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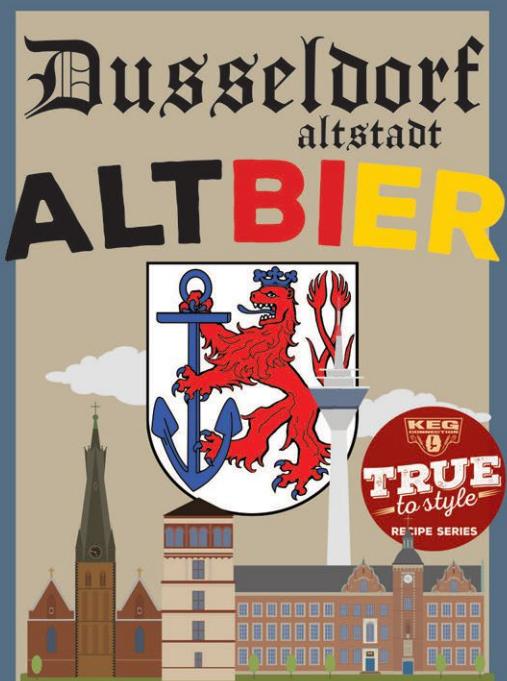
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Publisher Brewers AssociationSM
 Editor-in-Chief Dave Carpenter
 Associate Editor Amahl Turczyn
 Technical Editor Gordon Strong
 Art Director Jason Smith
 Graphic Designers Ashley Peck & Kelli Gomez
 Operations Director Stephanie Johnson Martin
 Sales & Marketing Director Barbara Fusco
 barbara@brewersassociation.org
 Sales Director Kevin Doidge
 kevin@brewersassociation.org
 Business Development Manager
 for Advertising & Sponsorship (East) Tom McCrory
 mccrory@brewersassociation.org
 Business Development Manager
 for Advertising & Sponsorship (West) Kari Harrington
 kari@brewersassociation.org
 Advertising & Sponsorship Associate Joe Damgaard
 Marketing Managers Jeb Foster & Rachel Staats
 Member Services/Circulation Manager Dan Goloback

American Homebrewers Association

Director Gary Glass
 Assistant Director Steve Parr
 Web Editor Duncan Bryant
 Events & Membership Coordinator Matt Bolling
 Competition Coordinator John Moorhead
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AHA Governing Committee Members

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By Dave Carpenter

Comp Time

I have a confession to make. In the nearly ten years that have elapsed since I started homebrewing, I have entered precisely two of my beers into competition.

Two.

One was an American pale ale. I think the other was a Belgian dark strong ale, but it might have been a wee heavy. In any case it was dark and malty. Both of my entries scored OK—mid 30s maybe—but neither medaled or went on to bigger and better things.

I brew what I like, and I (usually) like what I brew, but I know I can do much better.

Homebrew competitions offer excellent venues through which to hone one's brewing skills. There's the competitive aspect, of course—the self-imposed pressure to move an entry ever higher in the results—but there's also plenty of great feedback.

Every beer in a competition is judged according to criteria that are about as objective as can be formulated without resorting to lab equipment. The score sheets you receive in return are valuable sources of information to help you brew better beer. Judges tell you what works and what doesn't work, and you can use that to improve your homebrew.

As I worked my way through the stories in this issue of *Zymurgy*, I found myself repeatedly impressed by the lengths to which homebrewers will go to have their beers evaluated in competition. In "Homebrewing across America," Brian Yaeger relates the stories of two highly accomplished homebrewers—Rodney Kibzey and Derek Wolf—who have won medals in all 50 states. A five followed by a zero.



Simply sending that much beer out for competition is an impressive feat of logistics, but winning medals makes the achievement all the more remarkable.

And then there is, of course, the National Homebrew Competition. This year's comp saw a record 8,618 entries from 3,530 participants representing every state in the union, DC, Puerto Rico, and 14 other countries. Despite the continued growth of commercially brewed craft beer, NHC remains the world's largest beer competition.

My impeccably clad colleague John Moorhead presented the NHC awards at Homebrew Con in Minneapolis this past June. The energy in the room was palpable as names were announced and medals were draped around the necks of the best homebrewers, meadmakers, and cidermakers in the country and the world. It was impossible not to be ensnared by the excitement of the winners when they went on stage to receive their awards.

The recipes for all of the gold-medal-winning entries are here for you in this issue—in my opinion the ultimate bottle share and a true measure of homebrewer generosity. I don't know if I'll enter any competitions between now and Homebrew Con 2018 in Portland. But even if I sit out competitions for another decade, it's fun to know I can always brew a winning recipe, even if my own version never takes home a medal.

Dave Carpenter is editor-in-chief of *Zymurgy*.



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Quick! Name five British hop varieties. (We only got two, too.) There's much more to British hops than Fuggles and EKG. Meet the newest members of the Goldings family.

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Rodney Kibzey and Derek Wolf are accomplished homebrewers who happen to have medaled in all 50 states. Their stories inspire us all to up our game.

By Brian Yaeger

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The National Homebrew Competition just completed its 39th year. You'll find recipes for the 33 gold-medal winning entries here (there wasn't enough space to print all 8,618).

By Amahl Turczyn



Beer Camp: Brewing off the Grid

Thirsty Gold Rush miners had to brew their own beer. More than a century later, at a camp northeast of LA, modern hikers revived that tradition.

By Tracy Hammond

To read this special online feature, go to HomebrewersAssociation.org/so17

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Find these homebrewing recipes and more on our website @ HomebrewersAssociation.org/homebrew-recipes



>> GET THERE!

FRIDAY THE FIRKENTEENTH

Fact: there are 365 days in a year.

Well, almost. If it's a leap year, which happens in years that are divisible by four, we get a bonus day, so 366. That is, except in years that are exact multiples of 100, when we just have the normal 365 (look for it in 2100). Oh, but if the year happens to be an exact multiple of 400, then we do, actually, make it a 366-day leap year, which last happened in 2000 and comes next in 2400, so mark your calendars accordingly.

We tolerate this elaborate if-then logic because a normal year in the Gregorian calendar is 365 days, but it takes the earth slightly longer—365 days, 5 hours, 48 minutes, and 46 seconds—to complete one orbit around the sun. All the exceptions to the rule amount to a cosmic fudge factor that reconciles the difference between a calendar year and an astronomical year.

Such complexity, combined with the additional complications of the 7-day week and 12 months of unequal length, conspire to make the 13th day of the month somewhat more likely to fall on a Friday than on any other day. You're 0.4% more likely to witness a Friday the 13th than you are a Monday or Tuesday the 13th. And the 13th is almost 0.6% more likely to fall on a Friday than on a Thursday or Saturday.

That's terrible news if you're superstitious, but if you love cask ale, this Friday, October 13th is your lucky day. On every Friday the 13th since 1998, the Grey Lodge Pub in Philadelphia has held Friday the Firkenteenth, a one-day beer festival featuring 20 to 30 firkins of cask-conditioned ale.

The fest is divided into two sessions running from noon to 6 p.m. and from 6 p.m. to midnight, so take your pick. Last time they did this (January 13, 2017), the lineup included fresh cask ales from Thomas Hooker, Victory, Neshaminy Creek, Heavy Seas, Tröegs, and Bell's, just to name drop a few.

If you're the lucky one who kicks a firkin, the bartender rings a bell, an angel gets its wings, and you get a free commemorative T-shirt. Friday the Firkenteenth is cash only, and it's pay-as-you-go with no bar tabs, so hit the ATM on your way there. For more information, go to greylodge.com.

September 8–9

Beavertown Extravaganza

London, UK

beavertownbrewery.co.uk

September 15–17

Telluride Blues & Brews Festival

Telluride, CO

tellurideblues.com

September 16

21st annual Brewgrass Festival

Asheville, NC

brewgrassfestival.com

September 23

Ales, Arts and Autos

Gulfport, MS

alesartsandautos.com

September 30

15th annual Fresh Hop Ale Festival

Yakima, WA

freshhopalefestival.com

October 5–7

36th annual

Great American Beer Festival®

Denver, CO

greatamericanbeerfestival.com

October 5–8

38th annual Nashville Oktoberfest

Nashville, TN

thenashvilleoktoberfest.com

October 21

Long Beach Craft Beer Festival

Long Beach, CA

lbbefest.com

For more craft brewing events, go to CraftBeer.com



>> WORT-Y CAUSE:

OKTOBERFOREST

Anyone who brews beer knows that water is essential. Obviously there's water in the beer itself—anywhere from 85 to 98 percent by volume, depending on strength—but then there's all that water for cleaning, sanitizing, wort chilling, and so on. It adds up quickly, and more than half of the water in the United States comes from forests.

In partnership with professional breweries across the country, The Nature Conservancy is once again celebrating OktoberForest, a campaign to bring awareness to the health of forests, which reduce evaporation, filter sediment, and prevent erosion. These essential functions promote healthy watersheds and, consequently, better beer.

Unfortunately, the U.S. Forest Service (USFS) estimates that half of America's USFS-managed forests, an area larger than the state of Colorado, need some kind of restoration to recover from the effects of wildfire, deforestation, and pests such as the mountain pine beetle. Through OktoberForest, The Nature Conservancy aims to shed light on the critical link between forest health and brewing water.

You'll find a list of participating breweries from Deschutes to Dogfish Head at OktoberForest.org. A particularly interesting feature is the interactive map that superimposes the Brewers Association's brewery database onto a map of America's watersheds, which are classified according to their level of damage or risk.

For more information, go to OktoberForest.org. And be sure to check out Last Drop in the May/June 2016 issue of Zymurgy to learn more from Chris Topik, homebrewer and director of The Nature Conservancy's Restoring America's Forests initiative.

>> BEER QUOTE

*"Instead of
water we got here a
draught of beer, . . . which
would acclimate and naturalize a
man at once,—which would make
him see green, and, if he slept,
dream that he heard the wind
sough among the pines."*

—Henry David Thoreau,
The Maine Woods

>> TAKE IT EASY

BREW ON AND BREW OFTEN

By Charlie Sutton

Brewing with extract gives me the opportunity to dive into brewing and get my passion into full gear. As a father of three with limited spare time in my life for brewing, I use timesaving malt extract to get in my brew days at night. I put the kids to bed, my wife goes to sleep, and I get to brewing. Nighttime is the best time for me to get focused, enjoy one-on-one time with my ingredients, and stay on the path to creating great beer.

But can you make great beer with extract? Yes, you can, and I have proven results with the included recipe, which placed first out of 33 American IPA entries in the 2016 Keystone Hops War of the Worts in Montgomeryville, Pa.

Here are a few tips for coming out on top and enjoying top-notch beers made with extract.

- **Brew on.** Take critical feedback as a positive opportunity to brew more.
- **Brew often.** You have shorter brew days when you use extract. Take advantage of this extra time in your life and plan to brew a lot. You can brew many different styles, choose one style to perfect, or simply enjoy the art of brewing.
- **Brew with the right malt extract.** Choose the best liquid malt extract (LME) or dried malt extract (DME) base for your intended beer style. After you choose the right base, add steeping grains for color, flavor, and aroma.
- **Add malt extract carefully.** Pour DME in slowly so that clumps don't build up on the side of the pot and burn, which could cause off flavors. When working with LME, premix with a little hot water in a separate pot to prevent the extract from dropping to the bottom of your brew kettle and burning when you add it. Split the extract addition in two, adding half at 60 minutes and half at 15 minutes.
- **Adjust hop additions.** For my IPAs, I always add a bit more hops with

SUPER NICE DAY IPA

1st place American IPA, 2016 War of the Worts

Recipe courtesy Charlie Sutton

Batch Size: 5.5 US gallons (20.8 L)

Original Gravity: 1.060

Final Gravity: 1.008

Color: 10 SRM

Bitterness: 100+ IBU

Alcohol: 6.8% by volume

MAINTS

- 6 lb.** (2.72 kg) Golden light DME
8 oz. (227 g) aromatic malt
8 oz. (227 g) Caramunich malt
8 oz. (227 g) caramel 20° L malt
8 oz. (227 g) caramel 40° L malt
8 oz. (227 g) Carapils malt
1 lb. (454 g) corn sugar (dextrose)

HOPS

- | | |
|----------------|--------------------------------|
| 3 oz. | (85 g) Centennial @ 60 min |
| 0.5 oz. | (43 g) Chinook @ 60 min |
| 1 oz. | (28 g) Citra @ 15 min |
| 0.5 oz. | (14 g) Chinook @ 15 min |
| 1 oz. | (28 g) Citra @ 5 min |
| 0.5 oz. | (14 g) Chinook @ 5 min |
| 2 oz. | (57 g) Citra, dry hop 5 days |
| 0.5 oz. | (14 g) Chinook, dry hop 5 days |

YEAST

Fermentis Safale US-05

WATER

- 1 package** IPA Beer Dust

BREWING NOTES

Play Don McLean station on Pandora during brew session: the music will increase your passion for the art of brewing. Collect 3.5 gal. (13.2 L) reverse osmosis (RO) water, add IPA Beer Dust, steep grains at 160° F (71° C) for 20 minutes, and rinse grains with 2 qt. (1.9 L) of 170° F (77° C) water to collect 4 gal. (15.1 L) of boil volume. Split dry malt extract between two additions, 3 lb. (1.36 kg) right after steeping grains are removed and 3 lb. (1.36 kg) 20 minutes before knockout. Add hops as indicated above, and add the corn sugar (dextrose) at 15 minutes. Rack into primary and add additional RO water to collect 5.5 gal. (20.8 L) total. Aerate with mash paddle, pitch yeast, and ferment 14 days in primary at 66° F (19° C). Rack to secondary and dry hop for 5 days at 60° F (16° C).

Brew on. Brew a lot. Use this motto to create your next batch. Have fun, drink great beer, brew great beer, and remember that using extract can put you on top. The keys are to dive into the journey of brewing beer, perfect a style, keep it simple, and keep at it.

- **Use simple sugars.** I like to add dextrose (corn sugar) to the boil to increase wort fermentability and get the final gravity down.
Key's are to dive into the journey of brewing beer, perfect a style, keep it simple, and keep at it.



>> GREAT PRODUCT

33 BREWS: A BEER BREWING LOG

Sure, you *could* keep track of your brew day using a mobile device, but then your expensive phone runs the very real risk of falling into boiling hot wort, getting soaked in spilled homebrew, or arresting the fall of a plummeting wrench. Sometimes good, old-fashioned paper really is the best choice.

33 Brews: A Beer Brewing Log is a handy journal in which you can record 33 brew days, enough pages to be useful but not enough to weigh you down. The inside front cover offers a chart for estimating ABV, and each entry provides spaces for all of the relevant recipe info: grain bill, hop additions, water treatments, and so on. Particularly nice are the fields where you can write down the times for strike, mash-in, mash-out, sparge, boil, and knockout—great for keeping track of how long a brew day *really* takes.

The list price is just \$7, and discounts are available when you buy in bulk. Minor complaint: those of us with aging, myopic eyes might find the small-ish type a little hard to read, but we suspect we might just need reading glasses and that most of you young-uns will be just fine.

To learn more and buy your very own copy, head over to 33books.com.

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By Gary Glass



Brewers Association Launches Seal for Independent Craft Brewers

In the United States, we are fortunate to have more than 5,500 breweries, the vast majority of which are small and independent. Most of these breweries have their origins in the homebrewing community, and naturally, homebrewers tend to be the biggest supporters of their local breweries.

However, over the past several years, Big Beer has been purchasing a number of these formerly small, independent breweries. In nearly all cases, the acquired breweries' packaging doesn't mention the Big Beer parent companies, which makes it increasingly difficult for craft beer drinkers to identify which brands are independent and which are not.

As I'm sure most of you are aware, the American Homebrewers Association (AHA) is a division of the not-for-profit Brewers Association (BA), whose purpose is "To promote and protect American craft brewers, their beers, and the community of brewing enthusiasts." The BA has been hearing from our member breweries that they want a way to inform beer drinkers that they are independent.

To this end, on June 27, the Brewers Association launched the independent craft brewer seal. The seal is available free of charge to any brewery licensed by the US Alcohol and Tobacco Tax and Trade Bureau that meets the BA craft brewer definition of a small, independent, traditional brewery. Within a week of launch, more than 1,000 breweries downloaded the seal.

There are many reasons to support independent breweries. Acquired breweries have a level of access to capital, access



to raw materials like hops and malt, and—most critically—access to market that independent breweries will never have. Ultimately, for me, it comes down to choice. If homebrewers like you and I don't stand up for independent brewers, there may come a time when there are no independent breweries left. If that happens, we will have ceded choice and innovation in the beer market to Big Beer and closed the pathway for future homebrewers to open small breweries in this country. Yes, we will still have the option to brew at home, but I'm one homebrewer who sure doesn't want to be responsible for brewing all of the beer I drink! Please join me in supporting independent breweries, and encourage your friends and family to look for the independent craft brewer seal.



CRAFT BREWER DEFINED

An American craft brewer is small, independent, and traditional.

SMALL

Annual production of 6 million barrels of beer or less (approximately 3 percent of US annual sales). Beer production is attributed to the rules of alternating proprietorships.

INDEPENDENT

Less than 25 percent of the craft brewery is owned or controlled (or equivalent economic interest) by an alcohol industry member that is not itself a craft brewer.

TRADITIONAL

A brewer that has a majority of its total beverage alcohol volume in beers whose flavor derives from traditional or innovative brewing ingredients and their fermentation. Flavored malt beverages (FMBs) are not considered beers.



Brew Guru AHA App

It's now been a year since we launched the Brew Guru app for AHA members. While we think the initial app was pretty awesome, the latest version, which launches around the time this issue mails, is a major upgrade that incorporates suggestions from users.

The latest version includes all the features that make Brew Guru a great app, including the digital AHA membership card, the ultimate brewery and homebrew shop map, and easy access to AHA Member Deals. But the new version is faster to load, more user-friendly, and packed with proven homebrew recipes taken from Zymurgy magazine, National Homebrew Competition medal winners, and clones of many of your favorite commercial beers.

Additionally, the new app allows users to recommend businesses as potential AHA Member Deals program participants, which helps AHA staff recruit new participants. You can also help us keep the map up to date by providing edits to location details and letting us know about breweries that aren't showing up on the map.

If you have already downloaded Brew Guru, be sure to update to the latest version (available for Apple iOS 8 and up; Android 4.4 and up), and if you haven't yet downloaded the app, do it now! The app is free to members and non-members alike. Non-members get a free, no obligation, 15-day trial AHA membership with the app download. After the trial, the app still functions,

just without access to AHA Member Deals and the members-only content.

Member Deals

Speaking of AHA Member Deals, the AHA staff has already added more than 250 locations to the AHA Member Deals program so far this year, surpassing 1,800 total locations that offer discounts to AHA members. Don't worry: we'll keep adding more.



Homebrew Con

The 2017 Homebrew Con in Minneapolis is now but a fond memory, and it was pretty damn amazing if I do say so myself. We had 2,600 attendees this year. If you were one of them, glad you could join us. If not, sorry you didn't make it, and I hope to see you at a future Homebrew Con.

Whether or not you were in Minneapolis, all AHA members have access to video recordings of the 49 educational sessions from Homebrew Con 2017, as well as recordings of sessions from past conferences going back to 2011. This members-

only content is available in the Let's Brew section of HomebrewersAssociation.org.

Next year, Homebrew Con is headed to the great craft beer destination of Portland, Ore. It will have been 20 years since the last Portland conference, so mark your calendars. This is one not to be missed!

Look for more details on HomebrewCon.org as we get closer to our 2018 dates of June 28–30.



National Homebrew Competition

At Homebrew Con, 241 BJCP judges evaluated 1,134 National Homebrew Competition (NHC) final-round entries. The final-round entries had previously won first, second, or third place in one of the 33 NHC categories judged at 12 different judging centers in the first round of the competition. This year's first round set a new record of 8,618 total entries, ensuring that the NHC remains the world's largest beer competition. All of the gold medal-winning recipes from the 2017 competition can be found in this issue of Zymurgy. Gold 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

While Justin Crossley was busy broadcasting the NHC awards ceremony at Homebrew Con in Minneapolis, AHA Governing Committee chair Roxanne Westendorf announced his name from the event stage as the recipient of this year's AHA Governing Committee Recognition Award. Justin is the founder of the Brewing Network and a former member of the AHA Governing Committee.



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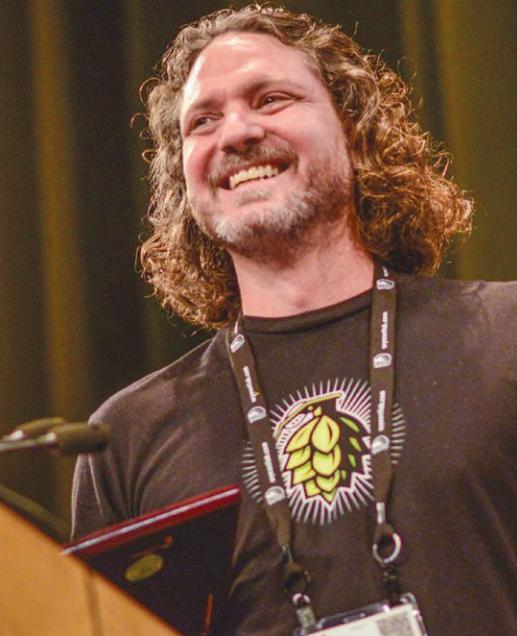
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*Directly calculates these values with no math or calculations required.



Justin Crossley accepting the 2017 AHA Governing Committee Recognition Award.

Since its founding, the Brewing Network has become a vibrant online community of homebrewers worldwide, helping educate tens of thousands of homebrewers. Justin has a rather flamboyant public persona, but in his time on the AHA Governing Committee he brought keen insight and invaluable advice to the group that helped make the AHA a better organization for the membership. Congratulations, Justin, this is a well-deserved honor!

Radegast Club Award

During the awards ceremony at Homebrew Con, AHA Governing Committee member Drew Beechum, along with Victoria Garza of YCH Hops announced the Heart of the Valley Homebrewers of the Willamette Valley in Oregon as the recipient of this year's Radegast Club of the Year Award. This AHA club award, named for the Slavic god of beer, celebrates what clubs contribute to the hobby of homebrewing and to their local communities.

Established in 1982, the Heart of the Valley Homebrewers is a smaller club, with 30–35 members, but they do a lot to contribute to homebrewer education and their local community. Their educational endeavors include Beer Judge Certification Program training for members, educational sessions on brewing and sensory analysis via Oregon State



Heart of the Valley Homebrewers of the Willamette Valley in Oregon were this year's recipients of the Radegast Club of the Year Award.

University's Fermentation Sciences program, and behind-the-scenes brewery tours. For public outreach, the club organizes events to demonstrate homebrewing and promote the hobby.

Since 2006, the Heart of the Valley Homebrewers, which is officially a 501(c)(4) social welfare organization, has contributed more than \$140,000 to local charities. The club's major fundraiser is the Septembeerfest beer festival, which in addition to serving an array of commercially made beer, mead, and cider, also has samples of the club's homebrews available for attendees. Club members also donate their time by participating in a local Adopt-A-Highway program, where the club keeps a two-mile stretch of Oregon Highway 20 beautiful.

The members of the Heart of the Valley Homebrewers truly embody the spirit of the Radegast Club of the Year Award. Congratulations to all of the club members, and thank you to all of the homebrew clubs that submitted entries for the 2017 Radegast Club of the Year Award. The award includes a \$500 cash prize and a \$500 donation to the charity of the club's choice. Thanks to YCH Hops for their continued sponsorship of this awesome award.

To learn more about the Radegast Club of the Year Award and the Heart of the Valley

Homebrewers, see the community section of HomebrewersAssociation.org.

Learn to Homebrew Day

The 19th annual AHA Learn to Homebrew Day is coming up Saturday, November 4. Learn to Homebrew Day is a great opportunity to introduce friends, family, and neighbors to homebrewing and help keep the homebrewing community alive and growing. It's easy to participate: just check out the Events section of HomebrewersAssociation.org for details.

A bit of advice: go easy on the newbies! Complicated processes and fancy equipment can be intimidating to those new to the hobby. By keeping that first brew simple, you can show your students the ropes and help them get a solid foundation to build on. From there, these newly initiated homebrewers can take it however far they want to go.

Legislative Update

The AHA supported a successful effort by the North Carolina Craft Brewers Guild to pass a comprehensive alcohol bill (passed as S155), which included language expanding the homebrew law to allow for use of homemade beer and wine in competitions and organized events. Governor Roy Cooper signed the bill into law on June 30. Thanks to all of the North Carolina homebrewers

who contacted legislators in support of the bill.

The AHA continues to support Ohio AHA member Elmer "Goose" Steingass in drafting a bill to expressly allow homebrew to be served at club meetings, competitions, and events like the AHA Homebrew Con. Ohio does not currently have a homebrew law, though Ohio Liquor Control has traditionally defaulted to federal law for matters involving homebrew.

In June and July, the AHA sent action alerts to AHA members in Delaware and Wisconsin on behalf of those states' brewers guilds, encouraging members to engage on legislation affecting those states' craft breweries. Thanks to all of the members in those states who heeded the call and contacted legislators.

Until next time, happy brewing!

Gary Glass is director of the American Homebrewers Association.

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By Our Readers

Inspired Homebrewing

Dear *Zymurgy*,

A few years ago, I was inspired by a drawing of what looked like a garage converted into a brewery, captioned with “Ah, what to brew?” All the things any homebrewer would want were close by. It took me a while, but I refinanced the house, built an addition, and ended up with a homebrewery and tavern that any brewer would be proud of.

