 US gal. (18.9 L)**Original gravity:** 1.112 (26.4°P)**Final gravity:** 1.030 (7.6°P)**Efficiency:** 70%**Color:** 80 SRM**Bitterness:** 100 IBU (Tinseth)**Alcohol:** 10.8% by volume**MALTS**

- 15 lb. (6.80 kg) Crisp Maris Otter
- 1.5 lb. (680 g) Simpsons Roast Barley
- 1 lb. (454 g) Dingemans chocolate malt
- 1 lb. (454 g) Dingemans aromatic malt
- 1 lb. (454 g) German white wheat malt
- 1 lb. (454 g) Quaker oats
- 8 oz. (227 g) Weyermann Carawheat Malt
- 8 oz. (227 g) Weyermann Chocolate Wheat Malt
- 8 oz. (227 g) Dingemans biscuit malt
- 8 oz. (227 g) Dingemans black patent malt
- 8 oz. (227 g) Dingemans Caravienne malt
- 8 oz. (227 g) Dingemans Special B malt
- 1 lb. (454 g) extra-light DME (in boil)

HOPS

- 4 oz. (113 g) Centennial, 9% a.a.
@ 60 min
- 1 oz. (28 g) UK Goldings, 4.6% a.a.
@ 30 min
- 1 oz. (28 g) UK Goldings, 4.6% a.a.
@ 10 min

YEAST

Wyeast 1056 American Ale

WATER

Filtered Chicago tap water treated with 1/2 tsp./5 gal. (2.5 mL/18.9 L) Brewtan B and 2 tsp./5 gal. (9.9 mL/18.9 L) CaCO₃.

ADDITIONAL ITEMS

- 1/2 tsp. (2.5 mL) Brewtan B, rehydrated
@ 16 min
- 1 tsp. (4.9 mL) Irish moss, rehydrated
@ 15 min
- 1/2 tsp. (2.5 mL) yeast nutrient, rehydrated
@ 10 min

BREWING NOTES

Mash in at 130°F (54°C) and ramp up to 155°F (68°C) over 15 min. Cook oats with 8 cups (1.9 L) of water. Add cold water to lower temperature to 128°F (53°C) and add 1 lb. (454 g) base malt. Hold for 15 min, then add to main mash. Hold main mash at 155°F (68°C) for 60 minutes until converted. Mash out at 170°F (77°C) for 10 minutes. Sparge with 4 gal. (15.1 L) 170°F (77°C) water. Boil 75 minutes, adding Irish moss and hops at stated intervals. Ferment in primary

for 7 days at 65°F (18°C). Rack to secondary and ferment 14 days at 65°F (18°C). Bottle condition with 1/3 cup (79 mL) corn sugar.

EXTRACT VERSION

Substitute 8.25 lb. (3.74 kg) Maris Otter pale malt extract syrup for all but 2 lb. (907 g) of the Maris Otter malt. Mash the 2 lb. (907 g) pale malt with the remaining grains at 155°F (68°C) in RO water for 45 minutes. Remove grains, rinse, dissolve extract completely in the resulting wort, then top off to desired boil volume with RO water. Proceed as above.

RUNNERS-UP**Silver Medal:** Tim Hill of St. Louis, MO, STL Hops Homebrew Club, Imperial Stout**Bronze Medal:** Tyler Mangin of Fargo, ND, with Jon Lewis, Prairie Homebrewing Companions, Imperial Stout

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2019 NATIONAL HOMEBREW COMPETITION

Category 16

AMERICAN IPA

353 entries

Sponsored by:

Experimental Brewing



**Mike Butler
with Stephanie Butler
Olathe, KS**
Kansas City Bier Meisters

"Idaho Is One Giant Park"
21A American IPA

Batch volume: 6 US gal. (22.7 L)
Original gravity: 1.067 (16.33°P)
Final gravity: 1.013 (3.25°P)
Bitterness: 72 IBU (calculated)
Color: 5.2 SRM
Alcohol: 7.2% by volume
Efficiency: 70%

MALTS

8 lb. (3.63 kg) Mecca Grade Lamonta pale malt

5.75 lb. (2.61 kg) Mecca Grade Pelton Pilsner malt
 1.62 lb. (735 g) flaked oats
 6 oz. (170 g) aromatic malt

HOPS

0.5 oz. (14 g) German Magnum (2017), 12.5% a.a., FWH
 0.25 oz. (7 g) Citra, 13.3% a.a., FWH
 0.5 oz. (14 g) Galaxy, 17.4% a.a. @ 10 min
 0.25 oz. (7 g) Idaho 7, 12.5% a.a. @ 10 min
 0.25 oz. (7 g) Simcoe, 13.5% a.a. @ 10 min
 0.5 oz. (14 g) Galaxy, 17.4% a.a., 1st whirlpool (45 min @ 185°F)
 0.25 oz. (7 g) Citra, 13.3% a.a., 1st whirlpool (45 min @ 185°F)
 0.25 oz. (7 g) Idaho 7, 12.5% a.a., 1st whirlpool (45 min @ 185°F)
 0.25 oz. (7 g) Simcoe, 13.5% a.a., 1st whirlpool (45 min @ 185°F)
 0.5 oz. (14 g) Galaxy, 17.4% a.a., 2nd whirlpool (30 min @ 170°F)
 0.25 oz. (7 g) Citra, 13.3% a.a., 2nd whirlpool (30 min @ 170°F)
 0.25 oz. (7 g) Idaho 7, 12.5% a.a., 2nd whirlpool (30 min @ 170°F)
 0.25 oz. (7 g) Simcoe, 13.5% a.a., 2nd whirlpool (30 min @ 170°F)
 0.75 oz. (21 g) Galaxy, 17.4% a.a., 1st dry hop (day 1)
 0.25 oz. (7 g) Idaho 7, 12.5% a.a., 1st dry hop (day 1)
 0.5 oz. (14 g) Citra, 13.3% a.a., 2nd dry hop (day 5)
 0.5 oz. (14 g) Galaxy, 17.4% a.a., 2nd dry hop (day 5)
 1 oz. (28 g) Idaho 7, 12.5% a.a., 3rd dry hop (day 9)

0.5 oz. (14 g) Simcoe, 13.5% a.a., 3rd dry hop (day 9)
 0.5 oz. (14 g) Idaho 7, 12.5% a.a., 3rd dry hop (day 9)

ADDITIONAL ITEMS

1 tsp. Irish moss @ 10 minutes

YEAST

Imperial Yeast A24 Dry Hop

WATER

9.47 gal. (35.8 L) reverse osmosis water treated with 0.26 oz. (7.35 g) calcium chloride, 0.26 oz. (7.24 g) gypsum, 0.09 oz. (2.64 g) Epsom salt, 0.04 oz. (1.26 g) table salt, and 0.31 fl. oz. (9.33 mL) lactic acid

BREWING NOTES

Single infusion mash at 150°F (66°C) for 60 minutes. Target 5.2 pH. Lauter, add first wort hops, and then boil 90 minutes, adding 10-minute hops as indicated. After flameout, allow temperature to free fall to 185°F (85°C) and add first whirlpool hop addition. Add second whirlpool hop addition after 15 minutes, when temperature is approximately 170°F (77°C), and whirlpool another 30 minutes. Chill to 64°F (18°C) and pitch yeast starter. Begin fermentation at 64°F (18°C) and ramp to 67°F (19°C) over the first 3 days. Add first dry hop addition on day 1 of fermentation. Maintain fermentation temperature at 67°F (19°C) for 4 additional days. Add second dry hop on day 5, or when beer is 80–90% attenuated. On day 9, add third dry hop addition and perform diacetyl rest for 3 days. After diacetyl rest, confirm full attenuation and cold crash over 4 days. Allow to condition another 7 days prior to packaging. Force carbonate to 2.5 vol. (5 g/L) CO₂. Enjoy!

PARTIAL MASH VERSION

Substitute 4.25 lb. (1.9 kg) pale malt extract syrup for all but 3 lb. (1.36 kg) of the Lamonta pale ale malt, and 4 lb. (1.8 kg) Pilsner malt extract syrup for all of the Pelton Pilsner malt. Mash oats and aromatic malt with the 3 lb. (1.36 kg) Lamonta pale malt at 150°F (66°C) for 45 minutes, or until full conversion of starches. Remove grains, rinse, and dissolve extracts completely in the resulting wort, then top off to desired boil volume with RO water. Proceed as above.

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RUNNERS-UP

Silver Medal: Stephen Cheng of Burke, VA, American IPA

Bronze Medal: Mark Booth of New Market, MN, South Side Barley Crushers, American IPA



Category 17

SPECIALTY IPA

475 entries

Sponsored by:

Hop Growers of America



Tom Beach
Rocky River, OH

Society of Northeast Ohio Brewers

"Summer Cloud"
21B Belgian IPA

Batch volume:	10 US gal. (37.9 L)
Original gravity:	1.061 (15°P)
Final gravity:	1.010 (2.6°P)
Bitterness:	60 IBU
Color:	5.6 SRM
Alcohol:	6% by volume
Efficiency:	75%

MALTS

19 lb.	(8.62 kg) Pilsner malt
15 oz.	(425 g) Caravienne malt
15 oz.	(425 g) dextrin malt
10 oz.	(283 g) 20°L crystal malt
7 oz.	(198 g) Vienna malt

HOPS

0.5 oz.	(14 g) Simcoe, 13% a.a., FWH @ 90 min
0.5 oz.	(14 g) Columbus, 14% a.a. @ 30 min
0.5 oz.	(14 g) Columbus, 14% a.a. @ 20 min
1 oz.	(28 g) Amarillo, 9.2% a.a. @ 15 min
1 oz.	(28 g) Mosaic, 12.25% a.a. @ 5 min
2 oz.	(57 g) Citra, 12% a.a. @ 0 min
2 oz.	(57 g) Amarillo, 9.2% a.a. @ 0 min
5 oz.	(142 g) Citra, 12% a.a., dry hop 10 days
5 oz.	(142 g) Amarillo, 9.2% a.a., dry hop 10 days

WATER

Carbon-filtered Cleveland municipal water.
Add 1 tsp. (4.9 mL) gypsum to mash water.

ADDITIONAL ITEMS

2	Whirlfloc tablets @ 15 min
1 oz.	(28 g) zest of organic tangerines or organic navel oranges, added with dry hops

YEAST

2 starters of 2 L each	Omega Labs Saisonstein's Monster (OYL-500)
------------------------	--

BREWING NOTES

Target 220 billion cells in each of the two yeast starters. Mash grains at 152°F (67°C) for 90 minutes with 32.5 qt. (30.8 L) water and run off to kettle. Add 37 qt. (35 L) batch sparge water, stir, hold at 170°F (77°C) for 10 minutes, and run off to kettle. Pre-boil gravity should be 1.051 (assuming 75% efficiency). Boil 90 minutes. After flameout, chill to 68°F (20°C), splitting into

two 5 gal. (18.9 L) batches. Oxygenate and pitch one yeast starter per batch. Ferment 5 days at 68°F (20°C), then 75°F (24°C) until final gravity is reached. Cold crash, add dry hops and citrus zest, and condition 10 days. Force carbonate to 2.3 vol. (4.6 vol.) CO₂.

PARTIAL MASH VERSION

Decrease Pilsner malt to 2 lb. (907 g). Substitute 13.25 lb. (6.01 kg) Pilsner malt extract syrup for remainder of Pilsner malt. Mash 2 lb. (907 g) Pilsner malt with remaining grains at 155°F (68°C) in RO water for 45 minutes. Drain, remove grains, dissolve extract completely in resulting wort, then top off with RO water to desired boil volume. Proceed as above.

RUNNERS-UP

Silver Medal: Josh Clark of Littleton, MA, Boston Wort Processors, New England IPA

Bronze Medal: Matt Cowper of Costa Mesa, CA, with Aaron Vieira, Orange County Mash Ups, New England IPA



Category 18

STRONG AMERICAN ALE

254 entries

Sponsored by:
Beer Tap Tag



**Donna Reuter
with Larry Reuter
Akron, OH**

Society of Akron Area Zymurgists (SAAZ)

**"Big Blimp!"
22C American Barleywine**

Batch volume: 5.5 US gal. (20.8 L)
Original gravity: 1.096 (22.9°P)
Final gravity: 1.018 (4.6°P)

Bitterness: 100 IBU (Rager)
Color: 17 SRM
Alcohol: 10.31% by volume
Efficiency: 70%

MALTS

19 lb. (8.62 kg) Maris Otter pale malt
 1 lb. (454 g) 40L crystal malt
 1 lb. (454 g) dextrose (in boil)
 8 oz. (227 g) 80L crystal malt
 4 oz. (113 g) Special B malt
 4 oz. (113 g) dextrin malt

HOPS

0.75 oz. (21 g) Cascade pellets, 5.75% a.a., FWH
 0.75 oz. (21 g) Chinook pellets, 12.8% a.a., FWH
 0.75 oz. (21 g) Centennial pellets, 10% a.a., FWH
 1.25 oz. (35 g) Cascade pellets, 5.75% a.a.
 @ 1 min
 1.25 oz. (35 g) Chinook pellets, 12.8% a.a.
 @ 1 min
 1.25 oz. (35 g) Centennial pellets, 10% a.a.
 @ 1 min

1 oz. (28 g) Cascade pellets, 5.75% a.a., dry hop 5 days
 2 oz. (57 g) Chinook pellets, 12.8% a.a., dry hop 5 days
 1 oz. (28 g) Centennial pellets, 10% a.a., dry hop 5 days

WATER

De-chlorinated Akron, Ohio, city water with 1 tsp. (4.9 mL) calcium chloride and 1/2 tsp. (2.5 mL) gypsum per batch

YEAST

1/2 gal. (1.9 L) starter Wyeast 1056
 American Ale

BREWING NOTES

Mash at 150°F (66°C) for 90 minutes. Target mash pH of 5.3. Batch or fly sparge for 15 minutes. Boil 90 minutes. Chill 30 minutes, with 1-minute hops in the wort, to 60–62°F (16–17°C), then aerate and pitch yeast. Ferment 21 days in primary, then dry hop for 5 days. Keg with 3.5 oz. (99 g) of corn sugar in a simple syrup and allow carbonation to develop over 2 weeks. Crash cool to 30°F (-1°C) and hold 2 weeks, then age until ready to serve.