My brewery has a three-tier gravity system, a three-tap keezer, a large stainless-steel sink, and a countertop with a garbage disposal. The water in the sink goes to a tank and can be reused to water trees and plants (I try to be as green as possible in the high desert). My wife uses part of the area to grow lots of green plants, which add to the beauty of the space.

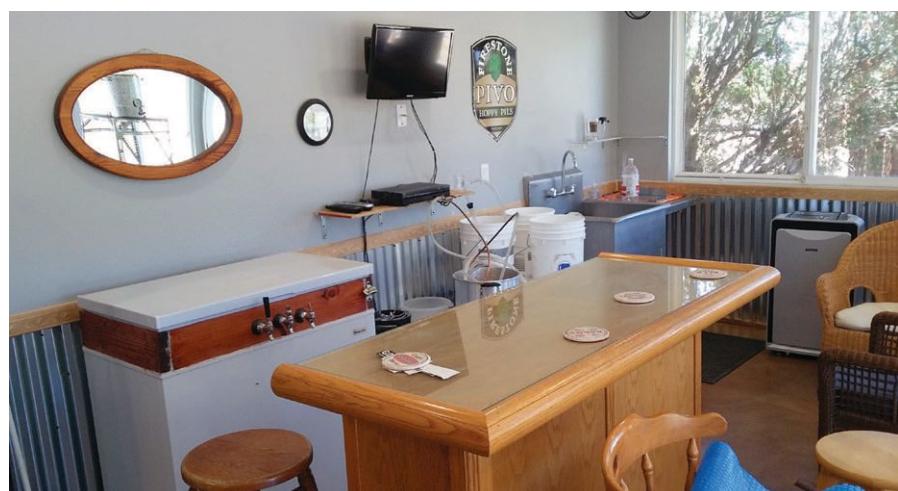
I had open-heart surgery three months ago and was overwhelmed when my homebrew club donated to a fund that allowed my wife to be with me during the ordeal. Everything was expensive, and I plan to show the club my appreciation with a little barbecue and some pool time in my new brewery as we uncork three of my staple beers: a nice IPA, a chocolate stout, and a Vienna lager.

To any new homebrewer, homebrew clubs are a great way to network and up your game as a brewer, and the camaraderie can be priceless. Thanks, *Zymurgy*, for “upping my game” as well. Cheers!

Yours truly,
Harold Johnson
Apple Valley, Calif.

Reactions to *Zymurgy's* Best Beers in America

Dear *Zymurgy*,
In your July/August issue article about the 15th annual Best Beers in America, you



Harold Johnson's homebrewery and tavern in Apple Valley, Calif.

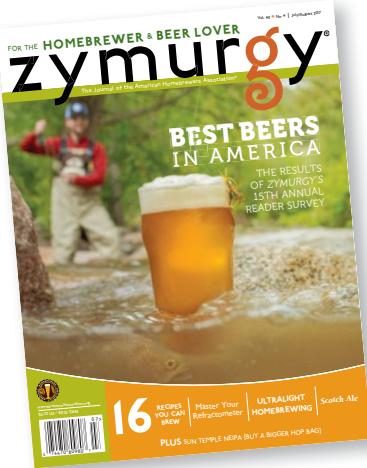
state, “The poll is open to members of the AHA, who could submit up to 20 of their favorite commercial beers available for purchase in the United States.”

What is your definition of “commercial?” The reason I ask is that Russian River Brewing’s Pliny the Younger made the list. If a beer is produced in such limited quantities without packaging and only sold on tap, is that still considered a commercially available beer?

I’ll admit I am not 100 percent familiar with every single beer on the list, but most of them seem to be available for purchase in cans or bottles.

Thanks!
Ben Cook
Santa Rosa, Calif.

Zymurgy editor-in-chief Dave Carpenter responds: Hey Ben, the survey is meant to take the palate pulse of *Zymurgy*



readers and highlight what homebrewers love about American beer; so, yes, limited-release, draught-only beer definitely qualifies. The beer need only be brewed and sold by a professional brewer to be considered. You're ideally situated to enjoy some of that Younger, but for the rest of us, perhaps it's time to plan a vacation to Santa Rosa next February!

Dear *Zymurgy*,

I love many of the beers that won, but how in the world does Sam Adams get no love in the Best Beers survey? Are they not groovy enough anymore? Do their beers not have funny enough names?

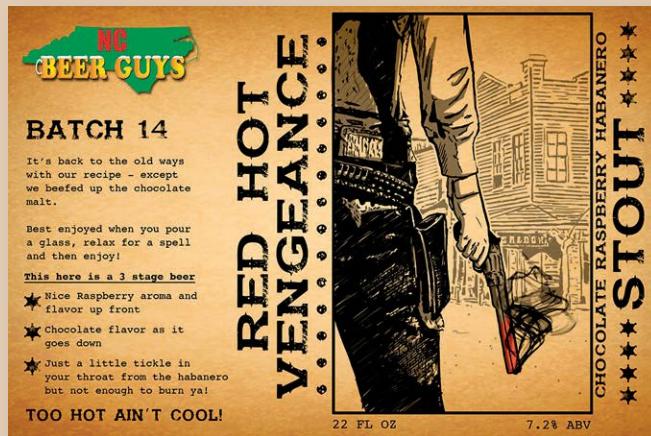
I understand the dynamics of who vote, but I think we need to respect Boston Beer: sixty-some beers in their portfolio, one of the original greats in Boston Lager, supporters of homebrewers, and a pedigree second to none. Shame on the readers of *Zymurgy*. I am going out to buy a 12-pack of anything from Boston Beer Company today and toasting the great brewer and patriot Sam Adams!

Disheartened,
Steve Dill
Amissville, Va.

Zymurgy editor-in-chief Dave Carpenter responds: We asked Jim Koch, founder of Boston Beer Co., to offer his thoughts. Here's what Jim had to say.

"We heard from our friends at *Zymurgy* there were a few drinkers, specifically craft-beer-lover Steve Dill, who were concerned that we were not included in the top 50 beers in America poll. We are grateful for his support and have seen Samuel Adams beers continue to win top awards during the last year at brewing competitions around the world. Like these fans,

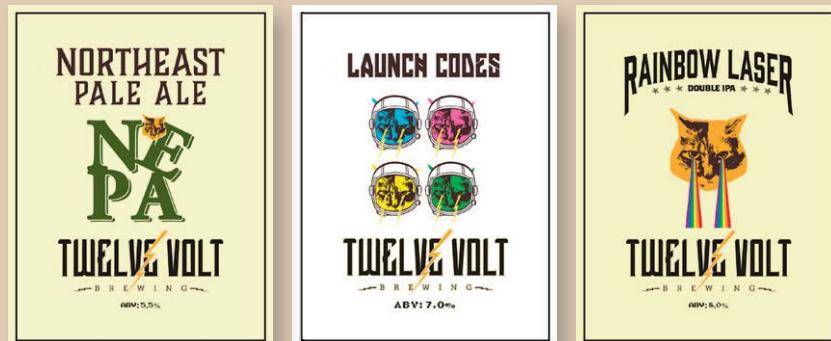
READER-SUBMITTED HOMEBREW LABELS



This is a label that has gone through many changes over the years. The beer was originally called Hot Pistol, a chocolate, raspberry, habanero stout, and it won NoDa Brewing's Top of the Hop Competition four years ago. NoDa Brewing has been brewing the beer on a limited basis ever since then and it has become a cult favorite. Whenever we would brew our homebrew version, people would get confused between the availability of ours and theirs, so we finally decided to change the name and the logo. It was difficult to come up with a new name because the old name has such a history. My son and I are both graphic artists, and we came up with a design that fit the new name perfectly: Red Hot Vengeance.

Most people shy away from pepper beers. We brewed Red Hot Vengeance to have a balance of chocolate and raspberry with a little bit of heat—just enough to give a little tickle in the throat. The NCBeerGuys have been brewing for six years but we're mostly known for promoting North Carolina breweries, beer, and events.

Dave Tollefson
Apex, N.C.



I live in northeast Pennsylvania, I love making New England-style IPAs, and I'm a member of the Wyoming Valley Homebrewers Club. A couple of months ago, I was joking around with my kids about making a label with our cat Daisy on it. They thought it would be funny to have her shoot rainbows out of her eyes. As a result, Rainbow Laser was born. My kids loved the design, and ever since, they have been dropping hints on what to do next with her.

Thanks,
Gary Cook

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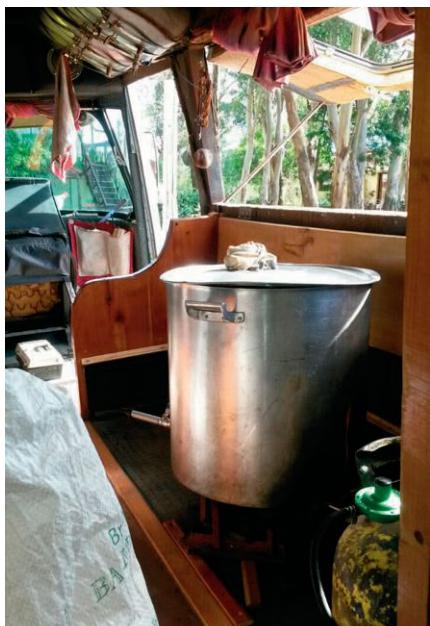


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We are traveling to the West Coast of the USA, and our ultimate dream is to reach the World Cup in Russia in 2018. You can find more information about our project in our Facebook page at facebook.com/MotorbarSur.

Regards,
Federico and Lucas Martino

Brew Pets



Dear Zymurgy,
This is Nugget, our one-and-a-half-year-old English bulldog. He loves to help his daddy brew beer! He's waiting patiently for his daddy to transfer the beer to a keg.

Cheers,
Shannon Rilloraza
Harrisburg, Pa.



Dear Zymurgy,
When my boyfriend took over my dad's brewing rig, I was surprised to see that it was Brody the dog (and not my dad) who felt he needed to keep an eye on him.

Cheers,
Briana Whinnie
Phoenix, AZ

we wished to see our award-winning beers like Samuel Adams Double Bock, OctoberFest, New World Triple or Utopias amongst such great company, but the good news is since I first homebrewed Boston Lager in 1984, there's [sic] now more than 5,300 independent American craft brewers making great beer! Cheers to our craft brewing compatriots who made the Top 50 and we'll see you next year on the annual list!"

The Motorbar

Dear Zymurgy,
We are two brothers traveling around the world making craft beer in a motorhome turned bar and brewery. We started our trip in Patagonia, Argentina, 15 months ago, and we have traveled 15,000 km (9,300 mi.) in our 1964 Bedford 300, in which we have brewed beer about 50 times in 30 different places. We are supporting our trip only with the beer we make, and we have made many friends who have invited us to



Dear Zymurgy,

These are brew Beaucerons Libby (left) and Simone (right) helping to brew "Hoot" Pale Ale in honor of their foster friend who got adopted last year to a happy home.

Ale in honor of their foster friend who got adopted last year to a happy home.

Cheers, Robert Blouch, Aloha, Ore.

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

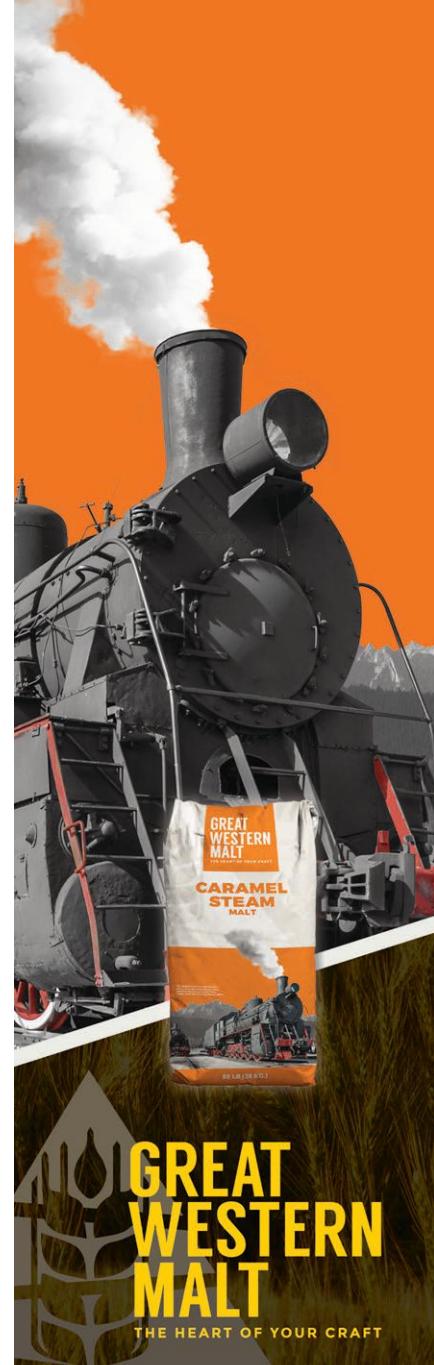
Hey homebrewers! Submit your homebrew label for Dear Zymurgy section, at homebrewersassociation.org/magazine/submit-bottle-label.

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By Professor Surfeit



Building Water

Dear Professor,
Our club, BUZZ Homebrew Club, in West Chester/Downingtown, Pa., west of Philly, is a vibrant, knowledge-hungry club with a great group of brewers! We have been spending the past year and a half doing small-batch experiments to isolate hop flavor and aroma, base malt flavors, and yeast strain characteristics. Later this summer we will be wrapping up our base ingredients experiments with a water test.

Here's my plan (unless you have a better suggestion!). I'd like to get a supply of reverse osmosis (RO) water and build it up with the correct chemicals to recreate classic brewing waters from three different regions. Then we will brew three small batches of the exact same recipe, using identical processes with the three different water profiles, and host a blind triangle tasting to see how water composition really comes through in the final product.

Some questions about this process: can we build the classic water profiles easily at home with RO water, or is there a better way? What suggestions do you have to aid in this process? Do you have any suggestions for the base style of beer? We don't want it to be too bland, as our most recent experiment, malt, was a pretty

simple beer with no real personality, but we do want the water to make the most impact. Do you have any suggested resources we could look at as we plan? And, finally, do you have any thoughts on process, or any other concerns that I might not be thinking about?

Looking forward to the results!
Patrick Lauletta
Downingtown, Pa.

Hiya Patrick,

Water, water, everywhere, and only beer to drink! The world can be good. You've sprayed a bunch of questions at me, but I'll try to provide some simple answers with a bit of background and my thoughts.

Yes, you can build a classic water profile at home starting with RO water. The arithmetic and science behind what you add is good to know if you are inclined to delve into the world (math) of water chemistry. Or you could use most homebrew recipe software to build your water with the addition of various minerals using such things as table salt (sodium chloride), Epsom salt (magnesium sulfate), chalk (calcium carbonate), gypsum (calcium sulfate), calcium chloride, and other compounds. Software is your friend here and intuitively easy to use. A gram scale can also aid in the process.

Your question about base style recipe brings up several reactions on my part. Simply speaking, I'd recommend a hearty pale ale or perhaps a light bock beer if you want a beer with some gusto. But, if you really want to identify how water can influence your beer, I'd try lighter styles.

Mind you, the influence of water on the resulting beer is complex. Don't look for water tastes coming through. What happens

is that water can affect mashing and fermentation, and thus flavor, mouthfeel, aroma, and balance. For example, adding sulfates can create some sulfur-like notes, but it can also affect fermentation, hop efficiency, and overall balance. Keep an open mind on the differences you experience, and don't necessarily blame it all on the character of the water. What's more important is how water affects mashing, brewing, and fermentation.

Here's an additional insight. So you want to create classic brewing water? Well, not so fast. The classic brewing water of Munich, Germany, was and still is quite hard. Making a light beer with classic Munich water might make for a grainy, harsh, and ill-balanced light lager.

Because Munich's water was so hard, German brewers either brewed a dark beer (the acidity of roast malt helped neutralize mineral hardness), pre-boiled the water to precipitate calcium carbonate and reduce alkalinity, or added acidified malt to the mash to neutralize the water and make for smooth, balanced light lagers. They actually conducted a sour mash and added a measured amount of the runoff to the mash water to change what you refer to as the classic water of Munich. Interesting, eh?

So, Patrick, I think I've sent you off in the right directions and added a few thoughts to consider.

*Don't worry, be brewing,
The Professor, Hb.D.*

Copycats and Deep Thinking

Dear Professor Surfeit,
Craft brewers are creating so many interesting beers these days. I love the world for this. But, I can't help but wonder why so many brewers copy each other and replicate perceived trends. I'm afraid that the innovation of craft

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brewers can be endangered. Do you think the world is really running out of new types of beers to brew? Is that why we see so many copycat beer brands and styles?

Out of the box,
Tom Wilder
Brookfield, Wis.

Dear Tom,

You are not only perceptive, but also wise. I wonder the same thing at times. While I love Citra-hop-accented grapefruit IPA and appreciate barrel-aged brews and some sours, I've gotta wonder why there isn't even more creativity out there. I mean really out-of-the-box creativity. How many bourbon-barrel-aged stouts and other brews do we want to choose from? There are so many other woods to age with. So many other barrels to play with!

Citrus-accented hops don't need to dominate IPAs, but they do. There is a whole world of hop choices to play with as late and dry hop additions, most of which haven't even begun to see the light of day. The subtleties of malt character are limitless, but few brewers have really explored those options to see how malt can interact with hop character, fermentation character, aroma, appearance, and so much more.

There are some exceptions out there, and some breweries do push the envelope of variations on a theme. I've seen some breweries play with yeast by providing different envi-

ronments for fermentation to express itself and yield ale and lager, Belgian-, German-, and American-style brews, all with the same yeast. Different yeast environments can really extend the envelope of hop flavor and aroma profiles. So much fun!

Beer making and homebrewing really provide the opportunity to continue the exploration of what beer can be.

I suppose for many professional breweries, copycatting provides an opportunity to give your paying beer-drinking fans something familiar to relate to. Cash is sometimes king. And a certain amount of copycatting can help provide the financial resources to keep growing and keep innovating. I've met many craft brewers who have sworn they wouldn't brew an IPA, but nearly all eventually succumb to the customer pressure to offer at least one, even though their heart and vision didn't originally include IPA. We all make sacrifices, and hopefully we do so in order to pursue our true purpose and vision. Keep that in front of you.

The hard part is maintaining that vision and reason to brew. You love it. I love it. We love to homebrew because our boundaries are truly limitless.

Stay wise, my friend. Thirst will follow.
The Professor, Hb.D.

**Have a question for The Professor?
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By Amahl Turczyn

Baltic Porter

At the beginning of the 18th century porter was the most ubiquitous of all beers, with London breweries churning it out in truly titanic proportions to a thirsty working-class public. It didn't stay in London, however, as porter brewers soon found export of their dark ales a lucrative business. Porter was shipped to India, Russia, and Australia, making its reach truly global.

But brewers, whether from experience or trial and error, found that normal-strength porter didn't favorably change after weeks in casks bound for warm climates. This was at odds with porter shipped north to Scandinavian and Baltic ports, which seemed to undergo some degree of improvement. Porter for export was brewed to a higher alcoholic strength to survive the voyage, a lesson later picked up by pale ale brewers shipping to the same destinations. Brewers began to name their strong or "stout" porters "imperial," a designation likely not lost on the Russian court, whose empress insisted on keeping the shipping lanes open and tariff-free to ensure her own supply.

One London porter producer, Henry Thrale's Anchor Brewery, shipped a strong porter known as Thrale's Entire from the late 1700s that found its way north to Russia, but there were at least ten more strong porter exporters doing the same. Since these ships often stopped at ports along the way, several Baltic ports between Russia and London also fell under the spell of these mystical dark beers and began setting up their own trade, many offering oak for barrels and isinglass for finings in exchange.

Russia became more enamored of imperial stout, with many English brewers later adding the distinction *Russian* to their ver-



"BREWERS FROM BALTIc REGIONS MADE THEIR VERSIONS OF STRONG PORTER WITH WHAT WAS AVAILABLE AND FAMILIAR."

sions. But Sweden, Finland, Estonia, Latvia, Lithuania, Livonia (which has since become part of Latvia and Estonia), and Poland preferred the beer we now think of as imperial porter, and unsurprisingly, each took up the brewing of the style with a unique spin to match regional taste preferences.

As with the adaptation of any style, brewers from Baltic regions made their versions of strong porter with what was available and familiar. While Thames water had long been considered the perfect porter water, Baltic brewers found success with their own raw ingredients and water resources. Quite often, they had help from British expatriates.

William Knox brought his porter brewing skills from England to Gothenburg, Sweden, setting up a porter brewery there in the late 1700s. Finland and Sweden are both countries where licorice has been a traditional treat, and is still a much-loved flavor, so it is natural that many porters produced there have strong licorice notes in addition to the dark roast signature.

Not long after this experimental stage, with lager breweries honing strong porter recipes, Finland's Nikolai Sinebrychoff (having

CONTINENTAL-STYLE BALTIC PORTER

Batch Size:	5.5 US gallons (20.8 L)	Color:	29 SRM
Original Gravity:	1.077 (18.8° P)	Bitterness:	29 IBU
Final Gravity:	1.012 (3° P)	Alcohol:	8.6% by volume

MALTS

5 lb.	(2.27 kg) Pilsner malt
4.25 lb.	(1.93 kg) 10° L Munich malt
4 lb.	(1.81 kg) Vienna malt
1 lb.	(0.45 kg) Caramunich malt
8 oz.	(227 g) Special B malt
8 oz.	(227 g) Briess Extra Special malt
8 oz.	(227 g) Carafa II malt

HOPS

0.5 oz.	(14 g) Polish Marynka or German Tettnanger, 10.5% a.a. @ 60 min
2 oz.	(57 g) Polish Lublin or Czech Saaz, 5% a.a. @ 20 min

YEAST

White Labs WLP802 Budejovice lager yeast (4L starter)

ADDITIONAL ITEMS

1 Whirlfloc tablet or 1 tsp. (5 g) Irish moss @ 15 min

DIRECTIONS

Mash in at 148° F (64° C) and monitor pH if necessary. Hold for at least one hour. Mash out at 168° F (76° C), and sparge at 170° F (77° C). Sparge enough volume for a 120-minute boil.

After 60 minutes of boiling, add the 60-minute hops. At 20 minutes, add 20-minute hops. At 15 minutes, add either 1 Whirlfloc tablet or 1 tsp. (5 g) of Irish moss.

After the boil, stir wort vigorously to create a whirlpool and precipitate out the trub. Chill wort to 48° F (9° C) as quickly as possible, run off into a fermenter, oxygenate, and cold-pitch yeast starter.

Ferment at 48° F (9° C) until signs of fermentation are evident (usually within 36 hours). Ferment at 50° F (10° C) for the next two weeks, and then allow temperature to free-rise to 55° F (13° F) and ferment until activity slows. Conduct a long diacetyl rest at 60° F (16° C) until terminal gravity is reached (7 to 14 days) before crashing the beer to lagering temperature. Cold condition for at least 1 month at 35° F (2° C) before packaging, although 3 months is better.

EXTRACT VERSION

Substitute Pilsner malt with 4 lb. (1.81 kg) Pilsner liquid malt extract. Substitute Munich malt with 3.5 lb. (1.59 kg) Munich liquid malt extract. Substitute Vienna malt with 3 lb. (1.36 kg) Vienna liquid malt extract. Decrease Caramunich to 8 oz. (227 g). Steep grains in 155° F (68° C) reverse osmosis (RO) water for 30 minutes. Remove grains, rinse, dissolve extracts, and top up to desired boil volume with RO water. Proceed as above.

emigrated from Russia) opened a brewery in Helsinki specializing in strong porter in 1819. Sinebrychoff Porter still retains much of its original character, with dark

chocolate, dried plum and tobacco smoke notes, hints of licorice, molasses, and 7.2% ABV. The proportion of roast and black malts gave it distinctly stout-like lean-

ings of London breweries, though it used Continental hops and base lager malts as well. Denmark was also notable for adopting this darker, stout-like strong porter style. Later, in 1836, Scot David Carnegie began brewing Carnegie Porter in Sweden. Its dark fruit, coffee, and licorice signature carries a sweetness that made it popular with Swedes, and it remains so today. However, like Sinebrychoff, Carlsberg now owns the brewery.

Speaking of Carlsberg, in the mid-1800s, Baltic porter as a style received another formative transformation: lager yeast. Cold shipping of the first strong porter exports had mellowed the English-brewed porters, but beers brewed in Baltic countries needed yeast adapted to ferment cool, not just condition cool.

Lager yeast therefore became the Baltic brewery standard; ale yeasts were unsuitable, and strong porters lost much of their ale yeast-derived esters and phenols, gaining a signature lager smoothness. Malting technology progressed as well, with high-kilned brown base malts changing over to pale lager malt with an addition of black patent and/or roast barley, allowing many Baltic breweries to add strong porters to their usual lineup of pale lager beers.

In Tartu, Estonia, another strong porter brewery opened, this one with a softer, sweeter profile that resulted from the use of Munich and Vienna base malts. To this day, Polish and Estonian “Continental-style” Baltic porters boast a smoother, maltier balance, with lots of deep malt complexity and less brown, black, roast, and licorice character than their stout-like Scandinavian counterparts.

Dividing Baltic porter into two sub-styles—a maltier, bock-like, dried-fruit-forward Continental style like those examples from Latvia, Lithuania, Poland and Estonia, and a darker, roastier, molasses-and-licorice Scandinavian style which more closely resembles English imperial porters and stouts—would be to grossly oversimplify the style’s complex historical diversity. But it does serve our purposes here, and gives you two quite different recipes to try.

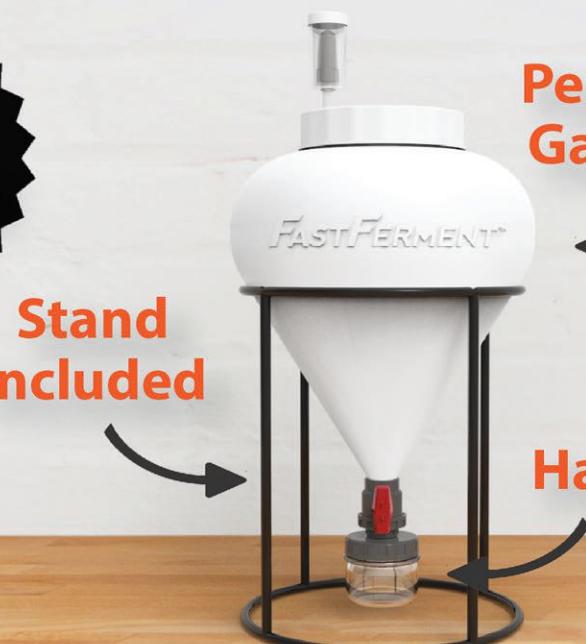
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LONDON-STYLE BALTIC PORTER

Batch Size:	5.5 US gallons (20.8 L)	Color:	28 SRM
Original Gravity:	1.081 (19.5° P)	Bitterness:	29 IBU
Final Gravity:	1.013 (3.8° P)	Alcohol:	9.1% by volume

MALTS

5 lb.	(2.27 kg) Maris Otter pale malt
5 lb.	(2.27 kg) Vienna malt
4.5 lb.	(2.04 kg) Munich malt
8 oz.	(227 g) brown malt
12 oz.	(340 g) Special B malt
8 oz.	(227 g) amber malt
4 oz.	(113 g) chocolate malt
4 oz.	(113 g) black patent malt

HOPS

1 oz.	(28 g) Perle, 8% a.a. @ 60 min
2 oz.	(57 g) Hallertau, 4.8% a.a. @ 20 min

YEAST

Kölsch or Irish Ale yeast (2 L starter)

ADDITIONAL ITEMS

1 Whirlfloc tablet or 1 tsp. (5 g) Irish moss @ 15 min

DIRECTIONS

Mash in at 148° F (64° C) and monitor pH if necessary. Hold for at least one hour. Mash out at 168° F (76° C), and sparge at 170° F (77° C). Sparge enough volume for a 120-minute boil.

After 60 minutes of boiling, add the 60-minute hops. At 20 minutes, add 20-minute hops. At 15 minutes, add either 1 Whirlfloc tablet or 1 tsp. (5 g) of Irish moss.

After the boil, stir wort vigorously to create a whirlpool and precipitate out the trub. Chill wort to 65° F (18° C) as quickly as possible, run off into a fermenter, oxygenate, and pitch yeast starter.

Fermentation should be allowed to free-rise from 65° F to 68° F (18 to 20° C) during the first 2 to 4 days. Ferment at 68° F (20° C) over the next two weeks until terminal gravity is reached. Cold condition for at least 1 month at 35° F (2° C) before packaging.

EXTRACT VERSION

Substitute Munich and Maris Otter malts with 3.25 lb. (1.47 kg) Munich and 4 lb. (1.81 kg) Maris Otter liquid malt extracts, respectively. Substitute Vienna malt with 4 lb. (1.81 kg) Vienna liquid malt extract. Decrease Special B malt to 8 oz. (170 g) and steep in 155° F (68° C) reverse osmosis (RO) water for 30 minutes. Dissolve extract and top up to desired boil volume with RO water. Add hops and boil 60 minutes. Proceed as above.

The former takes a clean, smooth, lager approach and has become the modern standard for the style. The other bitterer, edgier version is more like a Russian imperial stout—it's brewed with a more historically minded grain bill, and there-

fore works better with an ale fermentation. Either direction you choose, balance should be foremost on your mind when putting together a recipe. These are strong-flavored, complex beers, and the very best examples feature an interplay

of sweet, malty, bitter, fruity, and roasty components, none of which dominates the others.

On the subject of yeast, it almost goes without saying that pitching rates should be very generous, especially when brewing the lager option. A long, slow fermentation that severely limits ester production is best for this style, so if you have the patience for a cold-pitching regime, now is the time to use it. Pitching at or just below fermentation temperature onto fresh yeast from a medium-strength lager is ideal. A clean, attenuative strain works best: German, Czech, and Bohemian Pilsner strains all do well. With ale yeast, you don't have to worry quite so much about cell count, but it's still a cool-fermented, high-gravity beer. Clean ale varieties like Kölsch, Irish, or German ale yeasts would work.

The base malt bill should be a blend of low- and high-kilned malts totaling 70 to 80 percent of the grain bill. Pilsner, Vienna, and Munich malts usually comprise roughly equal proportions, though some brewers may use all Vienna and Munich; this provides a lush, malty backdrop to support the bitter black and roast grains, and it lends some toasty malt complexity. Caramel malts come next, adding heft and sweetness, and providing malt-derived dried fruit character. Caramunich and a very dark crystal malt like Special B accomplish this task nicely.

Malt extract is a great option when brewing these beers, since all-grain versions require a lot of mashing space, but I usually cut back the caramel malts a bit when doing extract-heavy Baltic porters; otherwise they can end up with too much dried fruit sweetness. If you can find Briess Extra Special malt, it's worth giving this 130° L drum-roasted malt a try for its prune, date, and toasted marshmallow contributions—in judicious amounts, these go marvelously well with Baltic porter.

For the Scandinavian/English style, brown and amber malts provide an authentic nod towards early London porter grain bills, with a burnt toast and biscuit grain astringency that accentuates the dry cocoa and

bittersweet chocolate notes. As for black malts, Carafla II works wonders for the lager version, as do debittered (huskless) chocolate and black malts. Black patent and chocolate malts are appropriate for the London style, too.

Minute amounts of chocolate wheat or chocolate rye—no more than one percent of the grain bill for either—may also provide some balancing black grain astringency without adding too much harsh or burnt character. But remember that a good dose of alcohol will also dry out the balance, so these may not even be necessary.

The BJCP limits color to 30 SRM, and it's easy to get carried away with the black malts—but then you are leaning into imperial stout territory. Baltic porters can be as light as 17 SRM, which would mean including only a few ounces of black malts on top of the other specialties.

Hops are background here, and the variety doesn't matter a whole lot. Shoot for about 30 IBUs, though the BJCP allows 20–40 for the range, with a modest addition at the 60-minute mark and a flavoring addition at 20 minutes. Noble lager varieties seem to pair well with the style, as do Styrian Goldings. Citrus, pine, catty, and tropical fruit varieties are not good choices as they are too intrusive; unimpeded malt complexity is the goal here.

As for water, start with reverse osmosis or distilled water. Some brewers like to add a tiny addition of salt, which adds a sweetness to strong porters, but this is easy to overdo—over 100 ppm is too much. Alkalinity can be adjusted upwards with calcium hydroxide (pickling lime), but only do this if necessary.

If you are doing the London-style Baltic porter and want to dial in a good chalk aquifer London water profile, it is advisable to take three precautions first.

1. Read Martin Brungard's article on London water in the July/Aug 2013 issue of *Zymurgy*;
2. Use a water calculator before adding salts—it's common to target 50–75 ppm calcium, 50–150 ppm sulfate,

50–150 ppm chloride with moderate (120–200) alkalinity to counter the high proportion of acidic black, kilned, and dark caramel malts in the grain bill—and

3. Use a pH meter (not pH strips, which aren't as accurate) to get a correct reading of your actual mash pH and adjust if necessary.

If brewing the Continental-style Baltic porter you can also avoid diddling too

much with your water and just use soft or reverse osmosis water without any acidification of your mash. Existing mineral content in the grain bill should put you in the correct range of 5.2 to 5.4, but use your pH meter after mashing in, and if you get a reading below 5, be ready with a bit of calcium hydroxide for adjustment.

Amahl Turczyn is associate editor of *Zymurgy*.

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Carbonation & Oxidation in Traditional UK Cask Ale

By Keith Thomas

Who cares for gas? Well, beer is full of it, so it's hard to ignore, particularly if you like that sharp snap of carbonation fizzing on your tongue and up your nose. However, not all beers bubble, and UK cask ale is a clear exception to international standards.

Gas is a major characteristic of beer and one we often judge for quality. Too low a level makes a beer flat and lacking sparkle. Too high, and the beer lacks temperance and control, frequently causing a mess as it gushes out of the bottle and over the table.



What, though, is too little and what is too much? To some extent, this depends on beer style, but it also depends on packaging and dispense. And nowhere is this more evident than in the carbonation of cask ales—the traditional dispense of beer in the United Kingdom.

A common complaint about UK cask ale is that it is “flat,” followed closely by “warm” and, occasionally when you look closely at the glass, by “cloudy.” In fact, cloudy beer is relatively rare in the UK, but flat and warm are more common criticisms.

At Brewlab, when we introduce overseas students to traditional British ale, we often find participants leaving behind partially consumed pints and switching to the more familiar fizzy kegged beer. This, though, is a temporary response—once we demonstrate the wealth of flavors in well-managed cask ale, we find a rapid rise in interest.

Because of this, and despite increasing promotion of international highly carbonated craft ale, UK cask ale retains its popularity. North American outlets are showing greater interest in traditional UK cask ale, and prominent cask ale festivals are increasing in popularity throughout the country.

With this in mind, I’d like to report on some investigations into the features of cask ale, particularly how cask ale carbonation varies and how it may be controlled for best quality. We’ll also discuss the rate at which oxygen diffuses into the beer after the cask has been tapped.

Why Cask Ale Is Unique

Perhaps the most obvious difference between brewery-conditioned kegged beer and cask beer is the lack of gas

bubbles in a cask pint. Force-carbonated beers fizz away, releasing a continual stream of bubbles as you drink down the glass. Cask ale foams on dispense but settles rapidly to a seemingly inert liquid. The initial foam is merely the turbulence of pouring through the beer engine and not a sudden release of high pressure.

This comparison is, however, deceptive. A *still* pint is by no means a *flat* pint, but one in which the level of carbonation is below that necessary for the carbon dioxide to form bubbles. Carbon dioxide is still dissolved and will effervesce on the tongue, providing a sharp impact of refreshment.

Brewlab has a long history of assessing cask ales for flavor, for shelf life and, because of its importance, for carbonation. We have worked with the Campaign for Real Ale (CAMRA) to evaluate dispense methods and with breweries to optimize their flavor profiles on dispense. One simple analysis is to determine the range of carbonation in cask beer from different breweries.

Ideally, a freshly opened cask ale should have around 2 grams of carbon dioxide per liter (g/L), which is about one volume (vol.) of gas per volume of beer. A beer that has had a successful secondary conditioning will develop this during maturation in the brewery as long as enough yeast and sugar are present (see sidebar). How close are UK breweries to this target?

Carbonation Levels in Cask Ale

A simple test of 39 different beers at a UK beer festival in 2016 showed an average of 1.73 g/L (0.87 vol.), which is not quite enough to give a strong tingle on the tongue. A few—18 percent of samples—were well above 2 g/L (1 vol.) with 82 percent below. Some were as low as 1.2 g/L (0.6 vol.), which is definitely low enough to be a dull pint to drinkers. Figure 1 illustrates the results of these tests.

This survey, however, was taken some days after casks had been tapped and therefore include effects of gas leakage. How much is present as soon as casks are opened? Data from another festival with 20 beers indicates higher levels immediately after

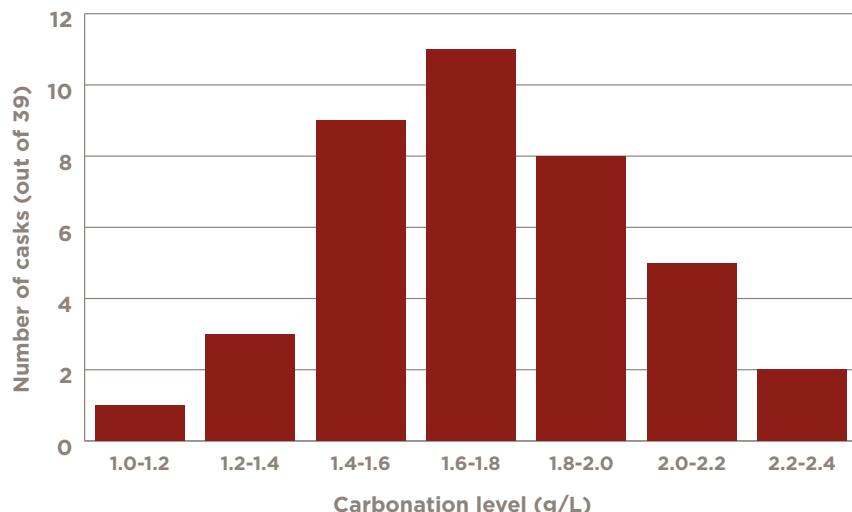


Figure 1. Distribution of carbonation in 39 cask ales sampled after three days' cellaring. Values are in grams CO₂ per liter of beer.

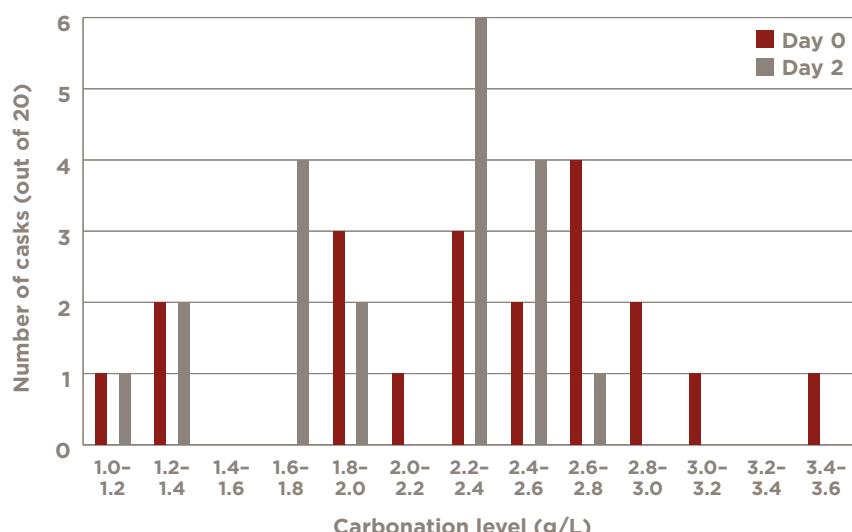


Figure 2. Carbonation levels in casks before dispense. Casks were opened on day 0 and tested on day 0 and on day 2 before serving. Values are in grams CO₂ per liter of beer.

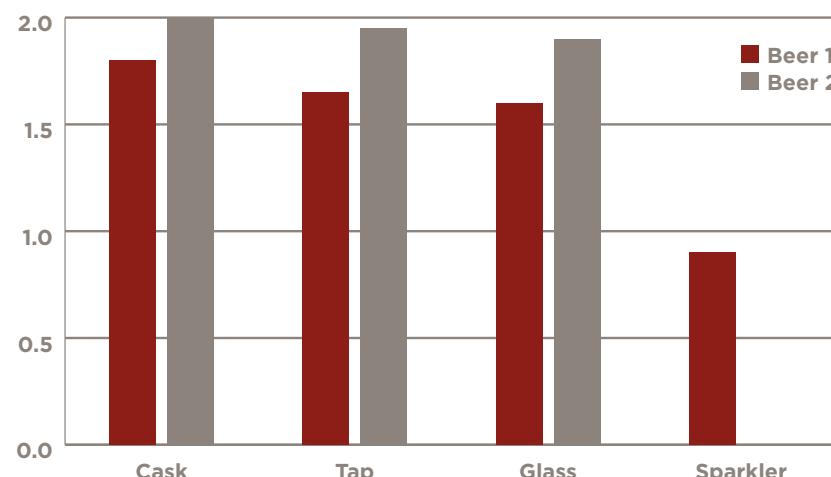


Figure 3. Distribution of carbonation in cask ales at points during dispense. Values are in grams CO₂ per liter of beer.

tapping. On average, levels were 2.34 g/L (1.17 vol.) with a massive 3.17 g/L (1.59 vol.) maximum in one cask, but also a low of 0.89 g/L (0.45 vol.).

Samples taken from the same casks two days later had a reduced average of 2.03 g/L (1.02 vol.) carbon dioxide, a 15 percent loss. Interestingly, the loss varied considerably between casks, from 0.5 to 27 percent, suggesting that structural features such as the cask closures may affect how easily gas escapes. Figure 2 shows the distribution of carbonation levels at tapping and after two days.

The frequency distribution of carbonation at dispense indicates that most had adequate carbonation, but a number were deficient by our definition. These

samples were taken directly from the cask and do not represent the beer we would eventually be served after its travel through pipework and taps. A test of this produces results shown in Figure 3 for two example beers with different lengths of pipework.

For the beer with a short, 3-meter (9.8-foot) pipe run, the carbonation at the tap fell by 1.7 percent. For the other beer with a 6-meter run, the carbonation fell by 7.4 percent. Keeping your cellar close to the bar is a good design if you are looking to maintain beer condition.

This, though, is not the final dispense—gas is also lost during the pour. In one case here, this loss was 3.1 percent, and in the other 5.9 percent giving a total loss

of 4.8 and 13.2 percent, respectively. The cumulative effect drove the carbonation down below 2.0 in both cases.

Traditionally, cask ale would have been dispensed directly from the cask via a simple tap. In fact, there are some UK pubs and festivals that still do this, although that number is decreasing as beer engines provide good opportunities to advertise brand details on pump clips. From the above studies it is clear that direct dispense would provide better carbonation to your pint than a beer engine.

Beer engines have been used in UK dispense since the early 1800s, initially using glass, lead, or copper pipework but commonly fitted with plastic today. They provide a rapid and simple system of filling your glass using suction pressure from the handpull to draw beer from the cask in the cellar. Inevitably, some carbonation is lost. Modern dispense reduces this loss by incorporating an external pump to the beer during its pull and aiding the mechanical effort needed if a cellar is some distance away.

Fashion also impinges on cask dispense, with some regions of the UK traditionally incorporating a sparkler on the dispense font. These screw-on devices provide a tight orifice of small holes for the beer to pass before entering the glass. Turbulence is increased and a finer head results, inevitably with even more gas loss. In the above test, adding a sparkler to the beer reduced the carbonation by a whole 41 percent to just 0.95 g/L (0.48 vol.)—less than half of our target.

Such a loss doesn't necessarily cause dissent with drinkers who welcome the enhanced head produced. In fact, it even creates a perception of greater carbonation because of the appearance. This fashion was taken to extreme in some areas of northern England where a specially designed hand pump called a recirculator not only incorporated a tight sparkler but poured beer into a trough to be repoured a number of times before entering the glass. Shown in Figure 4, this destroyer of carbonation created a magnificent head but gave a very limited sparkle to your pint.

Essentials of Cask Conditioning

Carbonation in cask ale requires enough sugar to ferment, enough yeast to do the fermenting, and a suitable temperature to allow the reaction to occur. Managing these is a key skill of a cask brewer.

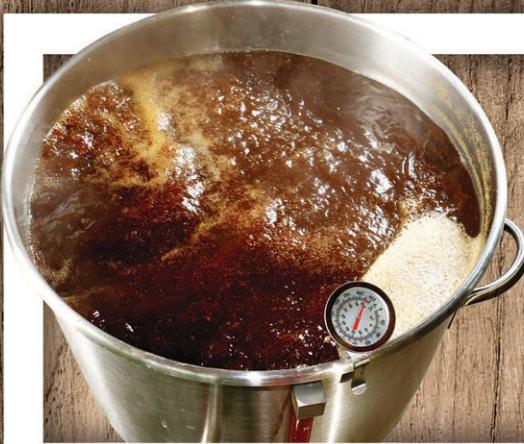
The level of sugar required to ensure adequate carbonation is equivalent to 2 fermentable specific gravity points (0.5° P). This would typically be provided by the natural residual sugar present towards the end of fermentation, but sugar can also be added if the fermentation is allowed to complete. Measuring gravity during fermentation allows you to determine when best to rack to the cask, but this can be missed if the rate of fermentation changes. Conducting a forced fermentation with a bottle of the wort kept at a high temperature (25–30° C, or 77–86° F) will allow a more accurate prediction of the final gravity.

Yeast counts need to be between 0.5 and 2 million cells per milliliter. Generally, this is seen as a turbidity that would stop your reading text through a full glass. If your yeast is very flocculent and rapidly settles to produce clear beer at the end of fermentation, stir up some of the sediment or add a small dose of fresh yeast.

Finally, keep your beer at a suitable temperature. Ale yeast works best above 15° C (59° F) so a few days warm conditioning will encourage the fermentation.



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Figure 4. Recirculating autovac beer engines showing the collection tray and return pipework.

Oxidation in Cask Ale

Another area of Brewlab's investigations into cask ale focuses on the levels of oxygen present and its impact on flavor and shelf life. Cask ale resembles fresh French bread in that it has a distinctive flavor when fresh but stales rapidly. Cask ale outlasts a baguette by at least two days, but because the cask is vented to the air during serving, it has great potential for oxidation. As all brewers know, oxidation spells problems for beer by producing stale, cardboard-like flavors such as trans-2-nonenal and encouraging the growth of microbial contaminants.

When cask beer leaves the conditioning tank, it is not filtered but filled directly to casks, often exposed directly to air and oxygen. This is not necessarily bad news, as this oxygen can stimulate yeast to grow and conduct the secondary conditioning that produces carbon dioxide. Levels can then drop to near zero milligrams per liter.

Once a cask has been opened in a cellar, oxygen has potential access to the beer, although this depends on whether the beer effuses carbon dioxide and limits air inflow. Eventually, however, air will be pulled in to replace beer drawn to the bar. How much does this affect the beer?

Only chemical and taste tests can determine this, but measurements of oxygen levels indicate that diffusion is quite slow



Hammonds 1903 XXXX

Recipe courtesy Keith Thomas, Brewlab

Batch Volume: 5.5 US gallons
(20.8 liters)
Original Gravity: 1.076 (18.3° P)
Final Gravity: 1.019 (4.8° P)
Color: 14 SRM
Bitterness: 32 IBU
Alcohol: 7.45% by volume

MALTS AND SUGAR

10 lb. (4.54 kg) pale malt
2.4 lb. (1.1 kg) torrified wheat
1.5 lb. (700 g) sugar
@ 0 min
3.5 oz. (100 g) black malt
1.1 oz. (30 g) brewer's caramel
@ 0 min

HOPS

0.5 oz. (14 g) Magnum, 14.7% a.a.
@ 60 min
1 oz. (28 g) Fuggles @ 5 min
1 oz. (28 g) Goldings @ 5 min

YEAST

West Yorkshire flocculent yeast

BREWING NOTES

Mash at 154° F (68° C) with 4 gal. (15.1 L) of brewing liquor for one hour. Sparge at 172° F (78° C) with 2 gal. (7.6 L). Volume of wort pre-boil should be 6 gal. (22.7 L). Boil for an hour, adding hops, sugar, and brewer's caramel as indicated. Ferment at 68° F (20° C), removing early head and allowing final head to consolidate well before racking off.

within the cask itself, as shown in Table 1. In this experiment, we used boiled and cooled water as a substitute for beer, so results may not be directly equivalent. Levels of oxygen in closed casks were only 4.6 mg/L in the first liter poured, rising to 4.7 mg/L in the last liter poured. After removing 2.5 gallons (9.5 liters) and leaving the cask open for 24 hours, oxygen levels increased to 6.9 mg/L at the surface and 7.0 mg/L at the bottom of the cask.

In another experiment, 1.5 gallons (5.7 liters) was removed, and the cask was left open for three days and compared to an unopened cask. Beer in the unopened cask had 5.0 mg/L in the water run out initially, rising to 5.3 mg/L in the final liter of water. Water in the opened cask had 5 mg/L in the initial runnings but 8 mg per liter in the final liter—a 60 percent increase. However, most of this increase was in the last sample, suggesting that oxygen levels striate in the cask, with higher levels in beer in contact with air and much lower levels in the depth of the beer.

Brewlab 1995 Best Bitter

Recipe courtesy Keith Thomas, Brewlab

Batch Size: 5.5 US Gallons
(20.8 litres)
Original Gravity: 1.039 (9.7° P)
Final Gravity: 1.008 (2.1° P)
Color: 5 SRM
Bitterness: 33 IBU
Alcohol: 4% by volume

MALTS

6.4 lb. (2.9 kg) pale malt
7 oz. (200 g) crystal malt 150° L
1.5 oz. (40 g) amber malt
3.5 oz. (100 g) torrified wheat

HOPS

0.3 oz. (9 g) Magnum, 14.7% a.a.
@ 60 min
3.2 oz. (90 g) Willamette @ 5 min

YEAST

Brewlab Thames Valley 3 or another English ale strain with moderate but not excessive attenuation

BREWING NOTES

Mash at 154° F (68° C) with 2.4 gal. (9 L) of brewing liquor for one hour. Sparge at 172° F (78° C) with 3.6 gal. (13.6 L). Volume of wort pre-boil should be 6 gal. (22.7 L). Boil for an hour, adding hops as indicated. Ferment at 68° F (20° C). Chill carefully to limit sulfur production.

Of course, water is a different medium than beer, which has a wide range of compounds to react with oxygen. Tests on beers in pub dispense indicate that levels are lower than in casks of water. For example a fresh cask only records 0.1 mg/L of oxygen, considerably different to that from a water filled cask. A cask of the same beer opened three days earlier and with only one gallon (3.8 liters) remaining recorded 0.4 mg/L, indicating that actual levels are low but that some pickup occurs.