EXTRACT VERSION

Substitute 12.25 lb. (5.6 kg) Maris Otter pale malt extract syrup for pale malt. Steep remaining grains at 160°F (71°C) in RO water for 30 minutes. Remove grains, rinse, and dissolve extract completely in the resulting wort, then top off to desired boil volume with more RO water. Proceed as above.

RUNNERS-UP

Silver Medal: Chris Rabeau of Matthews, NC, Fermentation Nation Brew Club (FNBC), Double IPA

Bronze Medal: Trevor Campbell of Winter Springs, FL, Brew Club of Seminole County, American Barleywine

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Category 19

STRONG UK ALE

248 entries


Jim Satin
Saline, MI

Ann Arbor Brewers Guild

"Knauf's Old Ale #46"
17B Old Ale

Batch volume: 5 US gal. (18.9 L)
Original gravity: 1.105 (24.9°P)
Final gravity: 1.038 (9.5°P)
Efficiency: 72%
Color: 18 SRM

Bitterness: 40 IBU
Alcohol: 9.1% by volume

MALTS

16 lb. (7.26 kg) US pale 2-row malt
 1 lb. (454 g) dextrin malt
 1 lb. (454 g) 60°L crystal malt
 1 lb. (454 g) 80°L crystal malt
 4 oz. (113 g) Weyermann Caraaroma malt
 4 oz. (113 g) Weyermann Caramunich III malt

HOPS

1 oz. (28 g) Nugget, 13% a.a. @ 60 min
 1 oz. (28 g) Fuggle, 4.5% a.a. @ 30 min

WATER

Reverse osmosis water with 1 tsp. (4.9 mL) calcium chloride and 1 tsp (4.9 mL) gypsum added for each 5 gal. (18.9 L) of brewing water used.

ADDITIONAL ITEMS

0.25 tsp. (1.2 mL) Irish moss @ 10 min
 1 tsp. (4.9 mL) yeast nutrient, in primary

YEAST

Fermentis T-58 SafBrew Specialty Ale

BREWING NOTES

Single infusion mash for 75 minutes at 150°F (66°C). Boil 60 minutes. Chill to 70°F (21°C), then pitch yeast. Ferment at 65°F (18°C) for one month. Bottle condition with corn sugar. Age for 5.5 years in a cool, dark place.

EXTRACT VERSION

Substitute 12 lb. (5.44 kg) pale malt extract syrup for pale malt. Steep remaining grains at 160°F (71°C) for 30 minutes in RO water. Remove grains, rinse, dissolve extract completely in the resulting wort, then top off to desired boil volume with RO water. Proceed as above.

RUNNERS-UP

Silver Medal: Metts Potter of Browns Summit, NC, Battleground Brewers Guild (2019 Gambrinus Club Award Winners), English Barleywine

Bronze Medal: Alex MacIntosh of Providence, RI, Rhode Island Brewing Society, Old Ale

Category 20

SAISON

253 entries

Sponsored by:
 Hops Direct

Luis Cuellar
Buga, Colombia

Homebrewers of Western Loudoun (HOWL)

"Birra Corina"
25B Saison (table, pale)

Batch volume: 3 US gal. (11.4 L)
Original gravity: 1.043 (10.7°P)
Final gravity: 1.008 (2.1°P)
Bitterness: 31 IBU (Tinseth)
Color: 3–4 SRM
Alcohol: 4.6% by volume
Efficiency: 75%

MALTS

3.42 lb. (1.55 kg) Avangard Pilsner malt
 1 lb. (454 g) Briess rye malt
 1 lb. (454 g) Briess red wheat malt

HOPS

0.28 oz. (8 g) Apollo pellets, 17% a.a.
 @ 60 min
 0.18 oz. (5 g) Perle pellets, 4.9% a.a.
 @ 15 min
 0.21 oz. (6 g) Calypso pellets, 15.4% a.a.
 @ 0 min
 0.14 oz. (4 g) Kohatu pellets, 6.4% a.a.
 @ 0 min

ADDITIONAL ITEMS

0.07 oz. (2 g) crushed coriander seeds
 @ flameout
 0.5 tsp. Irish moss @ 15 min
 0.5 tsp. yeast nutrient diluted in filtered water @ 15 min

YEAST

1 package White Labs WLP565 Belgian Saison I (no starter)

BREWING NOTES

Mash at 156°F (68°C) for an hour. The higher temperature is for extra body to compensate for the low ABV and high attenuation of the saison yeast. Sparge at 170°F (76°C). Boil wort vigorously for 90 minutes, following indicated hops schedule. Add yeast nutrient

and Irish moss at 15 minutes. Add the crushed coriander seeds at flameout. Chill to 64°F (18°C) as fast as possible. Aerate and rack to fermentation vessel. Pitch yeast and hold fermentation temperature at 64–68°F (18–20°C) for the first 5 days, then let free rise to 80°F (26°C). Don't transfer—let beer sit in primary for around 20 days to ensure it's clean and ready.

Carbonate with priming sugar, targeting 3 vol. (6 g/L) if using Belgian bottles or 2.5 vol. (5 g/L) if using regular bottles. Keep bottles at 75°F (24°C) for two weeks, then cold-condition for at least two weeks before consumption.

EXTRACT VERSION

Substitute 2.13 lb. (961 g) Pilsner malt extract syrup for the Pilsner malt and 12 oz. (340 g) each of rye malt extract syrup and wheat malt extract syrup for the rye and wheat malts. Dissolve extracts completely in RO water, then top off to desired boil volume. Proceed as above.

RUNNERS-UP

Silver Medal: Mike Vandervoort of Toronto, Ontario, GTA Brews, Saison (standard, pale)

Bronze Medal: David Allen of Mill Creek, WA, Greater Everett Brewers League, Saison (standard)



2019 NATIONAL HOMEBREW COMPETITION

Category 21

BELGIAN ALE

231 entries

Sponsored by:

Port Brewing Company/The Lost Abbey



Mark Peterson
Queen Creek, AZ

2019 Samuel Adams Ninkasi Award
2019 Homebrewer of the Year
Arizona Society of Homebrewers

"Witty Dutchman"
24A Witbier

Batch volume: 5 US gal. (18.9 L)
Original gravity: 1.045 (11.2°P)
Final gravity: 1.011 (2.8°P)

Category 22

STRONG BELGIAN ALE

389 entries

Sponsored by:

Cargill Craft Malt



Michael Maugel
with **Jarrod Hanson**
Denver, CO

"Four the Win (FTW)"
26D Belgian Dark Strong Ale

Batch volume: 6 US gal. (22.7 L)
Original gravity: 1.089 (21.3°P)
Final gravity: 1.021 (5.3°P)
Bitterness: 32 IBU
Color: 25 SRM

Bitterness: 17 IBU (Tinseth)
Color: 3 SRM
Alcohol: 4.4% by volume
Efficiency: 70%

MALTS

4 lb. (1.81 kg) 2-row Pilsner malt
2 lb. (907 g) white wheat malt
1.5 lb. (680 g) red wheat malt
12 oz. (340 g) yellow flaked corn
4 oz. (113 g) flaked oats

HOPS

0.7 oz. (18 g) Northern Brewer, 7% a.a.
@ 60 min

WATER

Carbon filtered, targeting a mash pH of 5.2

YEAST

1 package Wyeast 3944 Belgian Witbier

ADDITIONAL ITEMS

1 oz. (28 g) orange peel @ 10 min
5 oz. (142 g) cracked coriander seed
@ 5 min

BREWING NOTES

Single infusion mash at 155°F (68°C) for 60 min with (2.8 gal.) 10.6 L of 171°F (77°C)

strike water. Sparge with pH-treated water at 168°F (76°C). Run off 6.5 gal. (24.6 L) wort and boil, adding hops and spices as specified. Whirlpool and chill to 65°F (18°C), then pitch yeast (no starter). Ferment 14 days at 65°F (18°C), then rack to secondary and hold an additional 5 days at 65°F (18°C). Raise to 68°F (20°C) and hold for 2 days, then cold crash and carbonate to 2–2.5 vol. (4–5 g/L) CO₂.

PARTIAL MASH VERSION

Substitute 1.63 lb. (735 g) Pilsner malt extract syrup for all but 2 lb. (907 g) of the Pilsner malt, and 2.5 lb. (1.13 kg) wheat malt extract syrup for the red and white wheat malts. Mash the remaining 2 lb. (907 g) Pilsner malt with the flaked grains in RO water at 155°F (68°C) for 45 minutes. Remove grains, rinse, and dissolve extracts completely in the resulting wort, then top off with RO water to desired boil volume. Proceed as above.

RUNNERS-UP

Silver Medal: Andrew Johnson of Salem, OR, Capitol Brewers, Belgian Pale Ale

Bronze Medal: John Groeger of Mechanicsville, MD, Fredericksburg Brewing Insiders (FBI), Belgian Blonde Ale

BREWING NOTES

Mash in at 144°F (62°C) for 30 minutes, then raise to 156°F (69°C) and hold for 30 minutes. Sparge at 170°F (77°C). Lauter, then boil for 60 minutes. Chill to 67°F (19°C) and pitch yeast starter. Ferment at 67°F (19°C) until fermentation is complete. Bottle carbonated to 2.6 vol. (5.2 g/L) CO₂.

PARTIAL MASH VERSION

Reduce Pilsner malt to 2 lb. (907 g). Substitute remainder of Pilsner malt with 8.75 lb. (3.97 kg) Pilsner malt extract syrup. Mash 2 lb. (907 g) Pilsner malt with remaining grains in RO water at 156°F (69°C) for 45 minutes. Remove grains, rinse, and dissolve extract completely in resulting wort, then top off to desired boil volume with RO water. Proceed as above.

RUNNERS-UP

Silver Medal: Wesley Carmichael of New York, NY, with Mandy Naglich, Belgian Golden Strong Ale

Bronze Medal: Jonas Geiss of Guarulhos, São Paulo, Brazil, with Luiz Carlos Gaspar, AcerVA Paulista, Belgian Dark Strong Ale



Category 23

EUROPEAN SOUR ALE

231 entries

Sponsored by:

Captain Lawrence Brewing Co.



Kevin McMahon
Novato, CA

Marin Society of Homebrewers (MaSH)

"Trail Dog Berliner Bites"
23A Berliner Weisse

Batch volume: 5 US gal. (18.9 L)
Original gravity: 1.032 (8°P)
Final gravity: 1.006 (1.5°P)
Bitterness: 0 IBU
Color: 3.5 SRM
Alcohol: 2.7% by volume
Efficiency: 86%

MALTS

2 lb. (907 g) Rahr unmalted wheat
 1 lb. (454 g) Belgian Pilsner malt
 14 oz. (397 g) Rahr pale ale malt
 7 oz. (198 g) domestic 6-row pale malt
 7 oz. (198 g) flaked oats
 3.5 oz. (99 g) flaked barley
 2.5 oz. (71 g) acidulated malt
 1 oz. (28 g) Special B malt

WATER

Novato, CA filtered tap water (hard water profile), with 1/2 tsp. (2.5 mL) gypsum and 1/2 tsp. (2.5 mL) calcium chloride per 4 gal. (15.1 L). All water treated (not just mash water).

ADDITIONAL ITEMS

1 qt. (0.95 L) Goodbelly® mango probiotic drink
 1 tsp. (5 g) yeast nutrient
 8 oz. (227 g) rice hulls (in mash)

YEAST

Wyeast 3711 French Saison yeast (starter)
 Voss kveik plus house bugs (starter)

BREWING NOTES

Target a mash pH of 5.43. Use a step mash with two decoctions, resting at 113°F (45°C) for 30 minutes, 125°F (52°C) for 20 minutes, 148°F (64°C) for 20 minutes, and a mash out at 170°F (77°C). Boil 90 minutes. Chill

to 90°F (32°C). Pitch Goodbelly mango probiotic drink at 90°F (32°C) in boil kettle. Top headspace with CO₂ and cover tightly. Monitor pH every few hours, targeting a pH of 4.5 (after 48 hours, pH was 4.3). Ramp temperature up to 190°F (88°C) and hold for 10 minutes to kill lactic acid bacteria. Chill to 65°F (18°C). Pitch a very large starter of Wyeast 3711 French Saison yeast (diastaticus). Let rise to an ambient temp of 72°F (22°C). Check gravity after 9 days it should be at 1.012 with lots of acetaldehyde, which is typical of 3711 French Saison yeast. Pitch starter of Voss Kveik plus House bugs including Pediococcus, Lactobacillus, and Brettanomyces. After 2 months aging in a stainless 5 gal. (18.9 L) keg, final pH should be 3.67, and final gravity 1.006.

Blend with 20% 3-year-old barrel-aged house gueuze and bottle condition for 6 months.

EXTRACT VERSION

Due to high level of adjunct grains, an extract version is not recommended.

RUNNERS-UP

Silver Medal: Joseph Malizia of Valley Stream, NY, Gose

Bronze Medal: Thomas Morgan of Dayton, OH, Dayton Regional Amateur Fermentation Technologists, Gueuze

Category 24

FRUIT BEER

299 entries

Sponsored by:
Amoretti

Jordan Reed
Martinez, CA

Diablo Order of Zymiracle Enthusiasts (DOZE)

"Tropic Sun"
29A Catharina Sour
with Guava and Passion Fruit

Batch volume: 6 US gal. (22.7 L)
Original gravity: 1.058 (14.3°P)

Final gravity: 1.010 (2.6°P)

Bitterness: 10 IBU (Tinseth)
Color: 4 SRM before fruit
Alcohol: 6.3% by volume
Efficiency: 75%

MALTS

6.5 lb. (2.95 kg) Pilsner malt
 4.25 lb. (1.93 kg) white wheat malt
 0.55 lb. (249 g) dextrin malt
 0.38 lb. (172 g) acidulated malt

HOPS

0.35 oz. (10 g) Hallertau Magnum,
 13.2% a.a. @ 30 min

WATER

Ca 60 ppm, Mg 5 ppm, Na 10 ppm,
 SO₄ 55 ppm, Cl 95 ppm, HCO₃ 0 ppm

ADDITIONAL ITEMS

1 lb. rice hulls (optional) to aid lautering
 1 tablet Whirlfloc @ 15 min
 1/2 tsp. Wyeast Yeast Nutrient @ 15 min
 4.38 lb. (1.99 kg) pink guava puree
 (in secondary)
 2.38 lb. (907 g) passion fruit puree
 (in secondary)

lactic acid as needed to pre-acidify wort for kettle souring

YEAST

2 L starter Yeast Bay Lactobacillus Blend
 1 package Wyeast 3711 French Saison

BREWING NOTES

Protein rest at 122°F (50°C) for 10 minutes. Raise to 154°F (68°C) and mash for 70 minutes. Target 5.2–5.4 pH. Raise temp to 170°F (77°C) for mash-out, recirculating if possible. Collect first runnings and sparge until pre-boil volume is collected in boil kettle. Raise wort to 185–195°F (85–91°C) to sterilize for 10 minutes. Then chill wort to 105°F (41°C) or your preferred Lactobacillus strain's optimal temperature.

Use lactic acid to pre-acidify wort to 4.2–4.5 pH. Pitch Lacto starter. Purge headspace in kettle with CO₂, cover surface of wort with sanitized plastic wrap, and place lid on kettle. Maintain kettle souring temperature of 90–110°F (32–43°C), depending on Lacto strain, with insulation and/or heat source if needed, for 36–48 hours, or until pH reaches 3.2–3.5, depending on desired sourness. →



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→ (Optional: Collect 1–2 L wort with live Lacto to use as a starter for a future batch and store in fridge up to 2 months.)

Heat kettle-soured wort to a boil and boil 75 minutes, adding hops, Whirlfloc, and yeast nutrient at listed times. Chill to 65°F (18°C) and pitch yeast. Free rise to 70°F (22°C) after 72 hours. Add fruit purees to secondary and wait 1–2 weeks. Cold crash 24–48 hours before packaging. Carbonate to 3.3–3.5 vol. (6.6–7 g/L) CO₂.

PARTIAL MASH VERSION

Reduce Pilsner malt to 1 lb. (454 g) and white wheat malt to 12 oz. (340 g). Substitute remainder of Pilsner malt with 4 lb. (1.81 kg) Pilsner malt extract syrup and remainder of wheat malt with 3 lb. (1.36 kg) wheat malt extract syrup. Mash 1 lb. (454 g) Pilsner malt and 12 oz. (340 g) wheat malt with acid and dextrin malts in RO water at 155°F (68°C) for 45 minutes. Remove grains, rinse, and dissolve extracts completely in resulting wort, then top off to desired pre-boil volume with RO water. Proceed with sterilization stage as above.

RUNNERS-UP

Silver Medal: Joseph Daly of Baldwin, NY, Berliner Weisse with Passion Fruit

Bronze Medal: Zach Ahting of Walton, KY, with Jodi Ahting, Cincinnati Malt Infusers, Berliner Weisse with Raspberries

Category 25

SPICED BEER

430 entries

Sponsored by:

BottleYourBrand.com



**Tom Lawrence
with Zach Dixon
San Diego, CA**

"Richard's Brownie Batter"
30A Imperial Stout
with Coconut and Coffee

Batch volume:	3 US gal. (11.4 L)
Original gravity:	1.093 (22.2°P)
Final gravity:	1.030 (7.6°P)
Bitterness:	52 IBU
Color:	40 SRM
Alcohol:	8.3% by volume
Efficiency:	70%

MALTS

6 lb.	(2.72 kg) Maris Otter malt
0.69 lb.	(313 g) Weyermann Carafa II
0.69 lb.	(313 g) Briess Midnight Wheat malt
0.69 lb.	(313 g) flaked oats
0.69 lb.	(313 g) chit malt
0.69 lb.	(313 g) 10°L crystal malt
0.5 lb.	(227 g) 20°L crystal malt
0.5 lb.	(227 g) 40°L crystal malt
3.04 oz.	(86 g) 60°L crystal malt

3.04 oz. (86 g) 80°L crystal malt

3.04 oz. (86 g) 120°L crystal malt

HOPS

1 oz. Mosaic Noble @ 240 min

ADDITIONAL ITEMS

1.5 lb. (680 g) coconut (medium toast)

0.5 oz. (14 g) whole Arabica coffee beans

YEAST

1 L starter RVA132 Manchester Ale

WATER

Ca 53 ppm, Mg 5 ppm, Na 61 ppm,

SO₄ 37 ppm, Cl 45 ppm, HCO₃ 217 ppm

BREWING NOTES

Single infusion mash with 4 gal. (15.1 L) water at 150°F (66°C) for 60 minutes.

Sparge with 3 gal. (11.4 L) of 170°F (77°C) water. Add hops and boil for 4 hours. Chill to 66°F (19°C) and pitch yeast starter.

Ferment at 66°F (19°C) for the first 3 days and then increase the temperature by 1°F (0.6°C) each day until 72°F (22°C) is reached. Age beer in fermenter a total of 28 days. Lightly toast shredded coconut on the stove until light brown in color and let cool. Put coconut and coffee beans in a muslin bag and add to empty keg. Purge the keg with CO₂ and then close transfer the beer with CO₂ from the carboy to the keg. Force carbonate at 2.2 vol. (4.4 g/L) CO₂ and let beer condition on coconut and coffee at least 2 weeks.

EXTRACT VERSION

Reduce Maris Otter malt to 2 lb. (907 g).

Substitute remainder of Maris Otter malt with 3 lb. (1.36 kg) Maris Otter malt extract syrup. Mash 2 lb. (907 g) Maris Otter malt with remaining grains in RO water at 155°F (68°C) for 45 minutes. Remove grains, rinse, and dissolve extract completely in resulting wort, then top off to desired boil volume with RO water.

RUNNERS-UP

Silver Medal: Scott Sykes of Plymouth, MN, Mötley Brüe - Twin Cities Home Brew Club, Vienna Lager with Coffee

Bronze Medal: Keith Linn of Rogers, AR, Fayetteville Lovers Of Pure Suds (FLOPS), Imperial Stout with Espresso Beans, Cocoa Nibs, and Ancho Chiles



ON THE WEB

Find past winners' homebrew recipes on our website @ HomebrewersAssociation.org/homebrew-recipes



Category 26

SMOKE-FLAVORED & WOOD-AGED BEER

141 entries

Sponsored by:

Switchback Brewing Co.



Andrew Simsak
San Francisco, CA

San Francisco Homebrewers Guild

"Grodziskie"
27E Piwo Grodziskie

Batch volume: 6.5 US gal. (24.6 L)
Original gravity: 1.030 (7.6°P)
Final gravity: 1.008 (2.1°P)

Bitterness: 27 IBU
Color: 3.2 SRM
Alcohol: 2.9% by volume
Efficiency: 70%

MALTS

7 lb. (3.18 kg) Weyermann
Oak Smoked Wheat malt
1 lb. (454 g) Rahr red wheat malt

HOPS

0.25 oz. (7 g) Sterling pellets, 7.4% a.a.
FWH
0.25 oz. (7 g) US Magnum pellets,
13.2% a.a. @ 60 min
1 oz. (28 g) Sterling pellets, 7.4% a.a.
@ 10 min

WATER

Ca 51 ppm, Mg 27 ppm, Na 31 ppm,
SO₄ 148 ppm, Cl 71 ppm, HCO₃ 0 ppm

ADDITIONAL ITEMS

1 lb. (454 g) rice hulls (in mash)
1 tablet Whirlfloc @ 15 min
Wyeast Yeast Nutrient @ 10 min
Isinglass at bottling

YEAST

GigaYeast GY029 NorCal Ale #5, no starter

BREWING NOTES

Use a sequence of step infusions that end in a full-volume, no-sparge mash 126°F (52°C) for 30 minutes, 152°F (67°C) for 60 minutes, and 169°F (76°C) for 10 minutes. Lauter, and then boil 60 minutes. After boil, chill to 67°F (19°C), pitch yeast, and aerate. Ferment at 67°F (19°C) for 10–14 days, letting temperature free rise to 69°F (21°C). Hold at 69°F (21°C) until end of fermentation. Bottle with corn sugar and isinglass to 3.4 vol. (6.8 g/L) CO₂ using appropriate weight bottles and let condition at around 69°F (21°C) for 2 weeks before cellaring.

EXTRACT VERSION

Due to unavailability of oak-smoked wheat malt extract, an extract version is not recommended.

RUNNERS-UP

Silver Medal: Danny Steis of Durham, NC, Nash Street Homebrew Club, Rauchbier
Bronze Medal: Lucio Botelho of Rio De Janeiro, Brazil, AcervA-ES, Smoked Wee Heavy

Category 27

WOOD-AGED BEER

310 entries

Sponsored by:

River Drive



Karl Larson
with **Jeremy Nye**
Harrisburg, PA

The Saccharomyces Saints

"Blootered Bastard"
33B Wee Heavy
Aged in a Rye Bourbon Barrel

Batch volume: 10 US gal. (37.9 L)
Original gravity: 1.110 (25.8°P)
Final gravity: 1.036 (9.1°P)

Efficiency: 78%
Color: 24 SRM
Bitterness: 26 IBU
Alcohol: 10% by volume

MALTS

35 lb. (15.88 kg) US pale two-row malt
1 lb. (454 g) roasted barley
12 oz. (340 g) Briess Special Roast
12 oz. (340 g) aromatic malt
8 oz. (227 g) 120°L crystal malt
8 oz. (227 g) chocolate malt

HOPS

4 oz. (113 g) East Kent Goldings, 5% a.a.
@ 60 min

ADDITIONAL ITEMS

2 lb. (907 g) rice hulls in mash as
lautering aid
2 tablets Whirlfloc @ 15 min
2 tsp. yeast nutrient, in primary

YEAST

White Labs WLP028 Edinburgh Ale

BREWING NOTES

Mash all grains except roast barley and
chocolate malt at 156°F (58°C) for 45 minutes.
Add roasted barley and chocolate malt. While

recirculating the mash over heat, slowly
increase the temperature to 168°F (76°C) for a
10-minute mash out. Boil for 90 minutes with
one hop addition at 60 minutes remaining.
Pitch yeast at 68°F (20°C) and ferment 14
days. Once final gravity is reached, rack to a
rye bourbon barrel and condition 6 months
or until a balanced malt/oak aroma and flavor
profile is reached. The goal is to bring a big-
bodied beer to the barrel as the oak and
oxygen will thin the body over time.

EXTRACT VERSION

Substitute 28.25 lb. (12.81 kg) pale malt
extract syrup for the pale malt. Steep
remaining grains in RO water at 160°F (71°C)
for 30 minutes. Remove grains, drain, dissolve
extract completely in resulting wort, then top
off with RO water to desired boil volume.
Proceed as above.