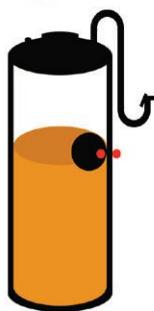
These results agree with the common bar problem of some pints from the same cask having very different flavors even after sequential servings to different customers. Oxygen encourages acetic acid bacteria to grow, and levels of acid would increase as the cask empties. Pints served from lower in the cask will have less spoilage than pints from beer near the surface. This may happen rapidly in a busy bar, thus allowing one drinker to have an acceptable pint and another a mouthful of sourness.

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This assertion requires some chemical analysis, which is the current focus of Brewlab's continuing research. Oxidation and acidity

Dissolved oxygen concentration in mg/L				
Liters drawn from cask	Unopened cask	Partially full cask (2.5 gal. removed), open 24 hours	Unopened cask	Partially full cask (1.5 gal. removed), open 3 days
5	4.6	6.9	5.0	5.0
10	4.6	6.9	5.0	5.1
15	4.6	6.9	5.0	5.2
20	4.6	7.0	5.1	5.4
25	4.6		5.1	5.5
30	4.7		5.3	8.0
32	4.7		5.3	

Table 1. Oxygen levels in water drawn from casks. Casks were filled with boiled water and left for periods of time before withdrawing and measuring oxygen in the outflow. Values are in milligrams of dissolved oxygen per liter of water.

are two major faults arising from poor cask handling, and it will be interesting to determine the kinetics of their production. In the meantime, cask beer continues to enjoy popularity in the UK and is increasingly a feature in North American bars. Hopefully, more studies will provide the information to encourage its spread.

Keith Thomas founded Brewlab in 1986 to provide training and analysis to amateur and professional brewers and as an application of his microbiology expertise. In addition to managing the company, he teaches at the University of Sunderland and conducts research into yeast physiology and novel brewing ingredients. His doctorate investigated the production of alcohol bio-fuel from paper waste, and he still has an ambition to create a beer from the daily newsheets.

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What's New *with* British Hops?

BY ALISON CAPPER





In 1906, the United Kingdom became the first country in the world to create a scientific hop-breeding program. The hops bred in the UK's natural environment have characteristic flavors that are different from those of hops grown elsewhere. They benefit from the natural resources available and require little, if any, irrigation, making them some of the most sustainable hops in the world. >>>

British hops are special thanks to the UK's latitude, climate, soil, irradiation (hours of sunshine), and unique breeding history. This sustainable terroir gives British hops lower levels of the essential oil myrcene than hops grown anywhere else in the world, and lower myrcene levels make for especially delicate and complex aromas. Flavorful British hops offer strong provenance, an unrivaled heritage, and the ability to brew some of the world's best session beers.

BRITISH HOPS HISTORY

Hops were introduced to Britain from Flanders at the end of the 15th century. Until then, the national drink had been ale, which was unhopped and sometimes flavored with herbs. Brewers initially used

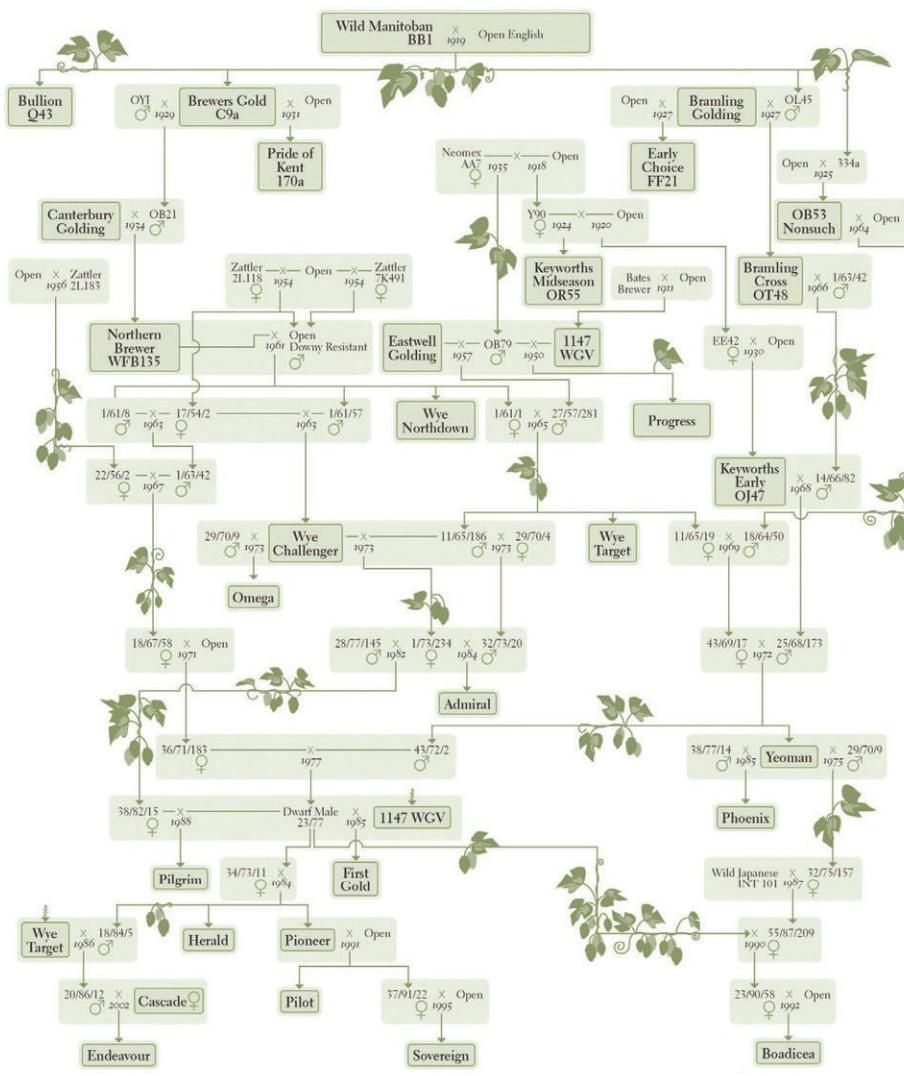
hops solely to preserve beer, but by the 17th century, hopped beer had overtaken unhopped ale, and cultivation grew rapidly. It was a golden age for hops in Britain, and acreage continued to increase until 1878, when it reached its peak.

The oldest British hop cultivar is Goldings, which was discovered in 1790. Goldings is referred to in the plural because it is a "family" of similar hop varieties. In 1737, British hop growers recognized the significance of their discovery of Mathon (also called Canterbury Whitebine) and went on to create a family of Goldings that included:

- Old Golding in 1790
- East Kent Golding in 1838
- Cobbs in 1881

THE FAMILY TREE OF ENGLISH HOP VARIETIES

All details courtesy of Dr Peter Darby



- Early Bird (also referred to as Amos) in 1887
- Eastwell Golding in 1889
- Whitbread Golding Variety in 1932
- Early Choice in 1948

Every new "Goldings" hop is named after either its grower, its location, its harvest date, or a brewer. It remains the most sought after and most widely grown of all the British hop varieties. It is also worth noting that Goldings is referred to as "head of the family tree" for British hops and has been used to create the majority of hop varieties bred and grown commercially in Britain.

Hops once flourished in almost every region of the UK. But by 1909, hops were commonly imported because breweries that had been contracted to brew foreign beers under license were required to use the hops stipulated in the original recipes.

With Verticillium wilt, which kills hops plants, and the many changes in UK taxes, as well as the increasing popularity of lager over traditional British beers in the 20th century, breweries required fewer hops, and British hop acreage fell dramatically.

Today's British hop farms are largely confined to the counties of Herefordshire and Worcestershire in the West Midlands (50 percent) and Kent in the South East (50 percent). These two areas of the UK have unique terroir, great soils, and a mild maritime climate.

The UK is the only hop-growing region of the world with this climate, meaning that it has low light levels; warm, damp summers; and mild winters, which ensures that the annual temperature range is less extreme than that of any other hop-growing climate.

BREATHING NEW LIFE INTO BRITISH HOPS

British hop acreage has been stable for the last 15 years, and British hops have recently seen a resurgence. My obsession with hops began at the BrauBeviale trade fair in Nuremberg, Germany, in November 2011 and was reinforced by a visit to the



American Craft Brewers Conference (CBC) in San Diego in May 2012. I traveled to both of these internationally renowned trade fairs to understand the size and scope of the market for British hops.

After being selected to join the Nuffield Farming Scholarships program at the end of 2012, I began to research the international hop industry. I traveled to Oregon, Washington, New Zealand, Canada, France, Belgium, and Vietnam to learn about hop growing and brewing. And I attended the American Hop Growers Congress and Hop Research Council meetings.

Following hundreds of conversations with brewers from all over the world, I realized that there was a huge opportunity for the British hop industry. Craft brewers loved hops and used lots of them, but British hops were “hiding in the warehouse,” with no brand, no website, and no unique selling point.

As a farm, we started working closely with Charles Faram, Inc. to promote British hops to brewers around the world. I also started to understand the importance of the homebrewing market. Homebrewers are similar to commercial brewers in that they are always looking to try something new and different.

My husband Richard and I realized that American homebrewers were finding it



difficult to access a high-quality range of British hops, so we set up a new business enterprise to sell hops direct to homebrewers: Stocks Farm HomeBrew Hops. We grow a range of experimental hops, which we supply both as whole leaf and as pellets.

Of the 100 acres (40 hectares) of hops in total at Stocks Farm, approximately 40 percent is exported to the USA. As one of the largest hop grower in the UK, these 100 acres of hops can make 46 million pints of beer in a good year!

Today, our farm is trialing more than 25 experimental cultivars and growing the established varieties Olicana®, Endeavour, First Gold, Goldings, Jester®, Phoenix, Pilgrim, Sovereign, and Target. Stocks Farm is the first UK hop farm to sell “fresh from farm” hops direct to customers, and the new experimental GP75 has proved a great success with UK homebrewers this year.

Despite an overall decrease in acreage, British hops have seen a resurgence in the last few years.

Endeavour started on the Wye Hops Ltd Development Program in 2002 and is a cross between Cascade and a low-trellis hop. It has complex blackcurrant, loganberry, summer fruit and spice notes, and wonderful grapefruit and lime citrus flavors.

- Alpha acids: 8–10.5%
- Beta acids: 3.8–5.3%

- Cohumulone: 30–36%
- Myrcene: 27–37%

Jester® is from the Charles Faram & Co Ltd Hop Development Program in 2015. Breeding is proprietary and brings New World flavors to the UK. It is fairly tolerant of all diseases including wilt. Jester® has an intense, punchy aroma of new world proportions, with flavor notes of grapefruit, tropical fruits and herbal.

- Alpha acids: 7–10%
- Beta acids: 4–6%
- Cohumulone: 23–28%
- Myrcene: 45–50%

GP75 is from the Wye Hops Ltd Development Program. The hop is out of the British hop collection and was originally from a cross made in 1978 between 19/73/3 (a granddaughter of OR55) and male 321 (a seedling of Neomex). It is wilt tolerant with aromas of pungent grapefruit, lime, and citrus.

VARIETY	FLAVOR INTENSITY (0–10)	TYPICAL ALPHA ACID (%)	CHARACTERISTICS
Jester®	9	7–9	Grapefruit, tropical fruits, lychee
GP75 (experimental)	9	6–7	Pungent lime and citrus
Olicana®	8	7–9	Mango, grapefruit, passionfruit
Target	8	8.5–13.5	Sage, citrus, spice
Endeavour	7	8–10	Blackcurrant, spice, citrus
Pilgrim	6	9–13	Spicy, citrus, pear
First Gold	6	6.5–10	Orange, marmalade, spice
Goldings	6	4–9.5	Spicy, honey, earthy
Sovereign	6	4.5–6.5	Herbal, floral, earthy
Phoenix	5	8–12	Molasses, chocolate, spice
GN37 (experimental)	5	unknown	Floral, honey, grassy

GP75 Pale Ale



Recipe courtesy of Sarah Saleh, The Unity Brew House

This pale ale has a simple malt bill to allow the fantastic flavor of GP75 hops to shine through, giving amazing tropical and citrus fruit flavors. Bittering hops are minimal due to the bittering effect of the large amounts of aroma and post-boil hops.

Batch Size:	5 US gallons (18.9 L)
Original Gravity:	1.058 (14.2° P) @ 80% efficiency
Final Gravity:	1.012 (3.1° P)
Color:	3 SRM
Bitterness:	35 IBU
Alcohol:	6% by volume

Malts

3.39 kg	(7.5 lb.) extra pale ale malt or lager malt
810 g	(1.8 lb.) pale ale malt
327 g	(12 oz.) torrified wheat

Hops

8 g	(0.3 oz.) GP75, 6.6% a.a. @ 60 min
45 g	(1.6 oz.) GP75, 6.6% a.a. @ 5 min
50 g	(1.8 oz.) GP75, 6.6% a.a. @ flameout
75 g	(2.7 oz.) GP75, 6.6% a.a., dry hop

Yeast

Fermentis Safale S-04

Additional Items

1 Whirlfloc tablet @ 15 min

Directions

Mash grains at 147° F (64° C) for one hour and sparge at 170° F (77° C). Boil for 60 minutes, adding hops and Whirlfloc according to the schedule above. Chill wort, pitch properly rehydrated yeast, and ferment at 65° F (18° C) until terminal gravity is reached.

Extract Version

Substitute malts with 6 lb. (2.72 kg) Maris Otter liquid malt extract and 2.12 lb. (962 g) wheat liquid malt extract. Dissolve extract in water, top up to desired boil volume with reverse osmosis water, and proceed as above.

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Golden Ale

Recipe courtesy of Sarah Saleh, The Unity Brew House

A light, easy-drinking ale with fruity hop aromas and flavors from the combination of Endeavour's citrus and loganberry and First Gold's orange and floral notes.



Batch Size:	5 US gallons (18.9 L)
Original Gravity:	1.041 (10° P) @ 80% efficiency
Final Gravity:	1.009 (2.3° P)
Color:	4 SRM
Bitterness:	20 IBU
Alcohol:	4.2% by volume

Malts

3 kg	(6.6 lb.) pale ale malt
100 g	(3.5 oz.) torrified wheat
70 g	(2.5 oz.) pale rye malt

Hops

4 g	(0.1 oz.) Endeavour, 9.8% a.a. @ 60 min
18 g	(0.6 oz.) Endeavour, 9.8% a.a. @ 5 min
22 g	(0.8 oz.) First Gold, 7.2% a.a. @ flameout

Yeast

Fermentis Safale S-04

Additional Items

1 Whirlfloc tablet @ 15 min

Directions

Mash grains at 147° F (64° C) for one hour and sparge at 170° F (77° C). Boil for 60 minutes, adding hops and Whirlfloc according to the schedule above. Chill wort, pitch properly rehydrated yeast, and ferment at 65° F (18° C) until terminal gravity is reached.

Extract Version

Substitute malts with 5.3 lb. (2.38 kg) Maris Otter liquid malt extract and 8 oz. (227 g) rye liquid malt extract. Dissolve extract in water, top up to desired boil volume with reverse osmosis water, and proceed as above.

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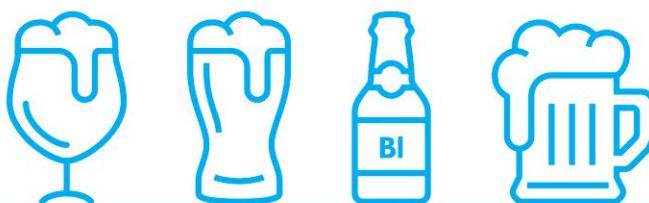
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- Alpha acids: 6–7%
- Beta acids: 5%
- Cohumulone: 47%

GP75 has produced some interesting results as a SMaSH (single malt and single hop) session beer. It is one to look out for in the future and, with the help of homebrewers, its true potential can shine.

COMPARISON OF HOP OILS IN BRITISH AND US HOPS

Humulus lupulus (hops) are complex plants with more than 400 essential oil components in the tiny lupulin glands. If we take a closer look at the British hop varieties mentioned above, there is certainly food for thought when you compare some of these British hops with famous American hop varieties.

- **Alpha acid:** The higher the level of alpha acids, the higher the bitterness potential. Jester® has an alpha percentage between those of Cascade and Centennial, while Endeavour is very close to Centennial.
- **Cohumulone:** GP75 has a high cohumulone level of 47%. Topaz is known for being the highest of all hop varieties at 50%.
- **Myrcene:** Myrcene is an indicator of aroma intensity, and Jester® has a myrcene level similar to that of Cascade.

Hop Oil Comparison Table

	Alpha Acid %	Cohumulone %	Farnesene %	Myrcene %
GP75	6–7	47		
Jester®	7–9	23–28	0.1–0.2	45–50
Endeavour	8–10.5	30–36	5–8	27–37
Cascade	5.5–9	30–35	6–9	45–60
Centennial	7–12	23–27	<1	55–65



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- Farnesene:** Endeavour has higher farnesene levels than Cascade and, most importantly, it is similar to Fuggle, a hop not grown at Stocks Farm due to its susceptibility to wilt.

The Unity Brew House has recently opened at Stocks Farm, the first time ever that a brewery has opened on a hop farm in the UK. All of the beers are brewed with hops grown on the farm and processed in

the hop kilns less than a stone's throw away. Sarah Saleh, head brewer at The Unity Brew House, has put together the accompanying homebrew recipes using a few of these new British hop varieties.

In welcoming visitors from Australia, New Zealand, Canada, Europe, and the USA to our farm in Worcestershire, Richard and I offer an improved understanding of British hops, growers, and the UK industry. If you are ever in the UK and would like to visit Stocks Farm for a tour of the hop yards or for a beer at The Unity Brew House, you will be made very welcome. Please contact us to make an appointment.

Alison Capper serves on the board of the British Hop Association and Wye Hops Ltd. The team at Stocks Farm are keen to hear your feedback on these recipes. If you would like to contact us or buy homebrew hops direct from the farm, please visit stocksfarm.net or email hello@stocksfarm.net. For further information on the British Hop Association, please visit british-hops.org.uk.

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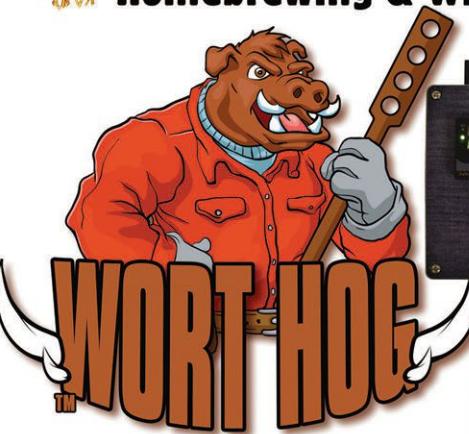


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HOME BREWING ACROSS AMERICA



BY BRIAN YAEGER

THERE AREN'T A LOT OF HOMEBREWING STORIES THAT BEGIN IN SOUTH DAKOTA, AND THIS ISN'T ONE OF THEM. BUT FORMER MEMBER OF CHICAGOLAND'S URBAN KNAVES OF GRAIN (UKG) AND CURRENT MEMBER OF PORTLAND'S OREGON BREW CREW RODNEY KIBZEY'S NATIONWIDE ODYSSEY ENDED IN SOUTH DAKOTA, WHERE HE WON HIS 50TH COMPETITION MEDAL. SCRATCH THAT; HE'S WON "400, MAYBE 500" SUCH MEDALS AND RIBBONS, BUT THE MOUNT RUSHMORE STATE WAS THE FINAL IN HIS QUEST TO WIN AN AWARD FROM EVERY STATE OF THE UNION.



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Unlike many decorated homebrewers, there's no "I love me/I'm so awesome" wall in his southeast Portland homebrewery or anywhere in the house he shares with his girlfriend Kate Jones and three ginger tabby cats. Instead of draped over walls, his awards are kept in boxes in the basement where he brews. It's more workspace than museum, save for German breweriana like a Hacker-Pschorr sign and a Reissdorf Kolsch tray.

There are hoses and Corney kegs all over and a small stack of cuts of cedar his for his once-a-year cedar-aged IPA (the beer that won a Widmer Bros. Collaborator). You won't find any pumps or racking canes. "I always did it this way and it works for me," says Kibzey of his old-school techniques. He even likes to brew to the oldies: "Sealed With a Kiss" or "Na Na Hey Hey (Kiss Him Goodbye)."

The first step in Kibzey's journey, although he hardly knew it at the time, was when his amber ale came in third place at the 2003 Drunk Monk Challenge, a UKG competition. It was his first batch of all-grain, having been turned onto the hobby by his then-girlfriend the year before. We all know about getting bit by the homebrewing bug, and that's when it sunk its fangs into Rodney.

Over the next decade, as bottles of his homebrew were shipped in every which direction, he realized he had a unique opportunity. "To see how people perceive certain beers in each part of the country. That was my real intention," he says. Along the way, his beers received honors including best of show in Mississippi and Alabama, where homebrewing wasn't exactly legal at the time.

Heavy medal: Rodney Kibzey (above) and Derek Wolf (right) with just a few of the medals they've accumulated over the years.

As for the last step? It was accomplished by an Oktoberfest in November 2016. "It was like a ton of bricks off my shoulders because it was a two-year goal," says Kibzey.

But Kibzey isn't the only person who found himself on the path toward winning in competitions from Alabama to Wyoming. In Harrisburg, Pa., Derek Wolf was gifted the customary Mr. Beer kit in 2011. He, too, quickly went all-grain, cultivated a passion for recipe development, and earned his first award via the New

"TO ENSURE THAT HE WAS SERIOUS ABOUT BREWING I TOLD HIM HE WOULD NEED TO GET AN AWARD IN EVERY STATE. . ."

Jersey State Fair in mid-2013. Less than three full years later, after brewing (and re-brewing) 46 different beers that would go on to rack up precisely 108 awards, he'd completed the sweep that his wife, Elaine, set him on. "To ensure that he was serious about brewing," says Elaine, "I told him he would need to get an award in every state."

Avocation vs. Vocation

"...An award in every state to prove to me he was serious about opening a microbrewery (or) brewpub," is how Elaine finished her thought. They currently plan to open Wolf Brewing in nearby Mechanicsburg.



GERMAN WEIZENBOCK

Recipe courtesy Rodney Kibzey

Batch Size: 5 US gallons (18.9 L)

Original Gravity: 1.076 (18.4° P)

Color: 16 SRM

Bitterness: 18 IBU

Brewhouse Efficiency: 75%

MALTS

7.25 lb. (3.29 kg) German wheat malt

5.25 lb. (2.38 kg) American pale malt

8 oz. (227 g) American Munich malt

4 oz. (113 g) Belgian CaraMunich malt

5.5 oz. (156 g) American chocolate malt

HOPS

0.8 oz. (23 g) Tettnanger, 4.7% a.a. @ 90 min

0.25 oz. (7 g) Tettnanger, 4.7% a.a. @ 0 min

YEAST

White Labs WLP380 Hefeweizen IV Ale

BREWING NOTES

Conduct a multi-step mash with the following rests: acid rest at 111° F (44° C) for 15 minutes, protein rest at 122° F (50° C) for 15 minutes, saccharification rest at 154° F (68° C) for 60 minutes, and mash-out rest at 168° F (76° C) for 10 minutes. Sparge at 168° F (76° C). Boil for 90 minutes, adding hops as indicated above.

AMERICAN IPA AGED ON SPANISH CEDAR WOOD

Recipe courtesy Rodney Kibzey

Batch Size:	5 US gallons (18.9 L)
Original Gravity:	1.067 (16.4° P)
Color:	6 SRM
Bitterness:	64 IBU
Brewhouse Efficiency:	75%

MALTS

10 lb.	(4.54 kg) American pale malt
1.5 lb.	(680 g) American Vienna malt
8 oz.	(227 g) American crystal 20° L malt
8 oz.	(227 g) Cara-Pils/dextrine malt

HOPS

1.05 oz.	(30 g) Chinook, 11.8% a.a., first wort hop
1.5 oz.	(43 g) Centennial, 8.1% a.a. @ 15 min
1.5 oz.	(43 g) Centennial, 8.1% a.a., dry hop

YEAST

Wyeast 1056 American Ale/Chico

ADDITIONAL ITEMS

5 Spanish cedar pieces, approximately 6"×1"×1/2" (15×2.5×1.25 cm)

BREWING NOTES

Single infusion mash at 152° F (67° C) for 60 minutes, followed by a 10-minute mash-out at 168° F (76° C). Boil for 60 minutes, chill, and ferment. After fermentation, age on Spanish cedar in secondary for 10–12 days with the dry hops.

All manner of people find themselves bitten by the homebrew bug, and even among—perhaps especially among—those who excel and become heralded for their recipes and the quality of their beer, homebrewers can be divided into two camps: those who love it as a hobby and those who aspire to go pro. Kibzey is not in the same boat as Wolf.

"The risks are too high," he says, "I want a retirement." (He does add that he really enjoys writing recipes, and there's nationwide evidence proving he's not bad at it. So if an eager brewing company were to request his services, he'd consider the offer.)

You can't swing a mash paddle in a room filled with NHC Ninkasi winners and not hit a homebrewer who hasn't been asked ad nauseam if he's going to open his own brewery. Joe Formanek is one of the five people to have had the Ninkasi Award bestowed upon him twice. "I once considered opening up a brewery in the area and did have some financial backing for it," says Formanek.

Kibzey and Formanek met as members of Urban Knaves of Grain in the early aughts as the former was just learning to brew and the latter, who began

homebrewing in 1987, was racking up those major awards. "Rodney," says Joe, "is a fun character who wanted to know as much as possible about brewing and wasn't afraid to ask."

Although their entry points are only separated by a decade and a half, "it would've been easier to medal in comps back in the 80s and 90s when the homebrewing world was smaller," says Formanek. "It's true that it was much more difficult to make a good beer back then with the lack of quality ingredients available at that time, but everyone was in the same boat when it came to this. . . . Now there are a lot of great brewers . . . (and) that tends to level the playing field a bit."

Furthermore, when brewing is your occupation, it theoretically can remove some of the joy of brewing. Even entering all those competitions took loads of effort for both Wolf and Kibzey. As Rodney puts it, "It almost felt kind of like work—picking dates, determining when I had to bottle and package and ship." Seriously, imagine how many trips to a shipping store that would require, and then layer on unforeseeable logistics. What if there's a hurricane on the East Coast when the comp in Florida is receiving entries?

So once they'd achieved their lofty goals, as Kibzey states and undoubtedly Wolf relates, "It felt like a ton of bricks off my shoulders because it was a two-year goal."

Says Jones, "[Rodney] was very low-key about it, just kind of, 'Oh, by the way that was fifty.'" Considering his accomplishment—not to mention past ones such as twice winning the Sam Adams Longshot Competition—he does handle himself with a fair amount of subdued bravado if not outright humility.

Says Kibzey, "I don't want people to perceive it as being arrogant, but I think I can make better beer than I'm making now . . . I keep pushing myself."

50 Shades of Gold, Silver, and Bronze

Stylistic diversity is key for both of these highly wreathed homebrewers. But Kibzey's oeuvre lies in the realm of German styles with a heavy dose of classic American renditions, while Wolf leans more toward newer entries in beer categories. Among his winningest recipes are Kibzey's Weizenbock and Festbier, though the Portland transplant has received plenty of hardware for his Cascadian Dark Ale, er, American-style Black Ale. (It was his sole submission to

CHOCOONUT BROWN PORTER

Recipe courtesy Derek Wolf

Batch Size:	5 US gallons (18.9 L)
Original Gravity:	1.053
Final Gravity:	1.016
Alcohol:	4.8% by volume
Color:	24 SRM
Bitterness:	24 IBU

MALTS

5.5 lb.	(2.49 kg) Maris Otter malt
2 lb.	(907 g) Munich malt 10° L
1 lb.	(454 g) flaked oats
1 lb.	(454 g) crystal malt 120° L
8 oz.	(227 g) chocolate malt 350° L

HOPS

1 oz.	(28 g) East Kent Goldings @ 60 min
0.5 oz.	(14 g) East Kent Goldings @ 20 min
0.5 oz.	(14 g) East Kent Goldings @ 5 min

YEAST

White Labs WLP005 British Ale Yeast

ADDITIONAL ITEMS

1 lb.	(454 g) unsweetened organic coconut
2 oz.	(57 g) cacao nibs
1	Madagascar vanilla bean

BREWING NOTES

Mash at 154° F (68° C) for 50 minutes with 12.5 qt. (11.8 L) of brewing water and mash out at 168° F (76° C). Sparge with 18.3 qt. (17.3 L) brewing water. Boil for 60 minutes, adding hops at the indicated times. Ferment 10 days in primary fermenter at 68° F (20° C). After primary fermentation is complete, rack to secondary and add coconut, cacao nibs, and vanilla bean. Age until desired flavor is reached, typically 6–10 days at 68° F (20° C) degrees.

the competition at the Delaware State Fair since it only featured three categories, one of which was “indigenous” thereby ruling his beers out. Nevertheless, his CDA won best of show.) Currently, half of the dozen kegs in his keezers contain different lagers. For Wolf, top medal-earners include his Choconut Brown Porter and SoOoOo Juicy New England IPA.

“Choconut was one of my earliest all-grain recipes,” says Derek, “and from the very beginning everyone loved it. So, I mainly made it for friends and family, then would send the rest away to competitions as they popped up. The recipe was inspired by Almond Joy. My [initial] goal with the 50 states was to make as many brand new, never-brewed-before beers to see how they would do. Many of the award-winning recipes I haven’t gotten the chance to brew again.”

Rodney rarely dabbles with spices or other adjuncts, save for his cherished cedar wood. But Derek’s fruit beers account for several of his awards, from the Lemon Thyme Saison (Best of Show, Arizona Society of Homebrewers Oktoberfest) to the Yuzu Imperial IPA and Yuzu Session

IPA that received People’s Choice honors at two different Pennsylvania comps (Bacon and Brew Ha Ha and Lititz Craft Beer Fest, respectively).

Nearly 30 of Wolf’s awards are for IPAs. He states that since he doesn’t filter his beers, “most judges would deduct a couple points for not having a clear beer, but now that the ‘haze craze’ has swept the nation, I have noticed that many judges no longer deduct points for a hazy IPA.”

If anything, what these two talented homebrewers demonstrate is that there’s no rule to follow for entering—or winning, really—local homebrew competitions. Wolf’s Choconut has received seven medals. Kibzey’s Weizenbock medals every year (and is responsible for six of seven of his 36 total best-of-show awards). He says he averaged entering 18 comps per year (17 of those beers won ribbons last year). Of course, Kibzey and Wolf are just two of the estimated 1.2 million active homebrewers around the country, according to American Homebrewers Association director Gary Glass. “There really isn’t a whole lot of regionality in brewing any-

more,” notes Glass, working in a shout out to Minneapolis for having the most Grand Master judges.

Rather than focus on what works from state to state, Glass reminds us that “consistency in brewing is something that is very hard for homebrewers to achieve. Most decent brewers will brew at least one really stellar beer at some point, but few can consistently brew award-winning beers Hitting the numbers isn’t the most important thing. Judges aren’t performing laboratory analysis on your beers. What’s most important is having a beer that closely replicates what a judge can reasonably expect that style to taste like and be enjoyable to drink. That’s not easy to do.”

It’s not. Unless you’re Rodney Kibzey or Derek Wolf.

Brian Yaeger is the author of *Red, White, and Brew* and *Oregon Breweries*. He contributed to the *Oxford Companion to Beer* and frequently writes for beer publications. Along with his wife and son (I.P.Yae), he just moved to Santa Barbara. 

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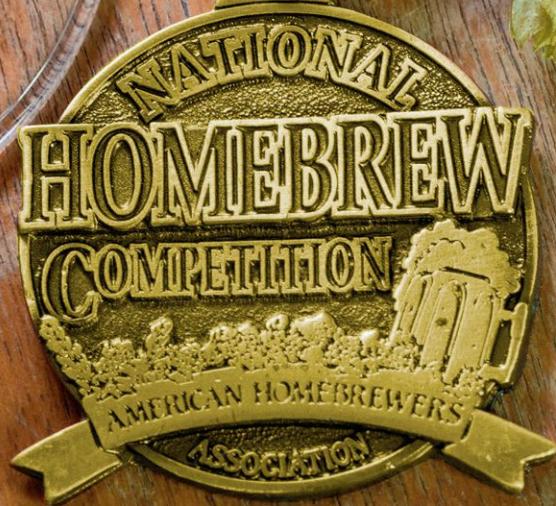
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2017 NHC Awards & Gold Medal Recipes

By Amahl Turczyn

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2017 NATIONAL HOMEBREW COMPETITION

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2017 American Homebrewers Association National Homebrew Competition Overall Winners

Homebrewer of the Year



**Zachary Kossow,
Wilmington, N.C.**
TRASH

Homebrewer of the Year goes to the brewer of the Best of Show beer from 33 categories.

Zachary Kossow was born and raised in Pittsburgh, Pa., bleeding black and gold! After graduating from Penn State with degrees in mechanical engineering and nuclear engineering, he was hired by GE and moved to Wilmington, N.C.

"I had become quite an obsessed cook and foodie in college with the advent of a kitchen of my own (albeit very basic and small given it was a college apartment!)," Kossow recalls. His income also afforded him the opportunity to try as many new beers as he could get his hands on. "I enjoy all things food and drink, attempting new recipes and techniques," and that creative spirit proved a natural fit for homebrewing.

Once he embarked on this new hobby, he hit the ground running. "In my first month, I had purchased a beginner's homebrewing kit with the basics, started brewing extract and partial mash in my apartment kitchen, and joined the local homebrew club, the Wort City Brewers," he remembers. "After a year, I bought my first house and started thinking of what I could build to take my brewing to the next level. I ended up welding together a bunch of stainless and building a Brutus 10-esque brewing rig from scratch. Shortly thereafter, I built a six-tap

kegerator and general cold storage from a 24-cubic-foot chest freezer. Shortly thereafter, my garage was no longer used for parking cars."

Building this equipment really appealed to his engineering mind. "I could've bought a rig from MoreBeer for the same or less money, but this was more about the fun of it, saying I built it from scratch, and tinkering." After about a year of brewing in his new house, on his new rig, Kossow started to win medals at competitions. "And lo and behold, I was bitten by the competition bug!" he laughs. "I won a few best of shows, more notably the 600- to 700-entry Blue Ridge Brewoff in Asheville, N.C."

Since winning Homebrewer of the Year, he has moved back to Pittsburgh, Pa., and has already gotten involved with the local homebrew club TRASH (Three Rivers Alliance of Serious Homebrewers). His brewing preference has also branched



out in funky new directions. "My brewing style heavily leans towards mixed fermentation, fruited mixed fermentation, and funk-forward saison-esque beers that lend themselves to aging and higher carbonation. That said, I also really enjoy brewing very simple, light lagers and geek out about the nitty-gritty brewing process details."

Kosslow's winning recipe, American Grisette, is one of the simplest beers he's

ever brewed. "It's a rustic and very funk-heavy version of a Pilsner," he explains. "The base beer is mostly Pils malt, wheat, and oats, (relatively) heavily hopped with noble hop varieties. This beer was actually heavily influenced by Dave Janssen's grisette talk at the 2016 Baltimore Homebrew Con . . . and it generally follows his guidelines for a more-or-less authentic grisette." He decided to put his own 'American' twist on the style and finished the beer with a funk-forward Brett blend from Omega.

"If I could offer advice to beginner homebrewers, it would be to join your local homebrew club and actively participate in meetings and events," he suggests. "I know way too many homebrewers who don't participate in homebrew club activities. Some tell me that they're just 'not that serious', or that they are intimidated. Homebrew clubs are NOT serious! I cannot stress how much I have learned by being part of a homebrew club since my very first batch of homebrew!"

Ninkasi Award Winner



**Jeff Poirot and Nicholas McCoy,
Fort Worth, Texas**

Draft Punk

2 gold medals

The Ninkasi Award goes to the winningest brewer in the second round of the National Homebrew Competition.

Nicholas McCoy owns a printing company in Plano, Texas, and is married with two kids. He counts brewing, traveling, golf, and bowling among his favorite hobbies. Jeff Poirot, a Catholic priest for the Fort Worth diocese, also brews and travels, but also likes cooking. The two met at their first jobs in Bedford, Texas.

"Jeff was a new priest assigned to a parish that I worked at in high school," McCoy remembers. "We quickly became friends. When I went off to college, Jeff

was assigned to a nearby parish soon after. Our love of craft beer started in a few local bars: The Flying Saucer in Fort Worth and Gingerman in Downtown Dallas."

Poirot started brewing when he received a homebrew kit from a buddy for Christmas. "It was easier than I thought," he recalls. For his part, McCoy had one of Poirot's first homebrews and was shocked at how good it tasted. That's when he too began to express an interest in the hobby.

Thirst for brewing knowledge and great beer soon led them on expeditions worldwide. Poirot explains, "We have been to all the great American breweries, many international breweries, and even Oktoberfest in Munich and GABF in Denver."

Beer travel hones their knowledge and gives them an advantage in competitions. "When we compare our homebrew to other beers it is to the very best commercial examples." Poirot continues. "For example, when we make a porter, we try it side by side with Fullers London Porter. We are trying to make the best beer possible, not just 'good homebrew.'"

Collaboration and the sharing of knowledge and brewing experience also give them an edge. One such source is their brew club. "Draft Punk is small, with just a few members, but instead of competing against each other within our club, we instead set our sights on working together to try and beat the bigger clubs," the pair confides. "This spirit of collaboration and working together to perfect a recipe has really paid off."

The two have also gained inspiration from The Brewing Network, books—"We have definitely worn out our copies of the Brewing Classic Styles series"—and from the mighty Jamil Zainasheff, whom they consider "the best brewer in the nation." The duo brews on a three-pot system with a brew stand, pumps, a RIMS tube, and a DIY PID temperature controller.

He continues, "We typically only enter our local competition, the Bluebonnet Brew-off, but just started entering NHC a few years back. Winning the Ninkasi was a lifelong goal and we felt privileged to have won such a great award." The Specialty IPA and Belgian Strong, which won gold in this year's NHC, prove the two are on the right path. "The Black IPA focuses on balancing the roast with the hops," Poirot says of their winners. "Most of the time we find one or the other is too dominant in this style. The Belgian Strong is a big, boozy beer focused on fermentation, which we feel is the key to this style."

Asked about their secrets to success, McCoy surmises, "We always come back to the small details: sanitation, water, and yeast health." It also helps that the pair have different, yet compatible strengths that contribute to the overall effort in different ways. McCoy has a process-oriented approach to brewing, while Poirot has a "creative chef" mentality.

"Don't take things too seriously, have fun, and don't be afraid to make mistakes," says Poirot. "It's just beer."



2017 NATIONAL HOMEBREW COMPETITION

Cidermaker of the Year



**Michael Wilcox
and Amy Satterlund,
Wichita, Kans.**
Kansas City Bier Meisters

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

Amy began brewing in summer 2002, with Michael joining the hobby a few years later, and altogether the two have participated in nearly 700 batches of beer, mead, cider, and wine. Both grew up in the Pacific Northwest and have developed an appreciation for cider, with Michael spending the last two decades researching apples as a hobby. Over time they messed with increasing hop levels, moved into the occasional sour or imperial style, but separately each eventually settled on similar favorites: sessionable lagers and saisons, and an appreciation for red wine and fairly dry cider. Each will reach for a bourbon or sweet mead when the occasion is right. Michael lives in Wichita with an annoying Shiba Inu and is known to dabble in sarcasm. Amy lives in Kansas City, loves Franzia and leopard-print leggings, and probably should not have let Michael write this sentence.

They also share a love of blending that Michael has admittedly taken to a near obsession. Blending batches allows one to explore different flavor combinations



without having to brew every day. It also allows skilled brewers to dominate in competition. Even the best brewer isn't going to nail a style every time, but by having different blend-able beers on hand one can tweak a creation until it is exactly what a judge is expecting.

Neither Amy nor Michael competes very often, preferring beer and money to medals, but both have had a tremendous amount of success when they do. Amy is a former co-High Plains Brewer of the Year and has a gold medal in NHC, while Michael has medaled in almost every BJCP category and along with his late wife are the current Midwest Homebrewers of the Year.

Amy is a BJCP beer judge of National rank as well as a mead judge. Michael is a Grand Master BJCP beer judge, performed final review on the 2015 guidelines, is a mead judge, and is currently writing material for the upcoming BJCP cider exam. Knowing there is a shortage of cider experience and knowledge among the judge base, he has several articles on judging cider on the BJCP website prospective cider judges are encouraged to review.

Michael's competition advice would be to pay attention to the guidelines, and know what judges are going to expect. Don't give a judge an excuse to not fully evaluate your creation. As judges, keep tasting, reading,

and experimenting. The judge pin is the beginning of the learning, not the end. He views becoming a beer judge as the single biggest source of improvement of his brewing. Taste what you made while reading the guidelines, and see where you missed the mark. Know your system, take notes, and make smart adjustments. If something works, keep doing it. At the same time recognize that not everything is going to fit perfectly in a style, and entrants should not view that as an indictment of their beer.

But getting to the winning cider...

Michael says, "My number one reason for attending Homebrew Con is to see my friends. The camaraderie of the brewing community is my favorite thing about this hobby. I often make friends at HBC I can tell I will know for the rest of my life. On that subject, when my wife Pamela was diagnosed with a rare cancer, Amy and Amanda Burkemper were there for me and I now consider them family. Pamela passed away in 2016, but we continue to talk most every day. Their support has gotten me this far, and when it became obvious that Amy wouldn't make it to Homebrew Con 2017 (apparently five days of drinking isn't ideal training for a Half-Ironman—who knew?!) I resolved to bring her to the stage with me any way I could. And so a blend was born."

Studying New England cider in 2012 while looking over the in-work guidelines, Michael noticed the adjunct characters listed in the style were similar to something else in his basement. However, it wasn't cider, it was a mead. Michael and Amy each count Fall's Bounty Cyser from Ken Schramm's *The Compleat Meadmaker* among their favorite recipes. Raisins, brown sugar, dates, honey, and of course apples—the beverage is like autumn in a glass. After a few tweaks, Michael blended a high-alcohol, acidic batch of cider with a bit of Fall's Bounty, sweetened with a touch of ice cider, and it started to win medals. Amy is being modest about her role in this, but her batch of mead was clean, with the perfect amount of adjunct character to blend with the cider without being sugges-



tive of a mead. Their blend has also won Gold at GLINTCAP, the largest Cider and Perry competition in the world.

Michael believes in staggered nutrient additions for his mead but prefers to use little to no nutrients and low-nitrogen

apples for most cider styles. "These are often delicate beverages, and I prefer to not blow off any more aromatics than necessary. As such I ferment very cool (low 50s), over several months. There's no hurry when you've already got hundreds of gallons."

Michael stresses that New England cider can absolutely be made in a single batch without involving blending, but where's the fun in that? He hopes that one day all of his entries into the National Homebrewing Competition are "blends with friends."

Meadmaker of the Year



**Scot Schaar,
Davenport, Iowa**

St. Paul Homebrewers Club

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

In about 2000, Scot Schaar and his wife watched a Viking movie in which the characters were drinking mead. Having never tried it, they felt obliged to broaden their horizons. "At that time the availability of commercial mead was very limited and we could only find one example," Schaar remembers. They weren't overly impressed, but were intrigued enough to attempt a mead of their own. "It was a raspberry melomel. We boiled the honey and added Champagne yeast. We bottled it way too early and ended up with raspberry mead on the ceiling." However, what remained of the over-carbonated beverage was good enough for them to plan a second batch. Shortly after that,

Ken Schramm released his book and their meads improved a great deal.

2010 was a pivotal year in their mead making. Schaar recalls, "We attended NHC in Minneapolis and attended every mead session, drank every mead we could get our hands on, and asked a million questions. It was also the first year we went up to judge the Upper Mississippi MashOut in St. Paul. You can't throw a stick at that competition and not hit a former Meadmaker of the Year. (I've tried) We bombarded them with questions and asked their opinions on our meads." The feedback they received was often brutal in its honesty, but mostly helpful, and they were able to use it to improve their meads. Soon after that, Schaar became a member of the St. Paul Homebrewers Club.

"Becoming a BJCP beer and mead judge has been a major part of my growth as a meadmaker," Schaar continued. "Not only in the knowledge gained by studying for the exams, but in the many, many people I've met and learned from. I bounce ideas off of meadmakers from literally all over the country as well as a meadmaker in Poland."

Schaar feels renovation trumps innovation when it comes to meadmaking. "To me, the key to success as a meadmaker is to not constantly chase the newest methods or yeast strains. Finding a proven process and yeast strain and adapting that to your own mead making goes a lot farther than continual experimentation. Once you 'master' a process or become very familiar with a yeast strain, then branch out."

Most of Schaar's latest meads are culinary inspired. "I made a pineapple-chipotle mead

that was inspired by a jar of salsa. The recipe was made commercially by Prairie Rose Meadery (Susan Ruud) and Moonlight Meadery (Michael Fairbrother). This mead took gold in the Spiced and Specialty category. A salad made with strawberries, fresh basil, and feta cheese brought out the idea for a strawberry and basil mead."

The mead that was responsible for his becoming Meadmaker of the Year was also food-based. "A serving of fresh bread, goat cheese, and dried figs drizzled in honey was all it took to send me down the fig mead path. This mead also brought out a new idea for me in my approach to meads: I wanted a dark, rich honey character but didn't want it to be over the top. I had been doing some reading on bamboo honey and thought it might just do the trick. I was somewhat afraid it would be too much if used on its own. Then I thought, 'I blend malts to get the flavor profile I want in brewing, why not blend honey varietals to get the flavor profile I want in mead making?' I opted for one-third bamboo and two-thirds wildflower blend, and it was exactly what I wanted."

His best advice to would-be meadmakers? Do your homework. "Steve Piatz's and Ken Schramm's books are wonderful sources of information. The cost of both books combined is less than the cost of honey for one 5-gallon batch. While there is some really solid information on some of the social media sites, it's sometimes buried in sh—misinformation. Keep the recipe simple and concentrate on your process."

"And in case anyone missed it, with mead virtuoso Joe Gerteis' gold in Traditional, the St. Paul Homebrewers Club swept the mead categories this year! (Shameless plug.)"

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2017 NHC

Gambrinus Club Award



CIA
Cane Island Alers
Katy, Texas

The Gambrinus Club Award goes to the club with the most final-round points per number of entries from the club in the National Homebrew Competition.

Now in its ninth year, the Gambrinus Club Award (named for King Gambrinus, the patron saint of beer) recognizes clubs with the most success in the National Homebrew Competition. To be eligible, clubs must have at least five club members 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. Six points are awarded for first place, four points for second place, and two points for third place. The 2017 Gambrinus Club Award went to the Cane Island Alers (CIA) of Katy, Texas.

Founded in 2003, the CIA meets at Texas Homebrewers, a local homebrew shop in Katy. Its enthusiastic members enjoy coming up with new ways to optimize brewing systems and processes, and there is a special focus on education. The club recently started conducting BJCP classes to prepare its members for BJCP exams. So far, three CIA members have been through the program, and all three passed the BJCP exam on the first attempt.

With several homebrew clubs in the Houston area, the CIA aims to keep up with its (friendly) competition. In addi-



tion to cleaning up at NHC, the CIA has done very well in the Lone Star Circuit. At press time, the club was in first place, with just over half the 11 competitions in the circuit complete.

After being named the recipients of the Gambrinus Club Award, the CIA received recognition in Katy and statewide. In fact, three area representatives filed a resolution in the Texas legislature, which reads as follows:

WHEREAS, The Cane Island Alers have won the 2017 Gambrinus Club Award, a prize presented by the American Homebrewers Association; and

WHEREAS, Each year, the AHA hosts the National Homebrew Competition, which recognizes the best homemade beer, mead, and cider from across the nation and around the world; the 2017 contest featured more than 8,600 entries from 3,530 brewers representing all 50 states and 13 foreign countries; the final 1,134 entries were evaluated by some of the nation's top beer judges at the annual National Homebrewers Conference in Minneapolis; and

WHEREAS, Named for King Gambrinus, the unofficial patron saint of beer, the Gambrinus Club Award is presented each year to the brewing club that wins the most final round points per number of entries in the national competition; in addition, at least two of the winning club's members must have advanced to, and one member must have placed in, the final round; and

WHEREAS, Cane Island Alers is a club of home brewers in the Katy area; two of its members helped propel the group to victory by earning individual honors: Ryan DeLaRosa, of Houston, won first place in the stout category, and David Rogers, of Cypress, took second place in the bock category; and

WHEREAS, The Cane Island Alers are making their own creative and distinctive contributions to a tradition that dates back millennia, and this prestigious award

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RESOLVED, That the House of Representatives of the 85th Texas Legislature, 1st Called Session, hereby congratulate the Cane Island Alers on winning the Gambrinus Club Award from the American Homebrewers Association and extend to its members sincere best wishes for continued success; and, be it further

RESOLVED, That an official copy of this resolution be prepared for the Cane Island Alers as an expression of high regard by the Texas House of Representatives.

Resolved indeed!

NHC Homebrew Club Award



QUAFF
Quality Ale and
Fermentation Fraternity
San Diego, California

The NHC Homebrew Club Award goes to the winningest club in the National Homebrew Competition.

The NHC Homebrew Club Award is earned by the club whose members collectively win the most points in the second round of the National Homebrew Competition (NHC). In 2017, San Diego area homebrew club the Quality Ale and Fermentation Fraternity (QUAFF) once again won the prestigious NHC Homebrew

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2017 NATIONAL HOMEBREW COMPETITION

Club Award with nine members bringing home a whopping eight medals in the final round. Two gold, three silver, and three bronze medals rounded out QUAFF's hoard of NHC 2017 treasure.

John Horton of Oceanside, Calif. claimed a gold medal for his Flatbed Pale Ale in the American Pale Ale category—not an easy category to win, as it had 358 entries this year. Eric Robinson of Ramona, Calif. won top honors in the 327-entry Porter category for his English-style porter, Big Ben.

Todd Higginson of San Diego was close on his heels, winning a silver medal in the same category for a Baltic Porter. Christopher Hotz of San Diego also won a silver medal for QUAFF with a sweet stout in the Stout category. Ketchen Smith of Escondido, Calif. took another silver in the hugely popular American IPA category.

Scott Rauvola of San Diego won a bronze medal for his experimental beer in the

Specialty Beer category. Miles McLennan of Mission Viejo, Calif. won a bronze for his Scottish Export in the Scottish & Irish Ale category. And, finally, Kandy and Nick Corona of San Marcos, Calif. claimed another bronze for the team for their Belgian Golden Strong ale in the Strong Belgian & Trappist Ale category. If Nick's name seems familiar, it's because he was Homebrewer of the Year in 2016, leading five medalist club members to the NHC Homebrew Club Award.

QUAFF has a long history of success at NHC, including a record streak of six consecutive NHC Homebrew Club awards from 2001 to 2006 and two Ninkasi Award winners to its credit (Jamil Zainasheff in 2004 and 2007, and Paul Sangster in 2011). This legacy of local homebrewing talent naturally fuels the renowned San Diego craft brewing scene. Since the club's inception, at least 56 QUAFF members have joined the craft industry as professional brewers, and at least 34 breweries were founded or co-founded by QUAFFers.