RUNNERS-UP

Silver Medal: John Blythin of Waukegan, IL, with Renee Weinberger, Beer Barons of Milwaukee, Whiskey Barrel-Aged Dark Doppelbock

Bronze Medal: Chad Steinke of Denver, CO, Bourbon Barrel-Aged Russian Imperial Stout with Lactose and Coffee



2019 NATIONAL HOMEBREW COMPETITION

Category 28

AMERICAN WILD ALE

334 entries

Sponsored by:
Maryland Homebrew



Matt Fitzgerald
Fenton, MO

STL Hops Homebrew Club

"Catharina's Passion"
28C Catharina Sour
with Guava and Passion Fruit

Batch volume:	5 US gal. (18.9 L)
Original gravity:	1.041 (10.2°P)
Final gravity:	1.009 (2.3°P)
Efficiency:	75%
Color:	2–3 SRM
Bitterness:	7 IBU
Alcohol:	4% by volume

MALTS

4.6 lb.	(2.09 kg) Weyermann Pilsner Malt
2.6 lb.	(1.16 kg) Weyermann Pale Wheat Malt

HOPS

0.2 oz.	(6 g) Magnum, 12% a.a. @ 30 min
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WATER

Ca 65 ppm, Mg 10 ppm, Na 15 ppm,
SO₄ 80 ppm, Cl 70 ppm, HCO₃ 0 ppm

ADDITIONAL ITEMS

1/2 tablet Whirlfloc @ 10 min	
4 mL	lactic acid, primary
42 oz.	(1.19 kg) passion fruit puree, secondary
28 oz.	(794 g) guava puree, secondary

YEAST

Organic Mango GoodBelly Probiotic
Fermentis SafAle US-05

BREWING NOTES

Build water from reverse osmosis and target a mash pH of 5.3. Start with a 10-minute protein rest at 122°F (50°C), raise to 153°F (67.2°C) for a 60-minute saccharification rest, and mash out at 168°F (75.6°C) for 10 minutes. Sparge with 4 gal. (15.1 L) of 168°F (75.6°C) adjusted sparge water until you have collected 7.16 gal. (27.1 L) of 1.033 wort. Boil 10 minutes and chill to 100°F (37.8°C).

Acidify wort with about 4mL of lactic acid to achieve a pH of 4.5. Add half a carton of GoodBelly Probiotics (Mango Flavor), float a layer of plastic wrap on surface of wort to keep oxygen out, purge headspace of kettle with CO₂, seal, wrap, and try to maintain 90–100°F (32.3–37.8°C) for 24–48 hours or until a pH of 3.2 is reached.

Return kettle to burner and boil 75 minutes, adding hops at 30 minutes. Chill, transfer to fermenter, and pitch rehydrated yeast at 65°F (18.3°C). On day 5 of fermentation, add fruit purees and let fermentation finish. Cold crash when fully attenuated, package, and serve cold and fresh!

EXTRACT VERSION

Substitute 3.5 lb. (1.59 kg) Pilsner malt extract syrup for Pilsner malt and 2.25 lb. (1.02 kg) wheat malt extract syrup for wheat malt. Dissolve extracts completely in RO water, then top off to desired boil volume with RO water. Boil 10 minutes to sterilize, then proceed from that step as above.

RUNNERS-UP

Silver Medal: Damien Jones of Petaluma, CA, Soured Blonde Ale with Raspberry and Blackberry

Bronze Medal: Ryan Smalley of Lexington, KY, Brewers of Central Kentucky (BOCK), Dry-Hopped Pale Ale with Brettanomyces

Category 29

SPECIALTY BEER

215 entries

Sponsored by:
The Smart Brew Kit



Danny Mattos
with Mauro Manzali Bonnacorsi,
Jonas Geiss & Marco Antonio Lemos
Belo Horizonte, Brazil

"Onyris Ryewine"
31A English Barleywine with 50% Rye

Batch volume: 31.7 US gal. (120 L)

Original gravity: 1.104 (24.6°P)

Final gravity: 1.024 (6.03°P)

Color: 26.5 SRM

Bitterness: 86 IBUs (calculated)

Alcohol: 10.2% by volume

MALTS

55.1 lb.	(25 kg) Castle Rye malt
44.1 lb.	(20 kg) Best Pale Ale malt
6.6 lb.	(3 kg) Best Dark Munich malt
4.4 lb.	(2 kg) Best Caramel Aromatic malt
4.4 lb.	(2 kg) Weyermann Caramel Rye malt
4.4 lb.	(2 kg) Best Melanoidin malt
4.4 lb.	(2 kg) Best Special X malt
1.1 lb.	(500 g) Best Chocolate malt

HOPS

14.1 oz.	(400 g) Magnum, 14% a.a. @ 60min
3.5 oz.	(100 g) Northern Brewer, 8.5% a.a. @ 5 min
3.5 oz.	(100 g) Northern Brewer, 8.5% a.a., steep 10 min

3.5 oz. (100 g) Hallertau Blanc, 10.5% a.a., steep 10 min

10.6 oz. (300 g) Northern Brewer, 8.5% a.a., dry hop 3 days

14.1 oz. (400 g) Hallertau Blanc, dry hop 3 days

3.5 oz. (100 g) Magnum, dry hop 3 days

WATER

45 ppm Ca, 3 ppm Mg, 21 ppm Na, 71 ppm SO₄, 57 ppm Cl, 90 ppm HCO₃. Adjust sparge water to 5.3 pH with lactic acid.

ADDITIONAL ITEMS

5 tablets Whirlfloc @ 10 min

YEAST

150 g Safale US-05

BREWING NOTES

Target a water-to-grain ratio of 3:1 by weight. Mash in at 104°F (40°C) for 15 minutes, then raise temperature to 158°F (70°C) and hold for 60 minutes. Mash out →



→ at 170°F (77°C) for 10 minutes. Sparge at 170°F (77°C). Boil 90 minutes. Chill wort to 68°F (20°C), pitch yeast, and oxygenate for 2 minutes at a rate of 5 L/minute. Ferment in conical fermenter at 65°F (18°C) for 5 days, then 70°F (21°C) for more 5 days, and then rack off the yeast. Chill to 53°F (12°C), dry hop 3 days, then rack off hops. Chill to 32°F (0°C) and cold condition for 14 days. Force carbonate to 2 vol. (4 g/L) CO₂. Bottle condition for 8 months at room temperature.

RUNNERS-UP

Silver Medal: Matthew Barone of Palmyra, NJ, The Brū Club, Kuytbier
Bronze Medal: Karl King of Colleyville, TX, Cap and Hare Homebrew Club, Wheat Eisbock



ON THE WEB

Find past winners' homebrew recipes on our website @ HomebrewersAssociation.org/homebrew-recipes

Category 30

TRADITIONAL MEAD

109 entries

Sponsored by:

The Compleat Meadmaker



Jeremy Voeltz
Vancouver, WA

"Covfefe"
35B Semi-Sweet Mead
with Mexican Coffee Blossom

Batch volume: 5 US gal. (18.9 L)
Original gravity: 1.102 (24.2°P)
Final gravity: 1.035 (8.8°P)
Alcohol: 13% by volume

FERMENTABLES

14 lb. (6.35 kg) Mexican coffee blossom honey
5 lb. (2.27 kg) Mexican coffee blossom honey for backsweetening

ADDITIONAL ITEMS

For proofing yeast:
0.69 oz. (19.5 g) Go-Ferm

Prior to fermentation:
15 g bentonite and 0.5 oz. (14 g) medium toast French oak cubes mixed in with the must

During fermentation:
5 g Fermaid-O and 1.5 g DAP added at 24, 48, and 72 hours post-yeast pitch

After fermentation:

Potassium sorbate and potassium metabisulfite to stabilize, SuperKleer to clarify, tartaric acid and/or tannin as needed for balance

YEAST

15 g Lavlin D47 yeast proofed with water and Go-Ferm (dosed at label recommendations)

BREWING NOTES

Making wonderful mead is part science and part art. The science comes into play with recipe development, quality honey, yeast management through staggered nutrient additions, and appropriate fermentation temperature. The art comes into play post-fermentation. Unfortunately, mastering the art of meadmaking often can't be described in a written recipe, and rather must be honed through experience and experimentation.

Mix 14 lb. (6.35 kg) Mexican coffee blossom honey, 4 gal. (15.14 L) of 60°F (16°C) water, and 0.56 oz. (15 g) bentonite in a sanitized ale pail. OG should be around 1.100 with a volume of around 5.2 gal. (19.7 L), and temperature should be under 65°F (18°C). Add 0.5 ounces (14 g) of medium toast French oak cubes.

Prepare yeast by mixing 0.69 oz. (19.5 g) Go-Ferm with 13.2 fl. oz. (390 mL) of 110°F (43°C) water. When the mixture's temperature drops to under 104°F (40°C), sprinkle 0.53 oz. (15 g) of Lavlin D47 yeast and let sit for 15 minutes. After that time is up, give the yeast a vigorous stir and begin tempering yeast mixture to must temperature by adding 3.4 fl. oz. (100 mL) of must to the yeast every 5 minutes or so until the yeast mixture reaches 70°F (21°C). Oxygenate with pure O₂ for about 60 seconds. Pitch yeast

mixture, seal fermenter with an airlock, and ferment at 60°F (16°C). Add 0.18 oz. (5 g) Fermaid-O and 0.05 oz. (1.5 g) DAP in three separate feedings at 24 hours, 48 hours, and 72 hours after pitching yeast. Ferment to a gravity of 1.000, and the mead will be nearly crystal clear thanks to the bentonite.

Dissolve the label-recommended dose of potassium metabisulfite and potassium sorbate in 6.8 fluid oz. (200 mL) of hot water and add this to a sanitized 5 gal. (18.9 L) carboy. Rack mead on to this solution. Fill the carboy completely, leaving all of the primary sediment behind.

A week later, back-sweeten to 1.035 (8.8°P) with about 5 lb. (2.27 kg) additional honey. Pour this honey into another sanitized 5-gallon fermenter and rack the mead over it. Stir to mix, and wait at least 2 weeks to fully incorporate.

Pull a sample to verify gravity is around 1.035 and replace that volume with SuperKleer (again, per the label instructions). After a few more weeks, the mead will be extremely clear, with a small layer of gunk on the bottom of the carboy. Rack into another carboy (dosing with a bit more potassium metabisulfite) and top off with a bit more water if needed. Add 0.2 g/L tartaric acid, or to taste, to brighten the flavor, or do bench trials with smaller volumes and scale up to the full batch. Bottle in regular brown beer bottles with crown caps.

RUNNERS-UP

Silver Medal: Warren Earle of Mesa, AZ, Arizona Society of Homebrewers (2019 NHC Homebrew Club Award), Sweet Mead with Hairy Vetch Honey
Bronze Medal: Carvin Wilson of Mesa, AZ, Semi-Sweet Mead with Ling Heather



2019 NATIONAL HOMEBREW COMPETITION

Category 31

FRUIT MEAD

169 entries

Sponsored by:
Amoretti



Steve Patik
Littleton, CO

"Bucktart"
36D Stone Fruit Mead
with Buckwheat Honey and Tart Cherries

Batch volume: 5 US gal. (18.9 L)
Original gravity: 1.100 (23.8°P)
Final gravity: 1.000 (0°P)
Alcohol: 13.1% by volume

FERMENTABLES

17 lb. (7.71 kg) buckwheat honey
18 lb. (8.16 kg) tart cherries

YEAST

10 g Lalvin 71B

ADDITIONAL ITEMS

10 g Opti-Red yeast nutrient
Fermaid-O, TOSNA protocol
potassium sorbate and metabisulfite to stabilize
tartaric acid as needed
Sparkolloid for fining

BREWING NOTES

Add buckwheat honey and tart cherries to
approximately 3.8 gal. (14.4 L) water for a
starting gravity of 1.100 for 5 gal. (18.9 L) of
must. Ferment with Lalvin 71B yeast (2 g/gal.)

at 62°F (16.7°C), following the tailored organic
staggered nutrient addition (TOSNA) protocol
with Fermaid-O. Ferment dry, stabilize with
sorbate and sulfate, and rack off lees. Back-
sweeten with buckwheat honey until balance
is achieved with tartness from cherries,
adjusting with tartaric acid if needed. Add
Sparkolloid and wait 10 days to clear. Filter
and bottle.