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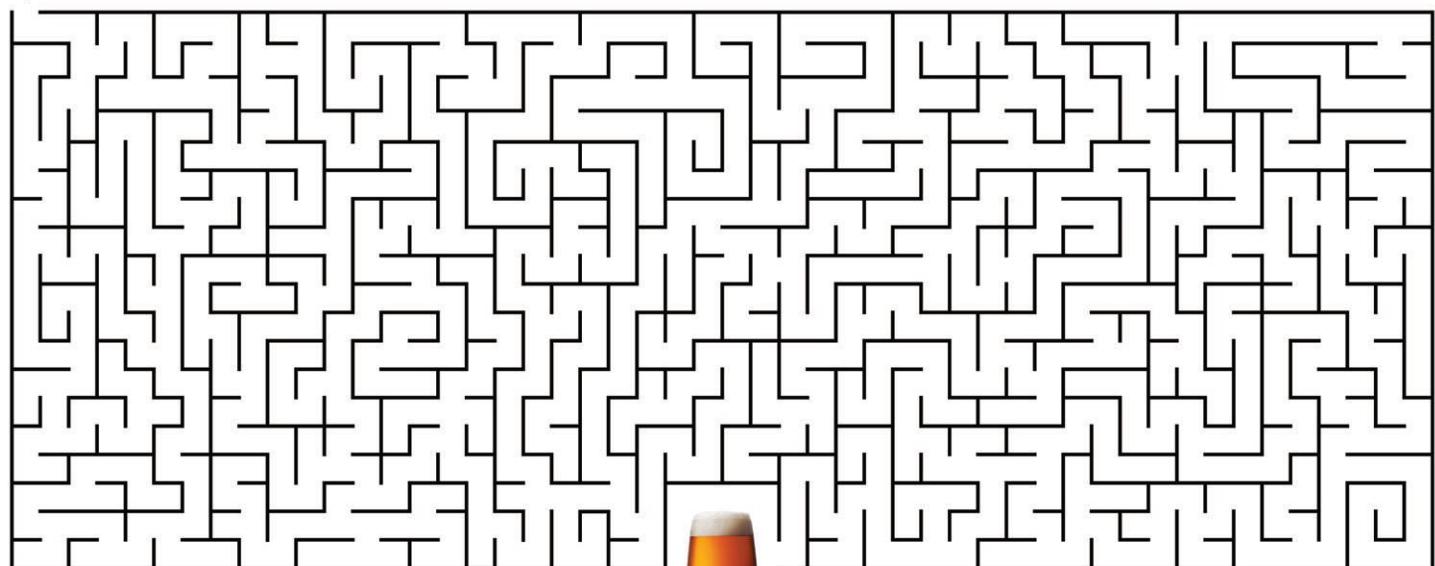
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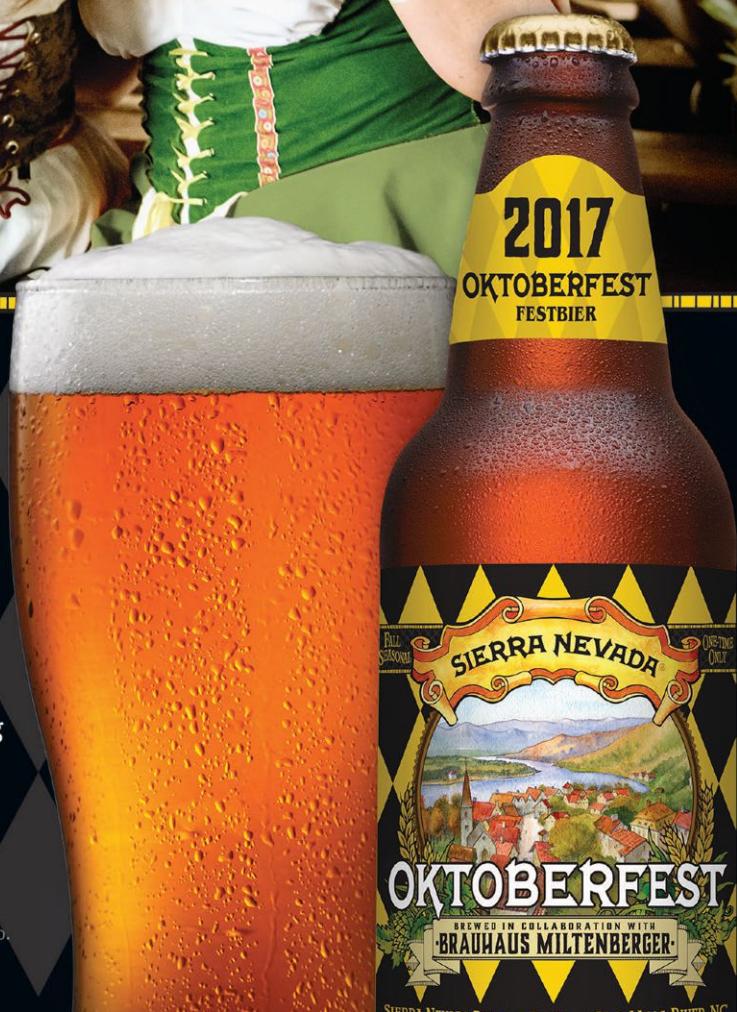
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2017 American Homebrewers Association National Homebrew Competition Gold Medal Recipes



Satterlund of Wichita, Kans., winners of the Cidermaker of the Year award; Scot Schaer of Davenport, Iowa, who took Meadmaker of the Year; homebrew club QUAFF (Quality Ales and Fermentation Fraternity) of San Diego, who again walked away with the Homebrew Club of the Year award; the CIA (Cane Island Alers) homebrew club, which claimed the coveted Gambrinus Award; and Jeff Poirot and Nicholas McCoy of Fort Worth, Texas, who had the most wins in the competition, earning them the Ninkasi Award.

"Being around so many fun, passionate and community-driven fellow beer lovers is humbling as well as inspiring," said Gary Glass, director of the American Homebrewers Association. "Those who placed in the National Homebrew Competition should be extremely proud."

Having cut his teeth as NHC organizer in 2016, John Moorhead put last year's experience to good use at this year's event.

Zymurgy: How did this competition run as opposed to last year's event?

The 2017 National Homebrew Competition (NHC) saw 8,618 mead, cider, and beer entries from around the world vie for medals in 33 categories. Homebrewers from all 50 states and 14 countries around the world participated, with 3,530 sending samples to be judged. Minneapolis played host to this year's Homebrew Con, which included the NHC final round, in which

1,134 finalists were evaluated by the best beer judges in the country. The conference culminated in the awards ceremony, where medals were awarded in 33 categories, along with six titles for the top awards.

These included Zach Kossow of Wilmington, N.C. who won Homebrewer of the Year; Michael Wilcox and Amy



2017 NHC

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NHC Competition Coordinator,
John Moorhead.

John Moorhead: The National Homebrew Competition takes an army of dedicated and passionate volunteers to run. Each year we work hard to run the best possible competition for our members and volunteers to ensure the best experience, and I believe everyone did an excellent job from First Round to Final Round. My hat's off to everyone involved at the AHA, BA, and all the volunteers involved.

Z: Minneapolis is shaping up to be one of the great beer communities in the country, on both amateur and professional fronts. In what ways did this year's NHC benefit from having the final round judged in a place with such a passionate brewing community?

JM: Minneapolis has such a rich and strong beer community, it makes coordinating events like the AHA Homebrew Con and the National Homebrew Competition easy for us as organizers. The benefits are a passionate crew on the ground during the planning phases of the competition, as well as the high caliber judge pool the competition can



pull on to complete the judging in one day. The volunteers in Minneapolis took the competition and conference seriously and wanted these events to reflect their dedication and passion to homebrewing.

Z: Last year saw the integration of the new 2015 BJCP Style Guidelines, and that integration continued in 2017. Many of the categories have shifted, evolved or expanded, and the total number has increased from 31 to 33. How was this process?

JM: The challenge is condensing the 2015 BJCP style guidelines to match the National Homebrew Competition's capabilities. Integrating the 2015 BJCP Style Guidelines to the competition is a flexible, dynamic, and ongoing process. In other words, it's never finalized. The goal is to best distribute entry counts across all 33 NHC categories, while still maintaining the judging integrity of the First and Final Rounds to be completed in a timely manner.

Z: Who decides how to condense BJCP categories to those used at NHC, and will the number of categories continue to grow?

JM: We simply do not have the judging power in the Final Round to judge the BJCP's 34 beer categories, 4 mead categories, and 2 cider categories in one day. There were some growing pains with the NHC category counts jumping from 28 to 31 the first year, however the competition stands in a good spot with its current 33 categories. Category style decisions are decided on by the AHA's Competition Subcommittee by analyzing past data and determining if any categories need to be evolved, expanded, or reduced. For 2018, we don't see any change in the categories, but as the world's largest beer competition we must remain flexible to accommodate the growth and changing landscape of entered styles in the competition as a whole.

Z: Is it challenging to find sponsorship for so many different categories, and what were some of the best prizes?

JM: The exposure sponsors get in this particular homebrew competition is unmatched, so in that sense I don't think sponsorship is a major hurdle. We're always looking for creative, interesting ways to make sponsorship appealing, and we did a great job of that this year with the revamp of the competition's website. All medal winners got a massive prize package, and some of the major prizes were really ramped up. For example, the NHC Homebrew Club award winner received a year's worth of malt.

Z: First round judge sites play a critical role in the overall competition; what regions were represented this year, and do you see those sites becoming permanent players for the NHC?

JM: Hosting a First Round judge site is a huge undertaking, and the amount of hard work, passion and dedication by all the First Round organizing teams is first class. We don't ask First Round judge sites to stay on for a specific number of years because of the amount of work that goes into organizing and executing the competition. Some sites stay on longer than others by passing along responsibilities and training new teams.

Z: Next year's final round, along with Homebrew Con and the awards ceremony, will take place in another great American brewing mecca: Portland, Ore. Are there any major changes coming for the event's 40th anniversary?

JM: If there are any, I couldn't tell you. However, you should expect to see something honoring the 40th anniversary of the event and competition. Stay tuned!

Thanks for all your hard work managing this amazing event! And now let's check out the gold medal recipes from all 33 of this year's categories.

Amahl Turczyn is associate editor of Zymurgy.



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2017 NATIONAL HOMEBREW COMPETITION



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

LIGHT LAGER

89 entries

Sponsored by:

Five Star Chemicals & Supply, Inc.



Philip Blosser

Oregon, Ohio

Glass City Mashers

"Phil's Lager"

American Lager

Batch Size: 5.5 US gal. (20.8 L)

Original Gravity: 1.035 (8.8° P)

Final Gravity: 1.005 (1.3° P)

Primary

Fermentation: 15 days at 54° F (12° C)

Secondary

Fermentation: 14 days at 34° F (1° C)

MALTS

6 lb. (2.72 kg) German Pilsner malt

0.25 lb. (113 g) 10° L caramel malt

0.25 lb. (113 g) 20° L caramel malt

HOPS

0.3 oz. (8.5 g) Centennial, 8.4% a.a.

@ 60 min

YEAST

2 L starter Fermentis Saflager W-34/70

ADDITIONAL ITEMS

1 Whirlfloc tablet

BREWING NOTES

Single infusion mash at 152° F (67° C) for 90 minutes

RUNNERS-UP

Silver Medal: Brady Smith of Indianapolis, Ind., Circle City Zymurgy, American Lager

Bronze Medal: Clifton Ellis of Weatherford, Texas, American Lager

PALE EUROPEAN LAGER

232 entries

Sponsored by:

Cargill Specialty Malts



Jacob Simon with Josie Dybe

Cambridge, Mass.

BräuKline

"Munich Gold 2016"

Munich Helles

Batch Size: 11 US gal. (41.6 L)

Original Gravity: 1.052 (12.8° P)

Final Gravity: 1.009 (2.3° P)

Boil Time: 60 min

Primary

Fermentation: 28 days at 52° F (11° C)

Secondary

Fermentation: 30 days at 33° F (1° C)

MALTS

15.75 lb. (7.14 kg) German Pilsner malt

HOPS

0.6 oz. (17 g) Magnum, 13.3% a.a.

@ 60 min

0.25 oz. (7 g) Hallertau, 2.5% a.a.

@ 0 min

0.25 oz. (7 g) Hallertau, 2.5% a.a.,

whirlpool 10 min

YEAST

11 L starter Gigayeast German Lager Yeast
(1 trillion cells)

ADDITIONAL ITEMS

4 g yeast extract nutrient

1 Whirlfloc tablet

WATER

Ca 25 ppm, Na 36 ppm, SO₄ 10 ppm, Cl 60 ppm, CO₃ 70 ppm. Adjust mash pH to approximately 5.4 with lactic acid.

BREWING NOTES

Mash at 146° F (63° C) for 40 minutes. Thick decoction (about half mash liquid and half grain) was used to bring mash temp up from 146° F to 156° F (69° C) then held for 30 minutes; second decoction brought mash temp up from 156° F to 170 F (77° C) for a 10-minute mash out. Each decoction was pulled 20 to 25 minutes before end of the mash step and then boiled for 10 to 15 minutes before being added back to the mash. Carbonated to 2.7 vol. (5.4 g/L) CO₂.

RUNNERS-UP

Silver Medal: Terence Gardner of Sacramento, Calif., Greenbelt Brewers Association, Festbier

Bronze Medal: Nick Konwerski of Munster, Ind., German Helles Exportbier

**PILSNER**

201 entries

Sponsored by:
SABCO**Rigoberto Padua
St Petersburg, Fla.**

St. Pete Home Brew Club

"Chickity Czech Yourself Pilsner"
Czech Pale Lager

AMBER LAGER

265 entries

Sponsored by:
Weyermann**Scott Satterthwaite
Sunnyvale, Calif.**

Worts of Wisdom Homebrewers

"Elsie's Marzen"
Märzen

Batch Size: 6 US gal. (22.7 L)
Original Gravity: 1.056 (13.7° P)

Final Gravity: 1.016 (4.1° P)
Boil Time: 90 min

Primary Fermentation: 5 days at 50° F (10° C)
Secondary Fermentation: 7 days at 65° F (18° C)

MALTS

10.88 lb. (4.94 kg) Bohemian Pilsner malt

HOPS

3 oz. (85 g) Saaz, 2.8% a.a.
@ 60 min

2.8 oz. (79 g) Saaz, 2.8% a.a.
@ 30 min

1.2 oz. (34 g) Saaz, 3% a.a. @ 10 min

1.2 oz. (34 g) Saaz, 3% a.a. @ 0 min

YEAST

3 packs Fermentis Saflager W-34/70

WATER

Reverse osmosis water with 0.68 tsp. sodium bicarbonate, 1.75 tsp. gypsum, 0.88 tsp. calcium chloride, 0.44 tsp. magnesium sulfate, and 0.33 tsp. canning salt

ADDITIONAL ITEMS

Biofine Clear for clarity

BREWING NOTES

Mash in at 158° F (70° C) and hold for 90 minutes. Mash out at 168° F (76° C) for 15 minutes. Ferment at 50° F (10° C) until it reaches 50% attenuation then raise the temperature 4° F per day until you reach 65° F (18° C), then let it rest at this temperature for 3 to 5 days until beer is fully attenuated and clean. Carbonate with 30 psi for 3 days at 31–34° F (0–1° C).

RUNNERS-UP

Silver Medal: Shawn Scott of McAlester, Okla., Fellowship of Oklahoma Ale Makers (FOAM), Pre-Prohibition Lager

Bronze Medal: Virgil Redman of Vacaville, Calif., Pre-Prohibition Lager

BREWING NOTES

Mash in with a protein rest at 126° F (52° C) for 20 minutes. Raise to 144° F (62° C) and hold for 20 minutes. Raise to 158° F (70° C) and hold for 30 minutes. Sparge at 169° F (76° C).

RUNNERS-UP

Silver Medal: James Moore of Middleburg, Fla., Cowford Ale Sharing Klub (CASK), Märzen

Bronze Medal: Jesse Johnson of Saint Johns, Fla., Cowford Ale Sharing Klub (CASK), Czech Amber Lager

MALTS

12 lb. (5.44 kg) Weyermann Pilsner malt

9 lb. (4.08 kg) Weyermann Munich II malt

2 lb. (0.9 kg) Weyermann Vienna malt

HOPS

4 oz. (113 g) Hallertau Tradition, 3.2% a.a. @ 60 min

YEAST

2 L starter White Labs WLP838 Southern German Lager Yeast



2017 NATIONAL HOMEBREW COMPETITION

DARK LAGER

170 entries

Sponsored by:

Briess Malt & Ingredient Co.



Dennis Pike Chapel Hill, N.C.

Nash Street Homebrew Club

"Entry 2"
Schwarzbier

Batch Size: 7 US gal. (26.5 L)

Original Gravity: 1.052 (12.8° P)

Final Gravity: 1.014 (3.6° P)

Primary

Fermentation: 14 days at 50° F (10° C)

Secondary

Fermentation: 7 days at 60° F (16° C)

MALTS

8 lb. (3.63 kg) Weyermann
Pilsner malt

4 lb. (1.81 kg) Weyermann
Munich I malt

0.75 lb. (340 g) Briess Blackprinz malt

10 oz. (283 g) Briess caramel 40 malt

HOPS

0.6 oz. (17 g) Magnum, 13.3% a.a.
@ 60 min

0.5 oz. (14 g) Hallertau Mittelfrüh,
2.6% a.a. @ 15 min

0.5 oz. (14 g) Hallertau Mittelfrüh,
2.6% a.a. @ 5 min

YEAST

White Labs WLP830 German Lager Yeast
(starter)

WATER

Mash water: 3.1 g gypsum, 6.2 g calcium chloride

Sparge water: 1.8 g gypsum, 3.5 g calcium chloride

ADDITIONAL ITEMS

0.5 tsp. Wyeast yeast nutrient @ 10 min
1 Whirlfloc tablet @ 15 min

BREWING NOTES

Mash at 152° F (67° C) for 60 minutes.
Mash out at 169° F (76° C) for 10 minutes.
Force carbonate to 2.4 vol. (4.8 g/L) CO₂.

RUNNERS-UP

Silver Medal: Brian Bergquist of Mineral, Va., with Scott Bergquist, Fredericksburg Brewing Insiders (FBI), Czech Dark Lager

Bronze Medal: Austin Jones of Ottumwa, Iowa, Iowa Brewers Union, Munich Dunkel

BOCK

256 entries

Sponsored by:

Rahr Malting



Tyler Rosenberg Tampa, Fla.

Special Hoperaions

"Exsanguinator"
Doppelbock

Batch Size: 5.5 US gal. (20.8 L)

Original Gravity: 1.091 (21.4° P)

Final Gravity: 1.023 (5.8° P)

Boil Time: 90 min

Primary

Fermentation: 30 days at 50° F (10° C)

Secondary

Fermentation: 90 days at 36° F (2° C)

MALTS

12.2 lb. (5.53 kg) Munich II malt

3.75 lb. (1.7 kg) Vienna malt

1 lb. (0.45 kg) CaraMunich II malt

0.9 lb. (408 g) melanoidin malt

0.35 lb. (159 g) CaraAroma malt

0.35 lb. (159 g) CaraRed malt

HOPS

1.25 oz. (35 g) Perle, 7.3% a.a.
@ 60 min

YEAST

650B cells Wyeast 2206 Bavarian Lager Yeast

BREWING NOTES

Mash at 154° F (68° C) for 60 minutes.
Force carbonate to 2.4 vol. (4.8 g/L) CO₂.

RUNNERS-UP

Silver Medal: David Rogers of Cypress, Texas, Cane Island Alers (CIA), Doppelbock

Bronze Medal: Arne Marius Haugen, Verdal, Norway, Doppelbock



ENGLISH PALE ALE

247 entries

Sponsored by:

Alternative Beverage



**Scott Anderson
with Dave Anderson
Salt Lake City, Utah**

"Rocket Surgeon Summer Ale"
British Golden Ale

Batch Size: 5.5 US gal. (20.8 L)

Original Gravity: 1.053 (13° P)

Final Gravity: 1.011 (2.6° P)

Primary

Fermentation: 7 days at 68° F (20° C)

Secondary

Fermentation: 6 days at 60° F (16° C)

Tertiary

Fermentation: 1 day at 30° F (-1° C)

MALTS

6.25 lb. (2.83 kg) British pale malt

2.25 lb. (1.02 kg) Belgian Pilsner malt

0.63 lb. (286 g) German pale wheat

HOPS

0.75 oz. (21 g) Cascade, 6.9% a.a.
@ 60 min

0.75 oz. (21 g) Cascade, 6.9% a.a.
@ 30 min

0.5 oz. (14 g) Cascade, 6.9% a.a.
@ 5 min

1 oz. (28 g) Falconer's Flight 7C,
10.4% a.a., dry hop

YEAST

2 packs Wyeast 1056 American Ale yeast

WATER

Mash water: 0.75 Tbsp. baking soda

Sparge water: 0.75 Tbsp. baking soda

ADDITIONAL ITEMS

1 Whirlfloc tablet @ 15 min
4.5 oz. (128 g) dextrose per 4 gal.
(15.1 L) to prime

BREWING NOTES

Mash in at 122° F (50° C) and hold for 30 minutes. Raise to 140° C (60° C) and hold for 15 minutes. Raise to 152° F (67° C) and hold for 45 minutes.

RUNNERS-UP

Silver Medal: Jeff Hewit of Midlothian, Va., with John Bean, James River Homebrewers, Ordinary Bitter

Bronze Medal: Brice Johnson of Cary, N.C., with Mary Johnson, Cary-Apex-Raleigh-Brewers-Of-Yore (CARBOY), English IPA

SCOTTISH & IRISH ALE

285 entries

Sponsored by:

St. Louis Wine & Beer Making



**Aaron Reif
Des Moines, Iowa**

Iowa Brewers Union

"Scottish Light"
Scottish Light

Batch Size: 6 US gal. (22.7 L)

Original Gravity: 1.043 (10.7° P)

Final Gravity: 1.016 (4.1° P)

Boil Time: 90 min

Primary

Fermentation: 10 days at 62° F (17° C)

MALTS

6 lb. (2.72 kg) Maris Otter pale malt

1 lb. (0.45 kg) 40° L crystal malt

8 oz. (227 g) honey malt

4 oz. (113 g) 120° L crystal malt

3 oz. (85 g) 200° L chocolate malt

HOPS

0.75 oz. (21 g) East Kent Goldings,
5.1% a.a. @ 60 min

YEAST

Wyeast 1728 Scottish ale yeast

WATER

Aim for malty amber water profile in Bru'n Water. 49 ppm calcium, 18.2 ppm magnesium, 13 ppm sodium, 51.4 ppm sulfate, 64.4 ppm chloride, RA 13. Sulfate-to-chloride ratio 0.8.

ADDITIONAL ITEMS

1 tsp. yeast nutrient @ 15 min

BREWING NOTES

Mash at 154° F (68° C) for 60 minutes. Wyeast 1728 smack pack smacked 2 hours prior to pitching. No starter. Pitched yeast at 60° F (16° C) and let rise to 62° F (17° C) to ferment. Only primary, no secondary.

RUNNERS-UP

Silver Medal: Jeff Jennings of Westfield, Ind., Foam Blowers of Indiana (FBI), Scottish Export

Bronze Medal: Miles McLennan of Mission Viejo, Calif., QUAFF (Quality Ale and Fermentation Fraternity), Scottish Export



2017 NATIONAL HOMEBREW COMPETITION

AMERICAN PALE ALE

358 entries

Sponsored by:

BJ's Restaurant and Brewhouse



John Horton
Oceanside, Calif.

QUAFF

(Quality Ale and Fermentation Fraternity)

"Flatbed Pale Ale"
American Pale Ale

Batch Size: 11 US gal. (41.6 L)

Original Gravity: 1.057 (14° P)

Final Gravity: 1.010 (2.6° P)

Boil Time: 90 min

Primary

Fermentation: 10 days at 68° F (20° C)

Secondary

Fermentation: 10 days at 65° F (18° C)

YEAST

2 vials White Labs WLP001 California ale yeast (2.5 L starter)

WATER

Water: 50% reverse osmosis water, 50% carbon filtered tap water, 21 g gypsum, 4 g Epsom salts

ADDITIONAL ITEMS

2.2 tsp. yeast nutrient @ 15 min

2 Whirlfloc tablets

2 packs Clarity Ferm

BREWING NOTES

Mash in at 150° F (66° C) for 60 minutes. Raise mash to 164° F (73° C) to mash out for 10 minutes. Force carbonate to 2.4 vol. (4.8 g/L CO₂).

RUNNERS-UP

Silver Medal: Lee Holyoak of Bluffton, S.C., with Ross Hendricks, Lowcountry MALTS, American Pale Ale

Bronze Medal: Scott Casko of Holden, Mass., American Pale Ale

OTHER PALE AMERICAN ALE

256 entries

Sponsored by:

FastBrewing & WineMaking



Justin Licameli
Washington, D.C.

"Townie Yacht Club"
American Wheat Beer

Batch Size: 5 US gal. (18.9 L)

Original Gravity: 1.042 (10.4° P)

Final Gravity: 1.006 (1.5° P)

Boil Time: 70 min

Primary

Fermentation: 3 weeks at 67° F
(19° C))

YEAST

Wyeast 1010 American Wheat ale yeast

BREWING NOTES

Mash at 153° F (67° C) for 75 minutes.

RUNNERS-UP

Silver Medal: Daniel Janiga of Olympia, Wash., Blonde Ale

Bronze Medal: Brandon Jones of Oklahoma City, Okla., with Julie Bennett, Red Earth Brewers, Cream Ale



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[how-to-brew/3-simple-steps-converting-grain-recipes-extract/](http://www.homebrewersassociation.org/how-to-brew/3-simple-steps-converting-grain-recipes-extract/)



AMBER & BROWN AMERICAN ALE

324 entries

Sponsored by:

High Gravity Homebrewing
& Winemaking Supplies



Rob Hardisty
with Vince Turley
and Chuck Epperson
Colleyville, Texas

Cap and Hare Homebrew Club

"VCR Brown Ale"
American Brown Ale

Batch Size: 5 US gal. (18.9 L)

Original Gravity: 1.053 (13° P)

Final Gravity: 1.012 (3.1° P)

Boil Time: 60 min

Primary

Fermentation: 7 days at 64° F (18° C)

MALTS

- 6.5 lb.** (2.95 kg) Maris Otter pale malt
- 2.5 lb.** (1.13 kg) Munich malt
- 0.6 lb.** (272 g) 60° caramel malt
- 0.37 lb.** (167 g) chocolate malt
- 1.4 oz.** (41 g) Carafa Special II malt

HOPS

- 0.25 oz.** (7 g) Magnum, 12.4% a.a.
@ 50 min
- 0.6 oz.** (17 g) Willamette, 4.6% a.a.
@ 40 min
- 0.25 oz.** (7 g) CTZ, 15% a.a. @ 40 min
- 0.6 oz.** (17 g) Willamette, 4.6% a.a.
@ 30 min
- 0.7 oz.** (20 g) Willamette, 4.6% a.a.
@ 15 min
- 1 oz.** (28 g) Chinook, 11.8% a.a.
@ 0 min

YEAST

Wyeast 1450 Denny's Favorite 50 ale yeast (starter)

WATER

Ca 78 ppm, Mg 1 ppm, Na 13 ppm, SO₄ 80 ppm, Cl 93 ppm

BREWING NOTES

Mash in at 145° F (63° C) and hold 30 minutes. Raise to 162° F (72° C) and hold for 30 minutes. Mash out at 170° F (77° C) for 10 minutes. Force carbonate to 2.4 vol. (4.8 g/L) CO₂.

RUNNERS-UP

Silver Medal: Willie Creamer, Homer, Alaska, American Brown Ale

Bronze Medal: Malcolm Frazer of Aliquippa, Pa., Three Rivers Alliance of Serious Homebrewers, California Common

ENGLISH BROWN ALE

179 entries

Sponsored by:

Alternative Beverage



Lori Ertl
Plymouth, Minn.

Primary Fermenters Brewers & Vintners

"Royal"
Historical Beer/London Brown Ale

Batch Size: 5 US gal. (18.9 L)

Original Gravity: 1.038 (9.5° P)

Final Gravity: 1.012 (3.1° P)

Boil Time: 90 min

Primary

Fermentation: 7 days at 69° F (21° C)
Secondary
Fermentation: 6 days at 68° F (20° C)

MALTS

- 9.5 lb.** (4.31 kg) Maris Otter pale malt
- 1 lb.** (0.45 kg) 160° L crystal malt
- 8 oz.** (227 g) Golden Promise pale malt
- 6 oz.** (170 g) Special B malt
- 4 oz.** (113 g) black malt
- 2 oz.** (57 g) Gambrinus ESB pale malt

HOPS

- 0.5 oz.** (14 g) Kent Golding, 4.6% a.a.
@ 60 min
- 0.5 oz.** (14 g) Kent Golding, 4.6% a.a.
@ 30 min
- 0.25 oz.** (7 g) Fuggle, 5% a.a.
@ 20 min

YEAST

Wyeast 1318 London III ale yeast (starter)

ADDITIONAL ITEMS

1 tsp. yeast nutrient

BREWING NOTES

Mash grains at 152° F (67° C) for 60 minutes. Mash out at 168° F (76° C) for 10 minutes. Sparge at the same temperature. Force carbonate to 2.7 vol. (5.4 g/L) CO₂.

RUNNERS-UP

Silver Medal: Tom Welch of Southern Shores, N.C., with Tim Welch, OBX Homebrewers, Dark Mild

Bronze Medal: Tyler Miller of New Hope, Minn., Saint Paul Homebrewers Club, Dark Mild



2017 NATIONAL HOMEBREW COMPETITION

PORTER

327 entries

Sponsored by:
Deschutes Brewery



Eric Robinson
Ramona, Calif.

QUAFF

(Quality Ale and Fermentation Fraternity)

"Big Ben"
English Porter

STOUT

319 entries

Sponsored by:
Brew & Grow



Ryan DeLaRosa
Houston, Texas

Cane Island Alers (CIA)

"The Olga Milk Stout"
Sweet Stout

Batch Size: 5 US gal. (18.9 L)
Original Gravity: 1.052 (12.8° P)
Final Gravity: 1.011 (2.6° P)
Boil Time: 60 min
Primary Fermentation: 14 days at 66° F (19° C)

MALTS

9 lb. (4.08 kg) Maris Otter pale malt
1.5 lb. (0.68 kg) 210° L pale chocolate malt
1 lb. (0.45 kg) Munich malt
0.75 oz. (340 g) double-roasted crystal malt
8 oz. (227 g) honey malt

HOPS

0.75 oz. (21 g) Challenger, 7.5% a.a.
 @ 60 min
0.5 oz. (14 g) Sterling, 7.5% a.a.
 @ 30 min
0.5 oz. (14 g) Sterling, 7.5% a.a.
 @ 0 min

YEAST

White Labs WLP013 London Ale yeast

ADDITIONAL ITEMS

2.5 tsp. LD Carlson yeast nutrient

BREWING NOTES

Mash at 151° F (66° C) for 60 minutes.
 Force carbonate to 2.5 vol. (5 g/L) CO₂.

RUNNERS-UP

Silver Medal: Todd Higginson of San Diego, Calif., QUAFF (Quality Ale and Fermentation Fraternity), Baltic Porter

Bronze Medal: Scott Sykes of Plymouth, Minn., Motley Brue - Twin Cities Home Brew Club, Pre-Prohibition Porter

Batch Size: 6.2 US gal. (23.5 L)
Original Gravity: 1.080 (19.2° P)
Final Gravity: 1.030 (7.5° P)
Boil Time: 60 min
Primary Fermentation: 5 days at 68° F (20° C)
Secondary Fermentation: 4 days at 72° F (22° C)
Tertiary Fermentation: 2 days at 36° F (2° C)

MALTS AND ADJUNCTS

7.45 lb. (3.38 kg) two-row pale malt
3 lb. (1.36 kg) 60° L crystal malt
3 lb. (1.36 kg) CaraMunich II
1 lb. (0.45 kg) lactose (boil)
12 oz. (340 g) chocolate malt
11 oz. (312 g) flaked oats
6 oz. (170 g) roast barley
5 oz. (142 g) flaked barley

HOPS

0.6 oz. (17 g) Columbus, 16% a.a.
 @ 60 min
0.5 oz. (14 g) East Kent Goldings, 5.6% a.a. @ 20 min
0.5 oz. (14 g) East Kent Goldings, 5.6% a.a. @ 0 min

YEAST

White Labs WLP001 California Ale yeast (starter)

BREWING NOTES

Mash at 156° F (69° C) for 60 minutes.
 Sparge at 169° F (76° C). Force carbonate to 2.2 vol. (4.4 g/L) CO₂.

RUNNERS-UP

Silver Medal: Christopher Hotz of San Diego, Calif. with Brent Master, QUAFF (Quality Ale and Fermentation Fraternity), Sweet Stout

Bronze Medal: Greg Hinton of Yorba Linda, Calif., BrewCommune, Sweet Stout



STRONG STOUT

366 entries

Sponsored by: BeerSmith



**David Byer with John O'Brien
Hot Springs, N.C.**

Mountain Ale and Lager Tasters (MALT)

"Session RIS"

American Stout

Batch Size: 5.3 US gal. (20 L)

Original Gravity: 1.077 (18.5° P)

Final Gravity: 1.029 (7.3° P)

Boil Time: 60 min

Primary

Fermentation: 8 days at 70° F (21° C)

AMERICAN IPA

436 entries

Sponsored by:

Experimental Brewing



**Chase Wilson
Nashville, Tenn.**

"Sunsphere IPA"

American IPA

Batch Size: 5 US gal. (18.9 L)

Original Gravity: 1.057 (14° P)

Final Gravity: 1.009 (2.3° P)

MALTS

- 9 lb.** (4.08 kg) Fawcett Golden Promise pale malt
- 8 lb.** (3.63 kg) Fawcett Maris Otter pale malt
- 2 lb.** (0.9 kg) Muntons Maris Otter pale malt
- 1.5 lb.** (0.68 kg) Muntons roasted barley
- 1 lb.** (0.45 kg) Dingemans Special B malt
- 0.5 lb.** (227 g) Muntons 60° L crystal malt
- 0.5 lb.** (227 g) Muntons 180° L chocolate malt
- 0.5 lb.** (227 g) Muntons 250° L chocolate malt

HOPS

- 3 oz.** (85 g) Willamette, 5.1% a.a.
@ 60 min
- 1 oz.** (28 g) Newport, 8.6% a.a.
@ 60 min
- 1.25 oz.** (35 g) Willamette, 5.1% a.a.
@ 10 min
- 0.64 oz.** (18 g) Challenger, 6.5% a.a.
@ 1 min

Boil Time: 60 min

Primary

Fermentation: 19 days at 64° F (18° C)

MALTS

- 5.5 lb.** (2.49 kg) Maris Otter pale malt
- 2.75 lb.** (1.25 kg) two-row malt
- 1.5 lb.** (0.68 kg) flaked oats
- 1 lb.** (0.45 kg) wheatmalt
- 1 lb.** (0.45 kg) Munich malt
- 0.5 lb.** (227 g) Victory malt

HOPS

- 0.5 oz.** (14 g) Mosaic, 13.7% a.a., FWH
- 1 oz.** (28 g) Mosaic, 13.7% a.a.
@ 15 min
- 1 oz.** (28 g) Citra, 11.1% a.a.
@ 10 min
- 1 oz.** (28 g) Eureka, 17.3 % a.a.
@ 5 min
- 1 oz.** (28 g) Citra, 11.1% a.a.
@ 0 min
- 1 oz.** (28 g) Citra, 11.1% a.a.,
dry hop round 1
- 1 oz.** (28 g) Mosaic, 13.7% a.a.,
dry hop round 1

YEAST

200 mL White Labs WLP001 California Ale yeast slurry (top-cropped)

WATER

9 g chalk dissolved in 1/4 cup (59 mL) cold water and 2 g baking soda, all added to strike water. My well water is very close to reverse osmosis water. The mash pH ended up at 5.42.

ADDITIONAL ITEMS

0.5 tsp. Wyeast yeast nutrient

0.5 tsp. Irish moss

BREWING NOTES

Mash grains at 157° F (69° C) for 60 minutes. This beer was originally meant to be an imperial stout, but I ended up with 47% efficiency, I believe in part due to a poor crush on this batch. Force carbonated to 2.8 vol. (5.6 g/L) CO₂.

RUNNERS-UP

Silver Medal: Nick Konwerski of Munster, Ind., Tropical Stout

Bronze Medal: Joseph Formanek of Bolingbrook, Ill., Urban Knaves of Grain, Imperial Stout

1 oz. (28 g) Eureka, 17.3 % a.a., dry hop round 1

2 oz. (57 g) Mosaic, 13.7% a.a., dry hop round 2

3 oz. (85 g) Eureka, 17.3 % a.a., dry hop round 2

YEAST

2 packs Wyeast 1450 Denny's Favorite ale yeast

ADDITIONAL ITEMS

Whirlfloc to clarify

BREWING NOTES

Mash at 153° F (67° C) for 60 minutes.

RUNNERS-UP

Silver Medal: Ketchen Smith of Escondido, Calif., QUAFF (Quality Ale and Fermentation Fraternity), American IPA

Bronze Medal: Rich Tomazin of Rocky River, Ohio, Society of Akron Area Zymurgists (SAAZ), American IPA



2017 NATIONAL HOMEBREW COMPETITION

DOUBLE IPA

173 entries

Sponsored by:
Hopsteiner



Randy Sauter
Rapid City, S.D.
Ale Riders Homebrew Club

"Double IPA"
Double IPA

Batch Size: 5 US gal. (18.9 L)
Original Gravity: 1.075 (18.1° P)
Final Gravity: 1.008 (2.1° P)
Boil Time: 90 min

Primary Fermentation: 8 days at 72° F (22° C)
Secondary Fermentation: 14 days at 65° F (18° C)
Tertiary Fermentation: 5 days at 65° F (18° C)

1 oz. (28 g) Simcoe, 13.5% a.a., dry hop 14 days
0.25 oz. (7 g) Centennial, 8.8% a.a., dry hop 5 days
0.25 oz. (7 g) Columbus, 13.1% a.a., dry hop 5 days
0.25 oz. (7 g) Simcoe, 13.5% a.a., dry hop 5 days

YEAST

1.5 L starter White Labs WLP001 California Ale yeast

ADDITIONAL ITEMS

0.5 tsp. yeast energizer (in starter)
2 tsp. calcium chloride
4 oz. (113 g) corn sugar to prime

BREWING NOTES

Mash at 150° F for 90 minutes. Mash out at 168° F (76° C) for 10 minutes.

RUNNERS-UP

Silver Medal: Chad Hartley of Reno, Nev., High Desert Brewgade, Double IPA
Bronze Medal: Chris Detrick of Salt Lake City, Utah, Lauter Day Brewers, Double IPA

SPECIALTY IPA

324 entries

Sponsored by:
Washington Hop Commission



Jeff Poirot
with Nicholas McCoy
Fort Worth, Texas
Draft Punk

NHC 2017 Ninkasi Award Winners

"Go Big"
Black IPA

Batch Size: 7.5 US gal. (28.4 L)
Original Gravity: 1.080 (19.2° P)
Final Gravity: 1.017 (4.3° P)
Boil Time: 90 min
Primary Fermentation: 2 weeks at 68° F (20° C)

1.5 oz. (43 g) Centennial, dry hop 5 days

YEAST

4 packs Wyeast 1056 American ale yeast

BREWING NOTES

Mash at 152° F (67° C) and hold 60 minutes. Carbonate to 2.3 vol. (4.6 g/L) CO₂.

RUNNERS-UP

Silver Medal: Marcus Rutherford of Baton Rouge, La., Brasseurs a la Maison, Specialty IPA
Bronze Medal: Geoff Bado of Cherry Hill, N.J., Barley Legal Homebrewers, Specialty IPA

MALTS AND ADJUNCTS

20 lb. (9.07 kg) pale two-row malt
1.75 lb. (794 g) CaraMunich III malt
1.5 lb. (680 gg) Briess Midnight Wheat malt
1 lb. (454 g) corn sugar

HOPS

1 oz. (28 g) Hallertau Magnum, 12.5% a.a. @ 60 min
1.25 oz. (35 g) Chinook, 11.9% a.a. @ 20 min
0.75 oz. (21 g) Centennial, 10.6% a.a. @ 20 min
2 oz. (57 g) Centennial, 10.6% a.a. @ 5 min
1.5 oz. (43 g) Citra, dry hop 5 days



GERMAN WHEAT & RYE BEER

192 entries

Sponsored by:

Brewing with Wheat by Stan Hieronymus



Rob Knighton
Columbia, Pa.

"Hackysack Superstar"
Weissbier

Batch Size: 6 US gal. (22.7 L)

Original Gravity: 1.048 (11.9° P)

Final Gravity: 1.010 (2.6° P)

Boil Time: 60 min

Primary

Fermentation: 7 days at 68° F (20° C)

MALTS

- 5 lb.** (2.27 kg) Briess red wheat malt
- 4.5 lb.** (2.04 kg) Weyermann Pilsner malt
- 6 oz.** (170 g) acidulated malt
- 2 oz.** (57 g) Weyermann melanoidin malt

HOPS

- 0.25 oz.** (7 g) Magnum, 12.4% a.a.
@ 60 min

YEAST

White Labs WLP380 Hefeweizen IV ale yeast starter

BREWING NOTES

Dough in with 22.4 qt. (21 L) of water and heat to 96° F (36° C). Heat to 115° F (46° C) over 10 min. and hold for 10 min. Heat to 127° F (53° C) over 10 min. and hold 10 min. Heat to 149° F (65° C) over 15 min. and hold 45 min. Fly sparge with 3.7 gal. (14 L) water at 168° F (76° C).

Ferment 4.25 gal. (16 L) in a 6 gal. (22.7 L) carboy to allow for head space. The remaining 1.75 gal. (6.6 L or 7 qt., which is the maximum

capacity of my pressure cooker) was pressure-cooked. One quart was used for kräusening, the other six were saved for future starters.

Ferment "open," or with only tin foil over the mouth of the carboy, at 62° F (17° C) for three days. Apply airlock on the fourth day, holding temperature stable. On day seven, pour a quart of the saved wort into the keg. Rack beer on top.

Referment "closed" in the keg, for three days. You can watch the progress with a pressure gauge on the gas post of the keg. When refermentation is complete, chill and serve or package. Kräusened with 1 quart (0.9 L) saved wort to 3 vol. (6 g/L) CO₂.

RUNNERS-UP

Silver Medal: Eric Carman of Oxford, Ohio, Cincinnati Malt Infusers, Roggenbier

Bronze Medal: Justin Licameli of Washington, D.C., Weisenbock

BELGIAN ALE

379 entries

Sponsored by:

Port Brewing Company/The Lost Abbey



Jonathan Aronson
with **Steve Wigginton**
Denver, Colo.

"3 Philosophers with Attitude"

Specialty Beer/Clone Beer

Ommegang Three Philosophers, Belgian Dark Strong with Approx. 2% Kriekbier

Batch Size: 10 US gal. (37.9 L)

Original Gravity: 1.092 (21.8° P)

Final Gravity: 1.021 (5.1° P)

Boil Time: 60 min

Primary

Fermentation: 14 days at 68° F (20° C)

Secondary

Fermentation: 79 days at 68° F (20° C)

MALTS AND ADJUNCTS

- 17.5 lb.** (7.94 kg) Belgian Pilsner malt
- 4.5 lb.** (2.04 kg) Munich malt
- 3 lb.** (2.04 kg) Belgian amber candi sugar
- 3 lb.** (1.36 kg) dry amber malt extract
- 1.75 lb.** (0.79 kg) flaked wheat
- 1.1 lb.** (499 g) Special B malt
- 0.75 lb.** (340 g) CaraMunich malt
- 8 oz.** (227 g) CaraVienne malt

HOPS

- 4 oz.** (113 g) Northern Brewer,
5.3% a.a. @ 60 min

YEAST

2 packs Inland Island INIS-222 Belgian Gnome Ale yeast

ADDITIONAL ITEMS

- 1 tsp.** yeast nutrient
- 1** Whirlfloc tablet
- 2%** Kriekbier
- 4.3 cups** (1 L) corn sugar to prime
- 2 packs** dry Champagne yeast to prime

BREWING NOTES

Mash at 156° F (69°) for 45 minutes.

RUNNERS-UP

Silver Medal: Andrew Ayers of South Jordan, Utah, Saison

Bronze Medal: Joseph McCann of Long Beach, N.Y., The Brewing Network, Witbier



2017 NATIONAL HOMEBREW COMPETITION

STRONG BELGIAN & TRAPPIST ALE

422 entries

Sponsored by:



Cargill Specialty Malts

**Jeff Poirot
with Nicholas McCoy
Fort Worth, Texas**

Draft Punk

NHC 2017 Ninkasi Award Winners

"Jeffstical"
Belgian Dark Strong Ale

SOUR ALE

240 entries

Sponsored by:

Captain Lawrence Brewing Co.



**Sangjae Park
Seoul, South Korea**

"Gose"
Historical Beer/Gose

Batch Size: 13.5 US gal. (51.1 L)
Original Gravity: 1.098 (23.1° P)
Final Gravity: 1.028 (7.1° P)
Boil Time: 90 min
Primary Fermentation: 1 days at 62° F (17° C)
Secondary Fermentation: 30 days at 65° F (18° C)

MALTS AND ADJUNCTS

41 lb. (18.6 kg) Weyermann Pilsner malt
2 lb. (0.9 kg) Special B malt
2 lb. (0.9 kg) D-180 candi syrup
2 lb. (0.9 kg) D-90 candi syrup

HOPS

2 oz. (57 g) Premiant, 7% a.a.
 @ 60 min
2 oz. (57 g) Tettnang, 4.5% a.a.
 @ 30 min

YEAST

6 packs White Labs WLP500 Trappist Ale yeast

BREWING NOTES

Mash in at 144° F (62° C) and hold for 30 minutes. Raise to 158° F (70° C) and hold 30 minutes. Mash out at 172° F (78° C) for 5 minutes. Start fermentation at 62° F (17° C) and let free rise after 24 hours. Boil then cool candi syrup and add to primary fermenter once fermentation begins to slow. Carbonate to 2.6 vol. (5.2 g/L) CO₂.

RUNNERS-UP

Silver Medal: Gerry Lynch of Milliken, Colo., with Jonnie Lynch, Berthoud Barn Burners, Belgian Tripel

Bronze Medal: Kandy Corona of San Marcos, Calif., with Nick Corona, QUAFF (Quality Ale and Fermentation Fraternity), Belgian Golden Strong Ale

Batch Size: 10 US gal. (37.9 L)

Original Gravity: 1.051 (12.3° P)
Final Gravity: 1.003 (0.8° P)
Boil Time: 0 min
Primary Fermentation: 5 days at 113° F (45° C)
Secondary Fermentation: 350 days at 75° F (24° C)

MALTS

16 lb. (7.26 kg) Weyermann Pilsner malt
16 lb. (7.26 kg) Weyermann wheat malt

HOPS

0.2 oz. (5.6 g) Citra, 11% a.a., dry hop

YEAST

Dry ale yeast

ADDITIONAL ITEMS

4 oz. (113 g) Weyermann Pilsner malt (lactic starter)
3.2 oz. (91 g) orange peel (in secondary)

BREWING NOTES

After collecting the second runnings of wort, don't boil. Simply cool the wort down to 45° C (113° F) and pitch around 4 oz. (113 g) of Pilsner malt. Let it ferment for 5 days at that temperature. Then chill it and dry hop it with little bit of Citra and orange peel. Let it ferment for almost a year. Bottle and age it at room temperature for a year.

RUNNERS-UP

Silver Medal: Jon Berkland of Morgan Hill, Calif., with John Phelan, Flanders Red Ale

Bronze Medal: Doug Schmidt of Swampscott, Mass., Boston Wort Processors, Berliner Weisse



STRONG ALE

247 entries

Sponsored by:
Northern Brewer



William Carley
Bloomfield, N.J.

New York City Homebrewers Guild

"Mister Mayhem"
English Barleywine

Batch Size: 5 US gal. (18.9 L)

Original Gravity: 1.112 (26.1° P)

Final Gravity: 1.024 (6.1° P)

Boil Time: 5 hours

Primary

Fermentation: 3 days at 62° F (17° C)

Secondary

Fermentation: 7 days at 70° F (22° C)

Tertiary

Fermentation: 15 days at 65° F (18° C)

MALTS

14.5 lb. (6.58 kg) Maris Otter pale malt

14.5 lb. (6.58 kg) Golden Promise pale malt

1 lb. (0.45 kg) biscuit malt

6 oz. (170 g) Special B malt

HOPS

1 oz. (28 g) Magnum, 12% a.a.

@ 120 min

2 oz. (57 g) EK Goldings, 5.7% a.a.

@ 20 min

1 oz. (28 g) Fuggles, 4.2% a.a.

@ 20 min

YEAST

Wyeast 1056 American Ale yeast and

Wyeast 1968 London ESB (blended starter)

BREWING NOTES:

Single infusion mash at 152° F (67° C) for 60 minutes.

RUNNERS-UP

Silver Medal: Wayne Mayer of Monticello, Minn., River City Brewers, English Barleywine

Bronze Medal: Aaron Smith of San Luis Obispo, Calif., San Luis Obispo Brewers (SLOB), English Barleywine



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2017 NATIONAL HOMEBREW COMPETITION

FRUIT BEER

255 entries

Sponsored by: Amoretti



Jared Mullenberg
Bothell, Wash.

"Razzhole Sour"
Specialty Fruit Beer

Batch Size: 5.5 gal. (20.8 L)
Original Gravity: 1.052 (12.8° P)
Final Gravity: 1.008 (2.1° P)

MALTS
9.5 lb. (4.31 kg) pale 2-row malt

1 lb. (0.45 kg) Briess red wheat malt
0.5 lb. (227 g) acidulated malt

HOPS

0.2 oz. (6 g) Magnum @ 60 min

YEAST

Wyeast 3711 French Saison and Wyeast 3724 Belgian Saison blend

WATER

Seattle tap water with 1 tsp. gypsum and 1 tsp. calcium chloride

ADDITIONAL ITEMS

Yeast nutrient

1 Whirlfloc tablet @ 10 min
2 L 1.020 starter wort
2 Tbsp. Nancy's plain nonfat Greek yogurt
1.5 tsp. lactic acid
16 oz. (473 mL) Goodbelly probiotic
1 lb. (0.45 kg) table sugar
10 lb. (4.54 kg) raspberries, 1 week in secondary

BREWING NOTES

Day 1: Prepare yogurt starter (multiple slower lacto strains) 2 days before brew day. Make

2 liters of 1.020 starter wort, cool to 100° F (38° C) and drop in 2 tablespoons Nancy's plain nonfat Greek yogurt. Add a pinch of yeast nutrient and 0.5 teaspoon lactic acid to lower pH closer to mid 4s. Use an airlock and stopper. Swirl gently a couple times a day. Kept culture on a heating pad to maintain about 100° F (38° C) for 2–3 days.