RUNNERS-UP

Silver Medal: Danielle Schanke
of Chandler, AZ, Arizona Society of
Homebrewers (2019 NHC Homebrew Club
Award), Pyment with Clover Honey and Pinot
Noir Juice

Bronze Medal: Timothy Elder of Kansas
City, KS, Kansas City Bier Meisters, Stone
Fruit Mead with Clover Honey, Avocado
Honey, and Michigan Tart Cherries

Category 32

SPICE & SPECIALTY MEAD

149 entries

Sponsored by:
Prairie Rose Meadery

Dwojniak/Poltorak with Raisins (Michael Wilcox)

"The closest I've ever come to making a true Poltorak (2:1 honey to water ratio), this mead is in the range of 1.120 to 1.130 final gravity. I don't remember what yeast it used, but I currently recommend Uvaferm 43 for all big Polish-style meads anyway. Between 1 and 1.5 pounds of raisins were used per gallon of mead, most in primary, and most were caramelized and mashed a bit on my stovetop before they went into the fermenter. (Yes, at this point, raisins are nutrients!) Make sure you're using non-sulfited fruit. The honey is my typical blend of mostly acacia with a bit of non-enteric buckwheat: something in the 3:1 or 4:1 ratio is fine. It was never sulfited and has oxidized brilliantly. This mead is in the range of seven years old now, and really TOO sweet anymore on its own, but in this blend it brings up the richness for the rest of the batch. It spent significant time wood aging, including, for a time, a stay in what I had previously aged my attempts at Madeira in. There is chocolate and molasses and caramelized sugar here, tons of raisin, other dried fruit, a bit of nuttiness, and I do believe it picked up a bit of booziness from the Madeira. Lots of second-use oak, nothing too overt, lots of edges rounded with time and residual sugar."

**Oxidized Mesquite
Traditional Mead
(Michael Wilcox)**
"Step fed, sack, and fermented with Lalvin K1V-1116 at around 70°F, to about 18% ABV. Finished at about 1.045. Big alcohol originally, but quite smooth now. Unintentionally oxidized with significant nutty (most would say walnut) character coming through. Several years old. This batch of mesquite also has a very woody character. After talking with a few others, we guess that something like creosote blooming around the same time may be giving this character. Whatever it is, it is a welcome character that I'm always looking for when I buy honey from the US Southwest. Adds alcohol, pronounced nuttiness, a woody, vaguely smoky character, and emphasizes honey."

Sweet Mead with Dates (Carvin Wilson)

"This fruit character was the missing component that raisin and fig alone weren't getting me. Beautiful honey character too, sort of a woody and clove-like spiciness, which could also be from the yeast Carvin chose. Fermented with AMH (Enoferm's Assmanhausen): treat this yeast well, slowly

"Old and Delicious, But Enough About Us"
38C Experimental Mead: Dwojniak with
Raisins and Dates

The winning mead in Category 32 was a
blend of five meads made by three talented
meadmakers. It is impossible to reproduce.
Here, Wilcox describes what each mead
contributed to the blend.



introducing it to your must without shocking it with huge gravity or temperature changes, fermenting in the 70s Fahrenheit, following proper nutrient protocol, and it will treat you well in return. The dates are Deglet and Medjool, totaling about 5 pounds per gallon. If you don't have access to that amount of dates or can't spend that much, Carvin thinks one can approximate this mead with a single pound of dates added after primary with a clean yeast. A mix of mesquite and avocado blossom honeys was used, with an OG in the range of 1.160, and the mead was already 5 years old when I blended with it."

Dwojniak with Dried Fruits and Walnuts (Scot Schaar)

"This is the mead you may have heard earned Scot his 'Polish passport' from a group of incredibly talented Polish meadmakers visiting the USA during Mazer Cup 2019. They told him, 'You are one of us now.' Awesome. This mead is big on walnut, which is almost exactly like a common oxidation character, and Scot has allowed it to oxidize for good measure. This mead emphasizes the aged and nutty quality of the blend and helps balance the less sweet components of the mead. In an approximately 3-gallon batch, a 1:1 ratio of honey is used, so 1.5 gallons of

water, 12 pounds (1 gallon) of wildflower honey, and 6 pounds of bamboo honey. It was fermented with Uvaferm 43 yeast with temperatures in the mid to upper 60s Fahrenheit. Head space was left in secondary to encourage oxidation. Fourteen months after pitching and after 10 months in secondary, 8 ounces of dried black currants, 12 ounces of white figs, 12 ounces of black mission figs, and 2 pounds of chopped walnuts were added. Alcohol is in the 15% range, and final gravity is unknown, but I expect something in the 1.090 range would get you close. The mead is almost three years old at this point."

Sweet Mead with Figs and Bamboo Honey (Scot Schaar)

"This mead won Scot the 2017 Meadmaker of the Year award. It was printed in *Zymurgy* two years ago, so go look it up. The heavier, richer, vaguely molasses-like, a-bit-like-buckwheat-honey nature of the bamboo honey was welcome. The figs just emphasize the dark fruit, dried fruit, and oxidized characters and don't stick out as much as the other fruit in the final blend, but you'd notice the difference if I left them out. This mead also gave the blend a championship pedigree I thought we could use."

RUNNERS-UP

Silver Medal: Josh Mahoney of White Bear Township, MN, Minnesota Home Brewers Association, Experimental Mead with Mesquite Honey and Aji Panca Chiles, Aged in a Tequila Barrel

Bronze Medal: Jeremy Voeltz of Vancouver, WA, Fruit & Spice Mead with Raspberry Blossom Honey, Mango, Pineapple, Ghost Pepper, and Habanero



ON THE WEB

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Category 33

STANDARD CIDER & PERRY

138 entries

Sponsored by:

Stowe Cider



Michael Wilcox
Wichita, KS

2019 Cidermaker of the Year
Kansas City Bier Meisters

"Sorry for Perrying"

39E Traditional Perry with Seckel, Forelle, and Tannic Wild Pears

FERMENTABLES

50% Seckel and forelle pears
50% tannic wild pears

YEAST

Cote des Blancs and/or DV10

BREWING NOTES

Please reference Michael's notes in the Cidermaker of the Year section on page 56 to learn more about his approach to perry.

RUNNERS-UP

Silver Medal: Brendon George of Everett, WA, Beer Renegades of Everett Washington (BREW), New World Cider (Heritage Cider Made with a Cider Apple Blend)

Bronze Medal: Edward Walkowski of North Abington Township, PA, Scranton Brewers Guild, New World Perry (Bartlett Pear)



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Category 34

SPECIALTY CIDER & PERRY

162 entries

Sponsored by:
Stowe Cider**Nathan Williams**
Somerville, MA

Boston Wort Processors

"Ice Cider"
40D Ice Cider

Batch volume: 3 US gal. (11.4 L)
Original gravity: 1.124 (29°P)
Final gravity: 1.054 (13.25°P)
Alcohol: 10% by volume

FERMENTABLES

12 gal. (45.4 L) fresh sweet cider,
12.75°P (1.051 SG)

ADDITIONAL ITEMS

5 g Ciderferm nutrient

YEAST

1 package White Labs WLP720 Sweet
Mead/Wine yeast

BREWING NOTES*First concentration*

12 gal. (45.4 L) of juice is split evenly into two bottling buckets, frozen in a chest freezer, thawed at ambient temperatures (60°F/16°C), and drained to yield 6.5 gal. (24.6 L) of concentrate with SG approximately 1.070 (17°P).

Second concentration

6.5 gal. (24.6 L) of concentrate is split evenly into two bottling buckets, frozen in a chest freezer, thawed at ambient temperatures (64°F/18°C), and drained to produce 4 gal. (15.1 L) of concentrate with SG approximately 1.110 (26°P).

Third concentration

4 gal. (15.1 L) of concentrate is placed in a bottling bucket, frozen in a chest freezer, thawed, and drained to produce 3 gal. (11.36 L) of concentrate with SG 1.124 (29°P).

The final concentrate is allowed to warm to ambient temperature in a small carboy and then pitched with one tube of WLP720. Fermented at low ambient temperature of 55–60°F (13–16°C).

After 10 days of fermentation, add CiderFerm nutrient. When fermentation stabilizes, rack twice and then package.

RUNNERS-UP

Silver Medal: Stephen Mayo, Derry, NH, Seacoast Homebrew Club, Cider with Apple Pie Cider Spices

Bronze Medal: Christian Banker, Oceanside, CA, QUAFF (Quality Ale and Fermentation Fraternity), Cider with Other Fruit

**ON THE WEB**

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Relax, Don't Worry, Have a Homebrew!



That mantra rings as true today as it did in 1978 when Charlie Papazian cofounded the American Homebrewers Association with Charlie Matzen. Homebrewing can be as simple or as complex as you want to make it, but the first step is always to relax and not worry.

To aid your relaxation and help you get the most out of Zymurgy, here are some standard assumptions and methods for our recipes. Of course, when a recipe says to do something different, follow the recipe. But you can always fall back on these general tips to brew great beer.



ON THE WEB

For more detailed info, head over to HomebrewersAssociation.org and dive into our How to Brew resources.

BREWING WITH ZYMBURGY

MAKING WORT

Most recipes in Zymurgy offer an all-grain version and a malt extract or partial-mash alternative. Pick the procedure you prefer and prepare some wort!



Malt Extract Recipes

Making wort from malt extract is easy.

- Crush specialty grains.
- Place milled grains in a mesh bag and tie it off.
- Steep bag of grains in 150–160°F (66–71°C) water 30 min. in your brew pot.
- Remove bag of grains from the pot.
- Fully dissolve extract in the hot, grain-infused water.
- Top up with water to your desired boil volume. (Leave some room for foam!)

All-Grain and Partial-Mash Recipes

Unless otherwise specified, all-grain brewers can conduct a single-temperature infusion mash with these parameters:

- Water/grain ratio: 1.25 qt./lb. (2.6 L/kg)
- Mash efficiency: 70%
- Mash temperature: 150–153°F (66.7–67.2°C)
- Mash duration: 60 minutes

Partial-mash recipes make the same assumptions but use a smaller amount of grain and augment the wort with malt extract.

BOILING

No matter how you get here, everyone loves adding hops.



- Boil time is 60 minutes.
- Boils are assumed to be the full batch volume, but you can also boil a concentrated wort and top up with water in the fermenter.
- Hop additions are given in minutes before the end of the boil.

Brew Lingo

Every field has specialized language, and homebrewing is no different. Here are some of the key terms, abbreviations, and acronyms you'll find throughout Zymurgy.

AA – alpha acid

ABV – alcohol by volume

AHA – American Homebrewers Association

BBL – US beer barrel [31 US gal or 117.3 L]

BIAB – brew in a bag

BJCP – Beer Judge Certification Program

Chico – American ale yeast, AKA Wyeast 1056, WLP001, SafAle US-05, and others

CTZ – Columbus, Tomahawk, and Zeus: interchangeable high-alpha-acid hops

DME – dry malt extract

DMS – dimethyl sulfide, an off flavor similar to canned corn or cooked vegetables

DO – dissolved oxygen

EBC – European Brewing Convention (beer color)

FG – final gravity

FWH – first wort hops, added to the boil kettle as it fills with sweet wort after mashing

HERMS – heat exchange recirculating mash system

HLT – hot liquor tank

IBU – international bitterness unit

LHBS – local homebrew shop

°L – degrees Lovibond (malt color)

LME – liquid malt extract

MLT – mash-lauter tun

NHC – National Homebrew Competition

OG – original gravity

°P – degrees Plato (density of wort or beer)

RIMS – recirculating infusion mash system

RO – reverse osmosis, a water purification process that removes most dissolved ions

SG – specific gravity (wort/beer density)

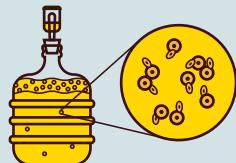
SMaSH – single malt and single hop

SMM – S-methyl methionine, precursor to dimethyl sulfide (DMS)

SRM – Standard Reference Method (beer color)

FERMENTING & CONDITIONING

Pitch yeast into chilled, aerated or oxygenated wort.



- Use twice as much yeast for lagers as you do for ales.
- Ales ferment at 60–70°F (15–20°C). Lagers ferment at 45–55°F (7–13°C).
- Condition ales at room temperature or colder for a week or two.
- Condition lagers at close to freezing for several weeks.

BOTTLING & KEGGING

If you bottle,

- Use 1 oz. of dextrose (corn sugar) per gallon of beer (7.5 g/L) for a good, all-purpose level of CO₂.
- Use less sugar for less fizz.



- Take care with higher carbonation levels—many single-use beer bottles aren't designed for high pressure.

If you force carbonate in a keg,

- Use the chart to dial in the pressure on the regulator.

- Add 0.5 psi (35 mbar) for every 1,000 feet (300 meters) you live above sea level.
- To convert psi pressures to mbar, multiply by 69.
- To convert volumes of CO₂ to g/L, multiply by 2.

REGULATOR PRESSURES (PSI) FOR VARIOUS CARBONATION LEVELS AND SERVING TEMPERATURES

TEMP. (F)	VOL. CO ₂										
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1
33	5.0	6.0	6.9	7.9	8.8	9.8	10.7	11.7	12.6	13.6	14.5
34	5.2	6.2	7.2	8.1	9.1	10.1	11.1	12.0	13.0	14.0	15.0
35	5.6	6.6	7.6	8.6	9.7	10.7	11.7	12.7	13.7	14.8	15.8
36	6.1	7.1	8.2	9.2	10.2	11.3	12.3	13.4	14.4	15.5	16.5
37	6.6	7.6	8.7	9.8	10.8	11.9	12.9	14.0	15.1	16.1	17.2
38	7.0	8.1	9.2	10.3	11.3	12.4	13.5	14.5	15.6	16.7	17.8
39	7.6	8.7	9.8	10.8	11.9	13.0	14.1	15.2	16.3	17.4	18.5
40	8.0	9.1	10.2	11.3	12.4	13.5	14.6	15.7	16.8	17.9	19.0
41	8.3	9.4	10.6	11.7	12.8	13.9	15.1	16.2	17.3	18.4	19.5
42	8.8	9.9	11.0	12.2	13.3	14.4	15.6	16.7	17.8	19.0	20.1

■ = PSI

Source: Brewers Association Draught Beer Quality for Retailers

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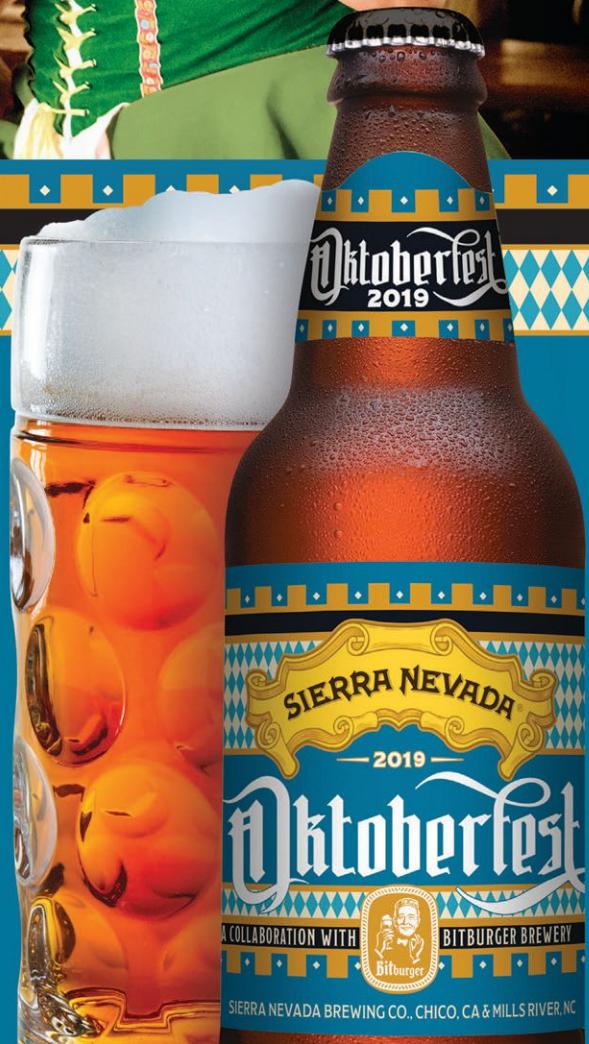
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Sanctioned Competition Program

JANUARY 2019

Concurso do 6º Festival das Confrarias de Cervejeiros Caseiros do Rio de Janeiro,
38 entries
Wanderley Silva & Arthur Antunes, Rio de Janeiro,
Brazil

MARCH 2019

I'm a Little Teapot, Short and Stout, 9 entries
Jeffrey Aronson, San Francisco, CA

IBU Open, 365 entries
Dustin Borror, Des Moines, IA

Coal Country Brewer's Cup 2019, 42 entries
Danielle Broschart, Elkins, WV

WBC 10th Anniversary, 21 entries
Rhys Williams, Auckland, NZ

IsraBrew 2019, 101 entries
Tony Fall, Jerusalem, Israel

Aro Rojo, 1205 entries
Marcelo Luis Roggio, Cordoba, Argentina

IPA Smackdown, 71 entries
Eric Gomez

Granada Beer Festival, 49 entries
Jose Ramon Santamans Miñana, Guadassuar, Spain

Desafio Corina Cervejeiros Caseiros 2019,
8 entries
Leonardo Klosovski, Brasilia, Brazil

APRIL 2019

LIBME April Pro-Am 2019, 33 entries
Justin Hansen, Mark Williams, Gregg Kelley

2019 ASH Spring Classic, 186 entries
James Omphroy, Mesa, AZ

Thirsty Boy Homebrew Competition, 72 entries
Joe Reyna, Carson City, NV

Ohio Mead Competition, 44 entries
Shawn Keenan, Akron, OH

Inaugural Pilsner Invitational, 15 entries
Greg Fleehart, Williamsburg, VA

Spirit of Free Beer, 279 entries
Francisco Talley, Las Vegas, NV

Carolinians Championship of Beer, 370 entries
John Stuart, Bryson City, NC

Ocean State Homebrew Competition,
563 entries
Thomas Belletete, Winchendon, MA

OC Fair Homebrew Competition, 243 entries
Jacob Aragon, Pomona, CA

**Steins Beer Garden 5th Annual Homebrew
Competition,** 32 entries
Cliff Sullivan, Santa Cruz, CA

Leavenworth Ale Fest - Make Ale for the Arts,
37 entries
Eric Adan, Wenatchee, WA

**Amarillo High Plains Drafters Homebrewing
Competition,** 20 entries
Bryan George, Amarillo, TX

Fresh Coast Homebrew Competition, 50 entries
Andrew Baker, Beverly Hills, MI

Antelope Valley Pro-Am, 32 entries
Patrick Ray, Rosamond, CA

TRASH XXIX, 404 entries
Jim Chaney, Steubenville, OH

Napa Homebrewers Classic, 114 entries
Marcos Santana, Campbell, CA

Vale do Lúpulo Blumenau - Cervejeiro Destaque,
11 entries
Marcos Felipe Vieira, Blumenau, SC

Barley's 24th Annual Homebrew Competition,
38 entries
Jim Sudeth, Columbus, OH

Nebraska Shootout, 74 entries
Brian Jeffries, Omaha, NE

Campionato Italiano MoBI Tappa II, 69 entries
Elia Barozzi, Italy

**IX Concurso ACervA Mineira de Cervejas
Artesanais,** 106 entries
Fabio Florencio, Belo Horizonte, Brazil

**Knights of the Tap Handle Quarterly
Competition 18B American Pale Ale,** 7 entries
Sebastian McEachern

Hammerdown Brewcup, 320 entries
Greg Schmidt, Maddy Schmidt, Phil Didion, Tyra
Schmid, Cincinnati, OH

TippyBrew 2019, 68 entries
Robert Wahr, Ypsilanti, MI

South Shore Brewoff, 222 entries
Vaughan Littlefield, Frankfort, ME

SWCA Homebrew Competition, 24 entries
Scott Phillips, Broomfield, CO

JaseComp - Christchurch IPA Challenge,
76 entries
Nick Johnson, Christchurch, NZ

2019 SBE Club Only Strong Ale Competition,
11 entries
Andy Gamelin, Vista, CA

ALES Open, 689 entries
Cory Day, Vancouver, BC

Buckeye BrewCraft's 2019 IPA Contest,
36 entries
Scott Elliott, Columbus, OH

Copa San Arnulfo Primavera, 22 entries
Mariza Gomez Rocha, Ajijic, Mexico

Spring Fling, 343 entries
Jess Ploium, Vancouver, WA

**CHAOS & Goose Island Trappist Single
Competition,** 18 entries
Ben Resch, Chicago, IL

QUAFF COC - Hybrid Beers, 8 entries
Brian Trout and Nick Rakovec

Saisonfest, 38 entries
Cliff Sullivan, Santa Cruz, CA

1º Festival do Cervejeiro Artesanal de Dourados
E Região, ACervA/MS Edição 2019, 30 entries
Murilo Ribeiro and Cristiano Fernandes, Dourados

2019 SMASH SpringStein, 38 entries
Julie Stuedemann, Marshall, MN

Bru Route Challenge, 145 entries
Nick Shadel

Erie County Fair Homebrew Competition,
135 entries

John Crossett, Brian Milleville, Mark Zambron, North
Tonawanda, NY

Titletown Open, 168 entries
Neil Froelich, Green Bay, WI

25th Annual 8 Seconds of Froth, 356 entries
Ryan Larsen, Omaha, NE

Big Homebrew Competition, 100 entries
Brad Drost, Ayr, ON

Colonial Cup, 343 entries
Bill Lynch, Waxhaw, NC

5º Concurso de Cerveja Artesanal do Distrito
Federal, 42 entries
Matheus Valentin Oyo, Brasília, Brasil

Reto SMArSH, 37 entries
Leidy Rincon, Bogota, DC

SODZ British Beerfest Competition, 106 entries
Tony Evangelista, Painesville, OH

2019 Maltose Falcons Mayfaire, 282 entries
Mike Neice, Anaheim, CA

CarbondAle Brew Fest, 51 entries
Rick Henson

Lunar Rendezbrew 26, 426 entries
Justin Holman, Richmond, TX

Modesto Beer Fest, 30 entries
Mike Olsen, Modesto, CA

9º Concurso Interno Acerva Paulista - 2019,
71 entries
Luiz Eduardo Miziara, Campinas, Brazil

Open Season at the ZOO, 111 entries
Dan Weaver, Racine, MO

23rd Annual Chico Homebrew Competition,
197 entries
Jeremy Andres, Chico, CA

MAY 2019

III Concurso TREMBIER de Cervejas Artesanais,
56 entries
Jonas Geiss, São Paulo, Brazil

2019 Greg Noonan Memorial Homebrew
Competition, 209 entries
Aaron Kennison, Colchester, VT

Segundo Cerva Centro Beer Cup, 21 entries
Juliano Roberto Schwantes, Santa Maria, Brazil

Microfest/Lift for Life Gym Homebrew
Competition 2019, 283 entries
Jeff Muse, St Louis, MO

Morgan Cup, 106 entries
Dana Pellerin, Fresno, CA

Lawrence Brewers Guild Big Brew Day Brew-Off,
127 entries
Mike and Stephanie Butler

Came, Saw, Conquered Competition, 32 entries
Eric Barron, Omaha, NE

Fraser Coast Home Brew Comp, 107 entries
Alex Taubert, Queensland, Australia


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Battle of the Bubbles IX, 180 entries
Tim Gerbracht, Vienna, VA

Lagerpalooza 5, 194 entries
Christopher Robinson, Syracuse, UT

Powwow Home Brewers Competition 2019,
14 entries
Troye May

RIBS May Club Competition, 20 entries
Scott Mendes

Wisconsin State Fair Amateur, 222 entries
Caleb Meinke, Madison, WI

23rd Annual BEER Brew-Off, 234 entries
Gregg Kelley, Farmingville, NY

BABO (Bay Area Brew Off), 140 entries
Scott Wilson, Gilroy, CA

Homebruin IX, 50 entries
Kristopher Mear, Seymour, TN

Philly Homebrew Cup, 142 entries
Doug Armstrong, Elizabethtown, PA

Third Annual R.A.Z.E. Cinco de Mayo
Homebrew Competition, 106 entries
Christy Helps, Nelson, WI

Me No Speak Americano, 24 entries
Christian Guthorl, Perth, Australia

West Sixth Brewoff, 36 entries
Joe Brewer, Lexington, KY

Maifest 2019 Keg Competition, 30 entries
Brian Chorba, Chicago, IL

Ipswich Show Home Brew Competition,
55 entries
Jan Grimmer, Waterford, UK

Wizard of SAAZ 2019, 309 entries
John Wicks, Wooster, OH

Sheldon Jackson IPA Challenge, 21 entries
Andrew Smith, Las Vegas, NV

Campionato Italiano Homebrewing - III tappa -
Sotto 50: Birre "estive" con OG minore uguale a
1050, 90 entries
Adriano Bresciani

Tombstone Pro-Am Brewoff, 7 entries
Kerry Hales, Sierra Vista, AZ

Lion Bridge/CRBS Wort Rally and Pro-AM
Qualifier, 36 entries
Tony Browning, Cedar Rapids, IA

The Mead House Iron Bee, 33 entries
Bert Mayer, Holbrook, MA

Vale do Lupulo BrewShop - Cervejeiro Destaque
Maio/2019, 10 entries
João Paulo Parisotto Andriolli, Blumenau, Brazil

7th Annual Heart of Cascadia, 44 entries
Ryan Holt, Salem, OR

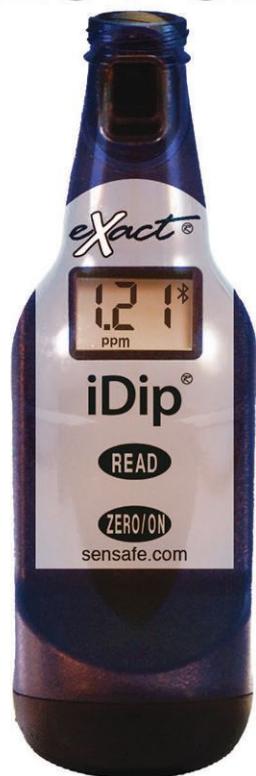
MOM Hot Summer Brew Off 2019, 145 entries
Matt Chick, Kansas City, MO

Bratislavský Hrncovar 2019, 67 entries
Radoslav Dohnal, Bratislava, Croatia

Capitol Creek Brewery's First Annual Home
Brew Competition, 25 entries
Chip Holland, Basalt, CO

Continued >

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R0719



ON THE WEB

For an up-to-date calendar
of AHA and BJCP events,
visit the Events section of
HomebrewersAssociation.org

Brewcommune & Chapman Crafted Challenge,
78 entries

Brian Bennett

Oregon Homebrew Festival, 213 entries
Spencer Williams, Bend, OR

7th Annual Hop Blossom Homebrew
Competition, 109 entries
Richard Deangelis, Stafford, VA

Aludariu taure 2019, 223 entries
Tomas Sirtautas, Peterborough, England

Das Boot, 281 entries
Sean McGuire, Hoboken, NJ

UNYHAs 41st Annual Competition, 304 entries
Ken Smith, Rochester, NY

Hunter Amateur Brewers Competition,
63 entries
Anthony Scott, Newcastle, Australia

Bloatarian Open, 80 entries
Tim McKee, Cincinnati, OH

Jeff Sanders Memorial, 42 entries
Joe St. John, Los Angeles, CA

Lucha de Chelas, 84 entries
Carrie Eckert, Aurora, CO

LABOpen, 343 entries
Sezona, Marian Verbenik, Slovakia

Paws for Rhythm and Brews Homebrew
Competition, 21 entries
Ian and Mark Graham, San Clemente, CA

24th Annual Big Batch Brew Bash, 107 entries
Keith and Pam Bradley, Austin, TX

22nd Annual Cactus Challenge, 338 entries
Cindy Oberlin, Friendswood, TX

2nd Annual HOWL & Solace Brewing Co Wort
Share Competition 2019, 34 entries
Steven Krise, Lovettsville, VA

Danville Brewing Company - GABF ProAm,
12 entries

Paul Brown, Pinole, CA

Great Alaska Craft Beer and Homebrew Festival,
57 entries

Lara Lewis, Whitehorse, YK

1º Concurso de Cerveja Artesanal da Acerva
Cearense, 30 entries
Joao Victor Barros Sampaio, Fortaleza, Brazil

San Diego County Fair Homebrew Competition,
686 entries
Brandon Holt & Garret Lemons, San Diego, CA

Campionato Italiano Homebrewing - IV tappa -
Birra in rIGA, 69 entries
Nicoletto Matteo, Venice, Italy

GTA Brews - Spring Showdown 2019, 81 entries
Chris George, Parry Sound, ON

King of the Guild, 36 entries
Gilad Neeman, Beer Sheva, Israel

Everwood Ave Inaugural HomeBrew
Competition, 30 entries
Peter Davis, Truro, NS

JUNE 2019

BTM Homebrew Challenge, 8 entries
John Carroll, Boulder, CO

The 10th Annual IPA Throwdown, 43 entries
Bill Metz, Oakland, MD

Ohio State Fair Homebrew Competition,
570 entries
Tim Ali, Cleveland, OH

8vo Concurso Interno del CCCUY, 120 entries
Ignacio Brogioli, Montevideo, Uruguay

VIII. Hrvatsko Homebrew Prvenstvo, 433 entries
Niko Čučković, Dubrovnik, Croatia

Mt. Vernon Homebrewers Festival, 48 entries
Chad Kuhns, Salem, IL

Redding Beer Cup, 77 entries
Jake Rothe, Redding, CA

La Copa del Procer 2019, 15 entries
Gabriel Carrabs, Panama City, Panama

LIBME "Chopped" Competition, 12 entries
Joe Glorioso

3rd Annual Homebrew Competition, 24 entries
Justin Mazorlig, Los Angeles, CA

Summer Sizzler, 229 entries
Adam Allen

Bluegrass Cup, 289 entries
Kevin Foster, Chamblee, GA

The Boneyard Brew Off, 182 entries
Caleb Yarrington, Champaign, IL

2019 Great Basin Brew-Off, 144 entries
Jason Wagner

Club-Only Competition, 25 entries
Jeff Spirko, Corpus Christi, TX

Mad Zymurgists/Shadow Puppet Pro-Am 2019,
7 entries
Bryan Arndt, Livermore, CA

Inaugural ACB Homebrew Competition,
78 entries
Lee Immings

8th annual Larry Hartzog's Twisted Beer Fest
& Homebrew Competition, 40 entries
Matthew Meyers, New Orleans LA

WCB Iron Brewer, 21 entries
Tim Mains, Perth, Australia

OC Mashups Team-up, 13 entries
Aaron and Mike, Costa Mesa, CA

2do Concurso Cerveceros del Oeste, 37 entries
Juan José Torres, Castelar, Argentina

Hong Kong Annual Homebrew Competition,
54 entries
Justin Shek, Hong Kong

Summer SMaSH, 18 entries
Giovanni Piva, Saint Louis, MO



For this installment of Commercial Calibration, we visit two classic Old World lagers, painstakingly recreated by two North American craft breweries.

Helles—German for “light,” as in color—was conceived in the mid-1800s by Munich brewers who feared their fellow Germans would prefer the new pale lager from Pilsen to the traditional dark lagers of Bavaria.

Helles lager shares a bit of the same spicy hop character as Czech Pilsner but emphasizes the bready delicacy of Pilsner malt with less bitterness. →

Judges' Score HELLES LAGER

pFriem Family Brewers, Hood River, Ore.

BJCP Category 4A Munich Helles



DAVE HOUSEMAN



SANDY COCKERHAM

→ pFriem Family Brewers in Hood River, Ore., bottles its take on Munich helles lager in traditional brown half-liter bottles. This spring seasonal of 4.8% ABV and 25 IBUs is bursting with aromas of fresh bread and honey from Weyermann Pilsner and Weyermann Barke Pilsner malts and is delicately spiced with Perle and Tettnang hops.

The brewery recommends pairing it with panini, fish, shellfish, or sushi.

Our other beer is a recreation of Černé Pivo Czech-style dark lager beer. Wayfinder Beer of Portland, Ore. presents Hidden Hand Black Lager, a smooth, cleanly-lagered, malt-forward dark beer that's decoction mashed to emphasize classic dark malt flavors of chocolate, caramel, and toffee with a hint of roast.

At 5.2% ABV and 30 IBUs, Hidden Hand pays homage to the traditional dark lager styles of what is now the Czech Republic. Stylistically, it represents something of a rarity among Czech-style lagers commercially brewed in North America, despite the style's official recognition in the 2015 BJCP style guidelines.

Hidden Hand pairs well with roast duck, mushroom dishes, and soft cheeses such as Brie and Camembert.

AROMA

Rich, bready Pils malt aroma dominates. Very low floral hop aroma. Hint of sulfur/DMS is OK. Hint of alcohol aroma. No fruity esters. No diacetyl. Clean lager aroma is right on target for style. **11/12**

APPEARANCE

Classic medium-yellow color. Brilliant clarity. Dense, rocky, white head with excellent retention. A beautiful beer. **3/3**

FLAVOR

Wonderful bready, slightly grainy Pils malt character without residual sweetness. Very low hop flavor. Hop bitterness is somewhat high for the style, but the beer is still well balanced. Malt and bitterness linger in the aftertaste while the beer finishes dry. No fruity esters. No diacetyl. No DMS. Low alcohol flavor is noticeable. Very well-crafted, clean lager. **17/20**

MOUTHFEEL

Medium body and mouthfeel. Lingering hop bitterness is high for style. There is a bit of alcohol warming. Well carbonated—lightens the mouthfeel a little. **4/5**

OVERALL IMPRESSION

This is a malt-forward beer that represents the style very well and is exceedingly drinkable. The brewers have extracted all the maltiness the barley has to offer. The bitterness, although welcomed by many, is high for the style, leaving a lingering bitterness in the aftertaste. Still, this wonderfully malty American interpretation of the classic style went very well with ham steak and pierogi. **8/10**

TOTAL SCORE 43/50

AROMA

After an initial perception of light sulfur, I smell medium-low herbal and floral hops. The moderate, clean, crackery, and bready malt aroma has a rounded character to it. Fermentation character is very clean. **11/12**

APPEARANCE

Color is bright yellow gold, and clarity is brilliant. Moderate white foam stand of fine bubbles with above-average retention. **3/3**

FLAVOR

The malt character has moderate intensity and a crackery, soft, white breadiness with grainy sweetness. Bitterness is pushing moderate and seems high for the style, but there is plenty of malt to balance. Hop flavor is medium low with herbal, floral notes. I get a very slight trace of red fruit character. Hop bitterness is balanced, but lingers in the finish. **15/20**

MOUTHFEEL

Medium body with a medium-high level of carbonation that has a slight carbonic bite. The medium-low creaminess fades to a slightly husky astringency. Mouthfeel is rounded and starts to finish soft, but leaves a lingering bitterness. **3/5**

OVERALL IMPRESSION

This beer is quite lovely, with a layered malt presence and a soft-handed hop flavor. Hop bitterness is a little coarse and seems slightly high. Still, I'd happily enjoy a few pints of this helles. **7/10**

TOTAL SCORE 39/50



Judges' Score

HIDDEN HAND DARK LAGER

Wayfinder Beer, Portland, Ore.

BJCP Category 3D Czech Dark Lager



SCOTT BICKHAM



GORDON STRONG

AROMA

Malt forward, with medium notes of toasted panko, cola, and caramel. The fruitiness is higher than expected, with plum from the malt and pear and berry esters from the yeast. Low, bittersweet chocolate, a touch of charcoal, and no hop aroma.

8/12

APPEARANCE

Very deep brown with mahogany highlights. The head is moderate, forming an off-white, tightly-beaded layer of foam with impressive retention. Pristine clarity.

FLAVOR

Also malt focused, with a blend of Maillard and toasted components, along with bittersweet chocolate and plum. Finishes semi-dry, with medium-low roast and caramel. Could be described as a lager version of a Scottish ale. Medium hop bitterness, but malt balanced. Everything is on the mark for a Czech Dark Lager.

18/20

MOUTHFEEL

Medium-low body and creaminess, with medium carbonation that complements the lingering semi-dry finish. Low alcohol warmth.

5/5

OVERALL IMPRESSION

This is great example of the style, marked by a malt complexity that lifts it above mass-produced commercial versions. The yeast character could be a little cleaner, and the dryness and slight bite from the roasted malts are on the high side for the style, but these do not diminish the excellent quaffability. The decoction mash clearly did its magic in generating malt complexity and a beautiful appearance. Thanks for making the effort to create a credible example of this elusive style.

9/10

TOTAL SCORE 43/50



AROMA

Moderately intense mix of malt and hops. Doughy and roasty maltiness with spicy hops at an even level with the malt. The roasted malt character isn't burnt and has a light chocolate note. The fermentation character isn't fully clean and has a light sulfur note, but nothing is really off.

9/12

APPEARANCE

Fine, light brown foam, great retention. Very dark brown beer with ruby highlights.

3/3

FLAVOR

Smooth malt initially, with a balance of medium hop bitterness and flavor. Dark chocolate roast flavor without any burnt notes. Malt has a richness but doesn't seem heavy. Smooth lager character with a light sulfur flavor. Dry but not crisp in the finish. Aftertaste of both malt and hops, with malt dominant. The hops are lightly spicy.

17/20

MOUTHFEEL

High carbonation, full body, creamy texture, yet a dry finish. Smooth on the palate, but mouth-filling and palate-satiating. Not astringent. Not warm. Seems fizzy.

4/5

OVERALL IMPRESSION

Smooth, full-flavored beer. Rich on the palate but dry at the finish. Well-balanced malt and hops with restrained roast. Interesting spicy hop character. Not squeaky clean, making it more Czech than German. Could use more hops and a lighter body, but it's delicious and disappeared quickly.

8/10

TOTAL SCORE 41/50

JUDGING

One way beer judges check their palates is by using commercial "calibration beers"—classic versions of the style they represent. *Zymurgy* has assembled a panel of four judges who have attained the rank of Grand Master in the Beer Judge Certification Program. Each issue, they score two commercial beers (or meads or ciders) using the BJCP scoresheet. We invite you to download your own scoresheets at bjcp.org, pick up a bottle of each of the beverages and judge along with them in our Commercial Calibration.

OUR EXPERT PANEL

Includes Dave Houseman, a Grand Master VII level judge and competition director for the BJCP from Chester Springs, Pa.; Sandy Cockerham, a Grand Master VI level judge from Indianapolis, Ind. and an associate exam director and Midwest Representative for the BJCP; Scott Bickham, a Grand Master IV judge from Corning, N.Y., who has been exam director or associate exam director for the BJCP since 1995; and Gordon Strong, a Grand Master XIII judge, principal author of the BJCP Style Guidelines, and president of the BJCP board who lives in Beavercreek, Ohio.



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Illustrations by Terry McNerney



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The Con Job

By Dave Carpenter

Homebrew Con 2019 was a wild success by any measure, especially if that measure is the number of AHA members upon whom I accidentally spilled beer, which was three. My driest apologies go out to the lucky few who found themselves in the splash zone, but please understand that such a small number of victims represents a personal victory.

I have a bit of a history when it comes to spilling beer, you see. Partly it's down to strabismus, a condition in which the eyes refuse to cooperate for the purpose of forming a single stereoscopic image. This hinders depth perception and makes it difficult to recognize where the pitcher ends and the glass begins. Strabismus also offers the amusing photographic side effect that →

one appears to be staring at something considerably beyond and, in my case, slightly to the left of the camera.

My unfortunate liquidity proclivity is also a product of the lavish enthusiasm with which I agitate sample glasses. I swirl them with abandon. While judging beer in Stockholm last April, I managed to overturn an appreciable fraction of the very first sample, so eager was I to volatilize aromatic compounds. It's my own special superpower.

Despite a bit of spilled beer, though, everyone I spoke to in Providence seemed to have a great time. I know I did. It's hard to capture the excitement of Homebrew Con in writing, but I hope the gold-medal recipes from NHC in this issue help even non-attendees feel a part of the action.

One question that comes up with some frequency concerns the selection process for Homebrew Con host cities. "Why don't you ever bring Homebrew Con to my city?" It's a simple, legitimate question that has a complex answer.

LEGAL EASE

First of all, the host city has to be in a state where we can legally and unambiguously serve homebrew to attendees. Without this, there's not much point in considering other

“
It's my own
special
superpower.

criteria. This is less straightforward than it might seem at first glance.

For one thing, alcohol control boards come and go. A precedent set by an official last year may not hold next year, and we need solid assurance the policy won't change just before showtime.

Then there's the not-necessarily-obvious issue of serving homebrew alongside commercial beer. Attendees of Homebrew Con 2018 will probably recall that we had to divide the expo hall in half: one side for homebrew, the other for commercial beer. When you wanted to cross from one area to

the other, dump buckets and security staff stood ready to ensure the two didn't mix. And this was in *Portland*, a city where the person dispensing craft beer by night may well have been dispensing recreational cannabis by day.

Silly? Absolutely. But them's the rules. And some places simply have sillier rules than others.

Laws change all the time, though, especially at state and local levels, making this an area where AHA members can really effect some change—you've done it before, and you can do it again. If you feel strongly that your city would be an excellent host for Homebrew Con, please check out the resources available at HomebrewersAssociation.org/homebrewing-rights. We don't have enough staff to do the lobbying ourselves, but we're eager to help AHA members who take up the cause.

The conference does move around—we aim for a sequence of East, Central, West—so even with the sluggish pace at which real legislative change occurs, it's possible your location could be a candidate sooner than you think.

RIGHT TIME, RIGHT PLACE

Next there's the small complication of finding an actual venue. If you've ever attempted

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to plan a wedding in mid to late June, you understand how hard it can be to find a desirable spot in early summer. Now imagine hosting 3,000 guests for three consecutive days, with a sizable number wanting to bring and serve their own beer. Not every potential venue is as cool with this as we are.

Besides the cost of the host venue itself, hotel rooms, transportation expenses, and concurrent events are also considerations. As much as I would love to attend a Homebrew Con on Maui, it would be asking a lot to expect AHA members to spring for summer flights to Hawai'i. Unlike work conferences, where companies generally foot the travel bill, Homebrew Con attendees incur personal expense and take vacation days to be there. We have to be cognizant of that.

FERMENTATION WITH REPRESENTATION

Your elected officials also have a say. I'm specifically referring to the AHA Governing Committee (GC), the group of 15 whom AHA members choose to advise AHA staff and help direct our organization. GC members offer feedback and help us choose Homebrew Con locations.

The GC meets once a month by phone, with staff chiming in as needed. And we all meet in person for half a day the Wednesday before every Homebrew Con to discuss priorities for the year ahead. The GC offers a valuable connection between staff and membership, and I encourage all AHA members to remember this channel for having your voices heard.

We also survey Homebrew Con attendees every year to gain valuable feedback on what worked and what didn't. Our survey includes questions about possible future locations for Homebrew Con, and we take that information very seriously.

FORESIGHT IS 2020

I am personally giddy that Homebrew Con 2020 will be in Nashville. I haven't visited Nashville in a long time, and I trust they've been able to replenish their stocks of hot chicken since then.

There will, of course, be much, much more said about Nashville once 2020 is actually here. But for now, if you've never attended Homebrew Con before, I recommend you block out June 18–20 in your calendar and request those days off work. If Nashville is anything like Providence, you'll have a great time, learn a lot, and taste outstanding beer, mead, and cider.

And who knows? Maybe, with just a bit of luck, I'll spill a little beer on you.

Dave Carpenter is editor-in-chief
of Zymurgy.

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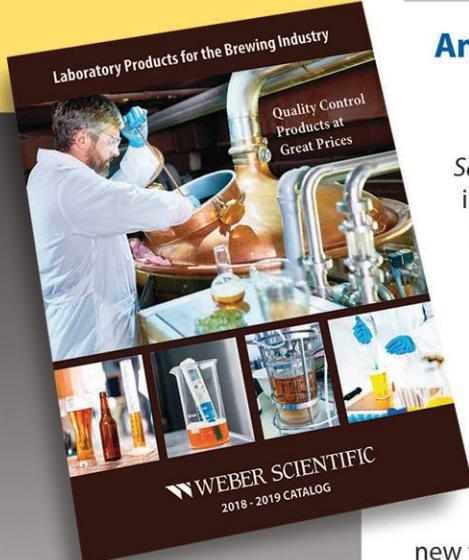
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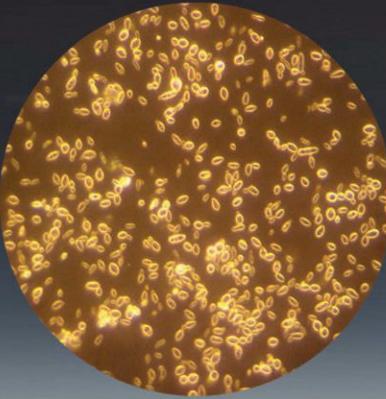
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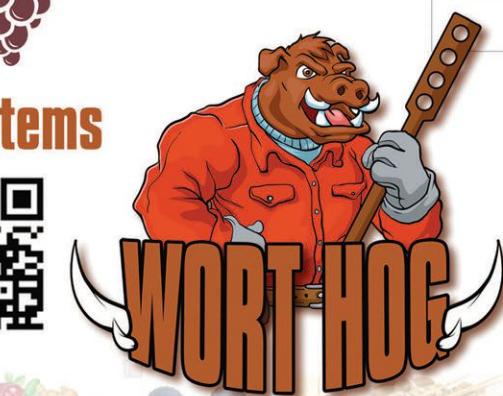
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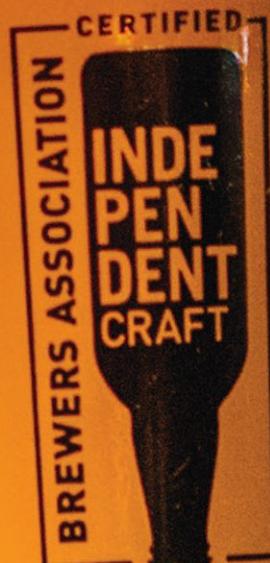


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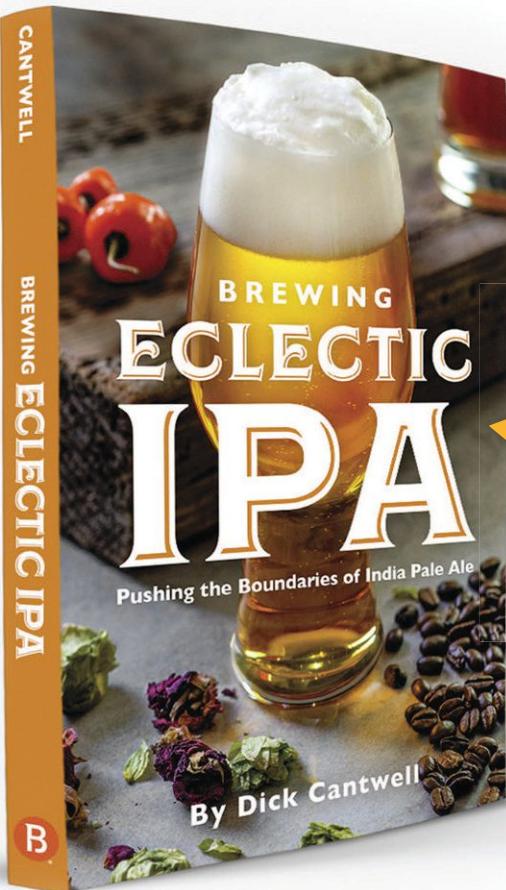
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Home Run

The text arrived on Sunday evening. It said judging had finished in the Nordeast Brewers Alliance homebrew contest and asked if I would like some news about my beer. The beer in question had been brewed under conditions that had prompted a friend to suggest I name it Serendipitous Stout.

I consider myself a casual brewer. I say that because I compare myself to other brewers who have intricate, hand-built all-grain brewing systems or chemistry degrees. By comparison, I brew in a bag using kettles and paint straining bags from a big box store. As a casual brewer, I can make mistakes, but repeating the mantra “Relax, don’t worry, have a homebrew” keeps me calm as I figure out workarounds.

I had experimented with three different dry-hop combinations in a small batch. Now I was going to do a larger batch with my preferred Citra-Columbus combination.

Brew day was filled with plenty of moments where I kicked myself over things going wrong. Each time was quickly followed by the “Relax, don’t worry, have a homebrew” mantra, although I saved the last part as a reward for finishing. Amazingly, at the end of the brew day I was only 1 gravity point off my target. The wort came up a gallon short, but I still celebrated by completing the mantra.

For all that had gone wrong, there was still much I had done right. I had experimented and found a good recipe. I had read up to learn more about what I was doing. And I had tried out techniques from two helpful books: *Brewing Better Beer: Master Lessons for Advanced Homebrewers*, by Gordon Strong, and *IPA: Brewing Techniques, Recipes and the Evolution of India Pale Ale*, by Mitch Steele.

Matt Johnson here with the Nordeast Brewers Alliance. We are finished judging the Nordeast Brewers Alliance Brewing Competition. Would you like some news on your beer?

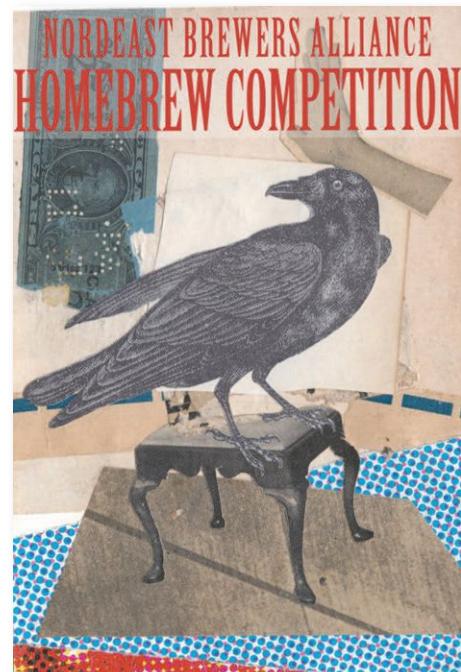
Matt

12/9/18 8:45 PM

Sure. 

Congratulations, your American Stout not only won its category, but also took 1st place in the Best of Show judging out of 180+ beers.

Exceptionally well brewed beer! It was a pleasure to have a sample of.



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The finished beer was very good. I had seen a poster for a competition that a local homebrew club was putting on, so I entered my beer. I had competed once before and enjoyed getting the feedback.

This led to the Sunday evening text and learning I had won my category and best of show. I was excited to place in my category, but I was astonished to win best of show. I felt like a pitcher who had hit a home run in the major leagues.

I went to the next meeting of the Nordeast Brewers Alliance to pick up my medals and see what a homebrew club was like. I liked it so much I joined the club and have enjoyed meeting new friends, sampling homebrew, and learning about brewing ever since.

Earlier, when I had been planning this brew, I met the brewer and co-owner of Clockwerks Brewing in Minneapolis and told him about the beer I had in mind. When I brought a bottle of the final product to the taproom, he offered to brew a pro-am version of my Serendipitous Stout.

Good things can happen when you connect your bat with the ball. So, whether you brew casually or otherwise, remember to relax, don’t worry, have a homebrew, and swing for the fences.

Tim Kane has been casually brewing for over six years. By day, he works as a CPA. He blogs about beer and brewing at timkwrites.com and is a member of the Nordeast Brewers Alliance.



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When Adam Robbins received a homebrew kit from his wife Grace, he never imagined that brewing would become his livelihood. Fueled by a growing family, fascinated with fermentation and driven by his Londoner roots, Adam crafted home brews from Wyeast Smack Packs that earned him regional and national awards. And after just three years of home brewing, Adam's passion for brewing "bloody good" beer turned into a family-run, award-winning brewery: Reuben's Brews.

Not only is Adam a master of his craft, but he has found success without ever losing site of what's important—the same values that serve as the foundation of Wyeast.



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