Day 3: Mash in at 154° F (68° C) and hold for 60 mins. Run 7 gal. (26.5 L) into the kettle and boil wort for 5 minutes to pasteurize, turn off heat and chill to 100° F (38° C).

Add the yogurt starter to the kettle, 16 oz. (473 mL) of mango Goodbelly probiotic (*Lactobacillus plantarum*), 0.5 tsp. yeast nutrient, and 1 tsp. lactic acid. Stir, purge air space above inoculated wort with CO₂, and seal up the top of the kettle to prevent air ingress. Keep the kettle at around 95° F (35° C) for 3 days.

Day 7 – Boil soured wort 60 minutes. pH should be 3.4, and wort gravity should increase from 1.038 to 1.044. Chill to 75° F (24° C) and rack to fermenter with 1/2 tsp. yeast nutrient and saison yeast blend starter. Oxygenate 30 seconds. Fit fermenter with an airlock. Maintain fermenter in the mid 70s °F (23–24° C) for the first day, and then warm the fermenter up to about 90° F (32° C) on the second day.

Around the third or fourth day of fermentation, just after high kräusen, add 1 lb. (0.45 kg) table sugar dissolved in a small amount of boiled water to re-ignite the yeast and boost the gravity. Original gravity with the sugar addition should be 1.052.

After 7 days fermenting, rack to secondary on top of 10 lb. (4.54 kg) of boiled, cooled raspberries. After an additional 7 days of fermentation, transfer to the serving keg, and force carbonate to 2.6 vol. (5.2 g/L) CO₂.

RUNNERS-UP

Silver Medal: Jason McLaughlin of Lincoln, Neb., Lincoln Lagers, Fruit and Spice Beer

Bronze Medal: Sherre Boyanowski of Laceyville, Pa., with Clinton Pickett, Brewminaries, Fruit Beer

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SPICE/HERB/VEGETABLE BEER

492 entries

Sponsored by:

BottleYourBrand.com



Jamie Moulton

Niwot, Colo.

Big Lebrawskis

"Toasted Coconut Black IPA"
Spice, Herb or Vegetable Beer
Standard Black IPA with Toasted Coconut

Batch Size: 10 US gal. (37.9 L)
Original Gravity: 1.077 (18.5° P)
Final Gravity: 1.015 (3.8° P)
Boil Time: 70 min

Primary

Fermentation: 14 days at 68° F (20° C)

Secondary

Fermentation: 14 days at 65° F (18° C)

MALTS

12.4 lb. (5.62 kg) pale ale malt
14.6 lb. (6.62 kg) Maris Otter malt
2 lb. (0.9 kg) Briess Midnight Wheat
1 lb. (0.45 kg) malted wheat
12 oz. (340 g) Victory malt

HOPS

3.6 oz. (102 g) Nugget, 11% a.a.
@ 60 min
1 oz. (28 g) Citra, 13.7% a.a.
@ 30 min
1 oz. (28 g) Citra, 13.7% a.a.
@ 20 min
2 oz. (57 g) Citra, 13.7% a.a.
@ 15 min
3 oz. (85 g) Citra, 13.7% a.a.
@ 10 min
2 oz. (57 g) Citra, 13.7% a.a.
@ 5 min
3 oz. (85 g) Citra, 13.7% a.a.
@ 1 min
4 oz. (113 g) Citra, 13.7% a.a.
@ 0 min

YEAST

2 packs Scottish ale yeast (starter)

WATER

Carbon-filtered tap water with 0.5 tsp. (2.5 mL) CaCO₃, 0.9 tsp. (4.4 mL) gypsum, 0.67 tsp. (3.3 mL) Epsom salts, and 0.33 tsp. (1.6 mL) salt per 10 gal. (37.9 L) of brewing water.

ADDITIONAL ITEMS

2 lb. (0.9 kg) toasted coconut flakes
(7 days in secondary)

BREWING NOTES

Mash grains at 152° F (67° C) for 60 minutes. Cold steep Midnight Wheat for 18 hours in 1.25 gal. (4.7 L) of water, then strain and add to brew kettle. Steep 2 lb. (0.9 kg) of toasted coconut flakes in secondary for 7 days. Carbonate to 2.2 vol. (4.4 g/L) CO₂.

RUNNERS-UP

Silver Medal: Jay Bond of Aurora, Colo., with Mallory Zimmerer, Autumn Seasonal Beer

Bronze Medal: Michael Wasyliw of Brentwood, Tenn., Music City Brewers, Spice, Herb or Vegetable Beer

SMOKE-FLAVORED & WOOD-AGED BEER

482 entries

Sponsored by:

Alaskan Brewing Co.



Shane Meyers

Wadsworth, Ohio

Society of Akron Area Zymurgists (SAAZ)

"Resurrection"

Historical Beer/ Piwo Grodziskie

Batch Size: 4.25 US gal. (16 L)

Original Gravity: 1.028 (7.1° P)

Final Gravity: 1.008 (2.1° P)

Primary

Fermentation: 13 days at 66° F (19° C)

MALTS

5 lb. (1.81 kg) oak-smoked wheat malt
4 oz. (113 g) rice hulls

HOPS

0.28 oz. (8 g) Magnum, 12.3% a.a.
@ 60 min
1 oz. (28 g) Saaz, 3.5% a.a.
@ 20 min
1 oz. (28 g) Saaz, 3.5% a.a. @ 5 min

YEAST

1 pack Fermentis Safale US-05

ADDITIONAL ITEMS

Whirlfloc

125 g (4.4 oz.) table sugar for bottle priming

BREWING NOTES

Mash in at 136° F (58° C) and hold 20 minutes. Raise to 148° F (64° C) and hold another 20 minutes. Raise to 156° F (69° C) and hold 45 minutes. Prime with 125 g table sugar per 4.125 gal. to achieve 3 vol. (6 g/L) CO₂.

RUNNERS-UP

Silver Medal: Matt Warren, Signal Mountain, Tenn., with Ryan Golden, Barley Mob Brewers, Specialty Wood-Aged Beer

Bronze Medal: Tracy Rickels, Hewitt, N.J., Jockey Hollow Brewers Guild, Wood-Aged Beer



2017 NATIONAL HOMEBREW COMPETITION

AMERICAN WILD ALE

373 entries

Sponsored by:

Maryland Homebrew



Zach Kossow Wilmington, N.C.

Wort City Brewers

2017 Homebrewer of the Year

"American Grisette"
Brett Beer

Batch Size: 10.2 US gal. (38.6 L)

Original Gravity: 1.044 (10.9° P)

Final Gravity: 1.004 (1.0° P)

Boil Time: 60 min

MALTS

- 13 lb.** (5.9 kg) German Pilsner malt
- 1.5 lb.** (0.68 kg) red wheat malt
- 1.5 lb.** (0.68 kg) flaked oats
- 1 lb.** (0.45 kg) rice hulls
- 6 oz.** (170 g) acidulated malt

HOPS

- 1.5 oz.** (43 g) Sterling, 6.8% a.a., first wort
- 3 oz.** (85 g) Saaz, 2.8% a.a., whirlpool
- 1 oz.** (28 g) St. Celeia, 6.8% a.a., whirlpool
- 1 oz.** (28 g) Tettnang, 3.9% a.a., whirlpool
- 0.5 oz.** (14 g) Sterling, 6.8% a.a., whirlpool

YEAST

- 1 vial The Yeast Bay Sigmund's Voss Kviek ale yeast (starter)
- 1 pack Omega Yeast OYL-212 Bring on Da Funk blend

WATER

Ca 67 ppm, Mg 2 ppm, Na 11 ppm, SO₄ 32 ppm, Cl 74 ppm, CO₃ 65 ppm. Mash pH (as calculated in Bru'n Water): 5.4

ADDITIONAL ITEMS

- 10.4 oz.** (295 g) table sugar for priming
10.2 gal. (38.6 L)

BREWING NOTES

Mash at 148° F (64° C) for 75 minutes. Mash out at 168° F (76° C) for 10 minutes. After 10 days of primary fermentation with the Voss Kviek Norwegian Farmhouse Ale strain, a packet of Omega Yeast's OYL-212 Bring on Da Funk was pitched and left to ferment at room temp until bottled (gravity at pitching of OYL-212 was 1.010). Carbonate to 2.6–2.7 vol. (5.2–5.4 g/L) CO₂.

RUNNERS-UP

Silver Medal: Brandon Warga of Mount Vernon, Ohio, Mount Vernon Brew Club, Mixed-Fermentation Sour Beer

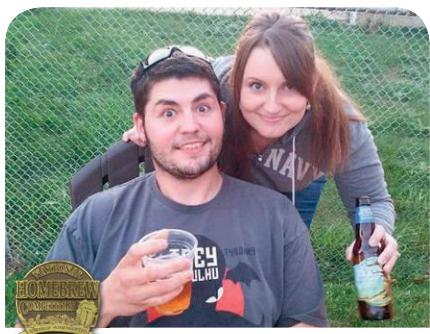
Bronze Medal: Alex Assey of Columbus, Ohio, with Ryan Torres, Scioto Olentangy Darby Zymurgists (SODZ), Wild Specialty Beer

SPECIALTY BEER

224 entries

Sponsored by:

Smart Brew Kit



ADDITIONAL ITEMS

- 0.25 oz.** (7 g) bog myrtle, 30 min
- 1 oz.** (28 g) bog myrtle, 10 min
- 0.5 oz.** (14 g) heather tips, 10 min
- 1 tsp.** Irish moss
- 4.3 oz.** (122 g) heather honey for priming to 2 vol. (4 g/L) CO₂

BREWING NOTES

Mash at 152° F (67° C) for 60 minutes.

RUNNERS-UP

Silver Medal: Andy Ziskin of North Hollywood, Calif., Maltose Falcons, Experimental Beer

Bronze Medal: Scott Rauvola of San Diego, Calif., QUAFF (Quality Ale and Fermentation Fraternity), Experimental Beer

Adam Scarbro Parma, Ohio

"Old Scotty"

Other Historical Beer: Scottish Heavy with Bog Myrtle/Sweet Gale

MALTS

- 3 lb.** (1.36 kg) Golden Promise malt
- 1.5 lb.** (0.68 kg) brown malt
- 12 oz.** (340 g) 40° L caramel malt
- 8 oz.** (227 g) flaked rice
- 8 oz.** (227 g) wheat malt
- 4 oz.** (113 g) 60° L caramel malt
- 2 oz.** (57 g) Victory malt

YEAST

- 1 pack Wyeast 1728 Scottish Ale yeast



TRADITIONAL MEAD

96 entries

Sponsored by:

Northern Brewer



Joe Gerteis
Saint Paul, Minn.

Saint Paul Homebrewers Club

"Le Pomme 1"

Sweet Pétillant Sack Mead
with Apple Blossom Honey

Batch Size:	5 US gal. (15.1 L)
Original Gravity:	1.132 (30.5° P)
Final Gravity:	1.040 (10° P)
Primary Fermentation:	22 days
Secondary Fermentation:	6 months

FERMENTABLES

17.75 lb. (8.1 kg) apple blossom honey

YEAST

Lalvin 71B and Chardonnay yeast

WATER

3.5 gal. (13.3 L) filtered St. Paul water

ADDITIONAL ITEMS

SuperKleer to clarify

BREWING NOTES

Mix honey and water with stir stick in large (7-gallon or 26.5-liter) bucket. Pitch yeast and attemperate if necessary. Ferment using staggered nutrient additions. Transfer to 5-gallon (18.9-liter) carboy to finish fermentation. Fine with SuperKleer and transfer into a purged keg. Add top pressure to carbonate lightly.

RUNNERS-UP

Silver Medal: Hirrendu Vaishnav of Alamo, Calif., Diablo Order of Zymiracle Enthusiasts (DOZE), Sweet Mead

Bronze Medal: Michael Wilcox of Wichita, Kans., Kansas City Bier Meisters, Semi-Sweet Mead

FRUIT MEAD

154 entries

Sponsored by:

Amoretti



Scot Schaar
Davenport, Iowa

Saint Paul Homebrewers Club

2017 Meadmaker of the Year

"Little Dark Heart"

Still, Sweet, Standard Wildflower
and Bamboo Honey Melomel with Figs

Batch Size:	5 gal. US gal. (18.9 L)
Original Gravity:	1.135 (30.8° P)
Final Gravity:	1.020 (5.1° P)
Primary Fermentation:	14 days at 68° F (20° C)
Secondary Fermentation:	10 days at 68° F (20° C)

FERMENTABLES

12 lb. (5.44 kg) dark wildflower honey
6 lb. (2.72 kg) bamboo honey
5 lb. (2.27 kg) semi-dried figs

YEAST

8 g (0.3 oz.) BA-11 dry yeast

ADDITIONAL ITEMS

DAP
Fermaid K
SuperKleer KC
GoFerm

BREWING NOTES

Hydrate yeast with GoFerm and use a staggered nutrient addition protocol. Ferment for two weeks, then rack onto fruit and allow to ferment for 10 more days. Clarify with SuperKleer KC finings.

RUNNERS-UP

Silver Medal: Scot Schaer, Davenport, Iowa, Saint Paul Homebrewers Club, Pyment

Bronze Medal: Christopher McAlexander of Saint Petersburg, Fla., Pinellas Urban Brewers Guild, Melomel



2017 NATIONAL HOMEBREW COMPETITION

SPICE & SPECIALTY MEAD

136 entries

Sponsored by:
Bos Meadery



Scot Schaar
Davenport, Iowa

Saint Paul Homebrewers Club

2017 Meadmaker of the Year

"An Uncommon Disaster"

Still, Medium, Standard Fruit and Spice
Mead with Mesquite Honey, Roasted
Pineapples, and Chipotle Peppers

Batch Size:	6 gal. (22.7 L)
Original Gravity:	1.130 (30.3° P)
Final Gravity:	1.015 (3.8° P)
Primary	
Fermentation:	14 days at 68° F (20° C)
Secondary	
Fermentation:	7 days with fruit at 68° F (20° C)
Tertiary	
Fermentation:	2–4 days with peppers at 68° F (20° C)

FERMENTABLES

18 lb. (8.16 kg) mesquite honey

YEAST

8 g (0.3 oz.) Lalvin 71B-1122 dry wine yeast

ADDITIONAL ITEMS

4 dried chipotle peppers

5 roasted pineapples

DAP

Fermaid K

SuperKleer KC

BREWING NOTES

Roast pineapples on a cookie sheet, with all the burnt and caramelized sugars added to the fermenter. Cut half the dried chipotle chilies in half; leave the others whole. Ferment in primary for two weeks. Rack on to fruit and allow to ferment another 7 days. Rack a third time onto peppers and steep for two to four days, or to taste.

RUNNERS-UP

Silver Medal: Mark Tanner, Oak Harbor, Wash., Wiza Whidbey Island Zymurgy Association, Fruit and Spice Mead

Bronze Medal: Christopher Shinn of Dingmans Ferry, Pa., with Craig Niebuhr, Sussex County's United Brewers & Alchemists (SCUBA), Fruit and Spice Mead

STANDARD CIDER & PERRY

85 entries

Sponsored by:
Vermont Hard Cider Company



Jeff Carlson
Grand Rapids, Mich.

PrimeTime Brewers

"Westside Traditional"

Pétillant, Semi-Dry New World Cider

Batch Size: 5.5 gal. (20.8 L)

Original Gravity: 1.052 (12.8° P)

Final Gravity: 0.0998 (N/A° P)

Primary

Fermentation: 21 days at 60° F (16° C)

Secondary

Fermentation: 3 months at 55° F
(13° C)

FERMENTABLES

5.5 gal. (20.8 L) Uncle John's 2016

Heirloom Cider Blend:
Winesap, Winter Banana,
Jonagrime, and Jonathan

YEAST

Vivace Renaissance Yeast

ADDITIONAL ITEMS

Fermax nutrients

Liquid pectic enzyme

Simple syrup

BREWING NOTES

After secondary rack to keg and add simple syrup to taste, about 1.002 FG. Sulphite and add potassium sorbate. Force carbonate to a petillant level, and counter-pressure bottle fill.

RUNNERS-UP

Silver Medal: Pavel Anisimov of Concord, Calif., Diablo Order of Zymiracle Enthusiasts (DOZE), New World Perry

Bronze Medal: Craig Easton of Hillsborough, N.J., WHALES (Woodbridge Homebrewers Ale and Lager Enthusiast Society), New World Cider



SPECIALTY CIDER & PERRY

134 entries

Sponsored by:

Vermont Hard Cider Company



**Michael Wilcox
with Amy Satterlund
Wichita, Kans.,
Kansas City Bier Meisters**

2017 Cidermakers of the Year

"Bobbing for Medals"
Still, Medium, New England Cider:
Golden Russet Cider

Batch Size:	4 gal. (15.1 L)
Original Gravity:	1.091 (21.4° P)
Final Gravity:	1.007 (1.8° P)
Primary Fermentation:	Several months at around 50° F (10° C)

FERMENTABLES

See brewing notes

BREWING NOTES

This is a blend of Michael's high-gravity, high-acid New World cider featuring a high percentage of Golden Russet, Northern Spy, Liberty, McIntosh, and crabapples. It's 9.5% ABV and off-dry, with Amy's fantastic version of Ken Schramm's Falls Bounty Cyser fermented dry from *The Compleat Meadmaker*. New England Cider needs an adjunct sugar character, and Falls Bounty happens to use just the sort the style needs. The last couple points of sugar to achieve medium sweetness were from back-sweetening with Michael's Ice Cider.

A small amount of medium toast American oak will add tannin, but don't overdo it. The cider can be made in one recipe, but



blending is a passion of both creators and an easy way to tweak things. The amount necessary of the cider and cyser blend will depend on the levels of sweetness of the two components and strength of adjunct character. NEC shouldn't show high amounts of honey. This can handle some age, as mild oxidation will just tend



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at HomebrewersAssociation.org/homebrew-recipes

to emphasize the molasses and raisin. The indicated original gravity assumes you try to make this without blending to hit the 11% ABV mark. We like it served still at a cool room temperature.

RUNNERS-UP

Silver Medal: Pavel Anisimov of Concord, Calif., Diablo Order of Zymiracle Enthusiasts (DOZE), Ice Cider

Bronze Medal: Bob Hart of Ferndale, Mich., with Joell Leining, Cider with Herbs/Spices

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KUDOS—BEST OF SHOW

AHA/BJCP Sanctioned Competition Program

March 2016

Los Angeles Belgian Brew Challenge, 122 entries—*Derek Johnstone, Long Beach, CA.*

April 2016

GTA Brews Spring Showdown, 63 entries—*Ed Hitchcock, Toronto, ON.*

July 2016

Welsh National Homebrew Competition, 132 entries—*Kevin Black, Reading, UK.*

2016 Ohio Brew Week Homebrew Competition, 271 entries—*Pat McGarry, The Plains, OH.*

April 2017

San Mateo County Fair Home Brew Competition, 83 entries—*Alex Deacon, San Francisco, CA.*

Hammerdown Brewcup, 189 entries—*Ken Hughes, Montpelier, VT.*

2017 Maltose Falcons Mayfaire Competition, 335 entries—*Nick Corona, San Diego, CA.*

IV Concurso Sulbrasileiro de Cervejas Artesanais, 247 entries—*Martijn Doelman, Curitiba, Brazil.*

Cascade Brewers Cup, 372 entries—*Henry Friedman, Bellevue, WA.*

2017 Greg Noonan Memorial Homebrew Competition, 222 entries—*Josh Youngman, Poughkeepsie, NY.*

Bridging the Gap 2017, 84 entries—*Vig Redman, Vacaville, CA.*

Grafton Brewing Competition, 72 entries—*Simon Hodgson, Sandy Beach, NSW, Australia.*

First annual Rochester Cinco de Mayo, 75 entries—*Dean Wiensch, Manitowoc, WI.*

22nd Saint Louis Microfest Homebrew Competition, 229 entries—*Rob & Laura Tegel, Godfrey, IL.*

Fraser Coast Home Brew Competition, 148 entries—*Davy Stabler, QLD, Australia.*

Canberra Brewers Comp I, 45 entries—*Ben Harmer, ACT, Australia.*

May 2017

2017 North Shore Brewers Homebrew Competition at Notch, 149 entries—*Matthew Border, Boston, MA.*

Saisonfest, 44 entries—*Andy Melcher, Cincinnati, OH.*

22nd annual Boston Homebrew Competition, 299 entries—*Matthew Border, Boston, MA.*

Tamassee Craft Brew Festival Homebrew Competition, 19 entries—*Bryan Shelmere, Greenville SC.*

20th annual Cactus Challenge, 248 entries—*Kevin Jones, Austin, TX.*

West Sixth Brewoff, 36 entries—*Mike Kling, Lexington, KY.*

Wort Transformation Challenge, 180 entries—*Andy Dietz.*

Battle of the Bubbles, 164 entries—*John Groeger, Mechanicsville, MD.*

8th annual Appalachian Brew Club IPA Throwdown, 35 entries—*Patrick McDermott, Wheeling, WV.*

HKHA 5th annual Homebrew Competition, 105 entries—*Philip Hafstad, Hong Kong.*

Lagerpalooza 3, 103 entries—*Sasha Taddie, Salt Lake City, UT.*

Hayesenbrau Award (London Amateur Brewers Members Only), 13 entries—*Phil Turner, London, UK.*

Aurora Brewing Challenge, 298 entries—*Marie-Annick Scott, Edmonton, AB.*

BrewMaui Annual Homebrew Contest, 81 entries—*Matt Wernig, Lahaina, HI.*

Duelo Cerveceros de Occidente, 232 entries—*Damian Erro, Hermosillo, Sonora, Mexico.*

2017 Heart of Cascadia - The Colors of IPA, 68 entries—*Sander Hoekstra, Portland OR.*

2017 Alameda County Fair Homebrew Competition (BABO), 262 entries—*Howard Clearfield, San Jose, CA.*

Wort Hog Brewers Summer Beer Festival, 36 entries—*Nick Grenfell, Johannesburg, South Africa.*

21st annual BEER Brew-Off, 162 entries—*Eric Grimm, Huntington, NY.*

Wisconsin State Fair Amateur Homebrew Competition, 177 entries—*Larry Leinberger, Wauwatosa, WI.*

Ipswich Home Brew Competition, 45 entries—*Adrian Cahill, Ipswich, QLD, Australia.*

4.o Concurso Interno del Club de Cerveceros Caseros del Uruguay, 112 entries—*Rodrigo Maestro, Montevideo, Uruguay.*

Athens Homebrew Classic, 101 entries—*Paul Skinner, Athens, GA.*

Concurso Vitrine Da Cerveja, 35 entries—*Diogo Rocha Barbosa, Morro do Chapéu, Brazil.*

Garden County Brewers NEIPA Competition, 30 entries—*Anil Godhino, Dublin, Ireland.*

BBC Pro-Am Homebrew Competition, 25 entries—*Tim Koester, Bend, OR.*

Sunset Hill American Homebrew Competition, 12 entries—*James Faircloth, Chicago, IL.*

Homebruin Cup VII, 35 entries—*John Peed, Oak Ridge, TN.*

Boardtown Brewoff, 84 entries—*Jonathan Harden, Greenville, MS.*

5th annual Hop Blossom Homebrew Competition, 177 entries—*Joe Darden, Chantilly, VA.*

Kokopelli Home Brew Cup, 29 entries—*Erik Bostrom.*

Shanghai 2017 National Homebrew Competition, 156 entries—*Da Mian Bao, Wei Ye, Fujian, China.*

Oregon Homebrew Festival, 300 entries—*Mike Furry, Bend, OR.*

NJHOPZ Maifest, 263 entries—*Robert Giaquinta, Sparta, NJ.*

London and South East Craft Brewing Competition, 275 entries—*Josh Smith.*

The 23rd annual Boneyard Brew Off, 124 entries—*Dean Wiensch, Valders, WI.*

Bloatarian Open, 99 entries—*Roxanne Westendorf, Cincinnati, OH.*

Evil Iron Brewer, 35 entries—*David Markgraff, Cincinnati, OH.*

OC Fair Homebrew Competition, 450 entries—*Greg Sietsema and Erin Wojtkiewicz, Corona, CA.*

Concurso Homebrewing Fuera de Estilo (I Ed.), 35 entries—*Javier Zubeldia Elzo, Getxo, Spain.*

Inter-Center Competition - 11 (ICC-11), 20 entries—*Stephen Watson, Pasadena, CA.*

San Diego County Fair Homebrew Competition, 721 entries—*Evan Nagorno, Los Angeles, CA.*

Big Batch Brew Bash (BBBB), 79 entries—*Craig Dhonau, Tomball, TX.*

Duane Graf Memorial Homebrew Competition, 24 entries—*Bizzy Gross & Charles Macaluso, Portland & St. Helens, OR.*

QUAFF Club Only Lagers, 37 entries—*Oleg Shpyrko, San Diego, CA.*

Great Alaska Craft Beer and Homebrew Festival, 75 entries—*Joshua Boldt, Festus, MO.*

Wild World o' Wheat, 15 entries—*John Montes de Oca.*

15th annual Korean Homebrew Competition, 94 entries—*Youngsun Kim, Seoul, Korea.*

Hogtoberfest Home Brew Competition, 78 entries—*Jason Chang, Avon, CT.*

Master Cup Home Brew Tournament of China #2 Xi'an, 150 entries—*Fan Jin, Shanghai, China.*

Taihu Brewing 1st Anniversary Homebrew Competition, 39 entries—*Jiun-Wei Lu, Taipei, Taiwan.*
Belgian Brew Brawl, 60 entries—*Sean Burke, Austin, TX.*

OC Mashups & Barley Forge Homebrew Competition, 28 entries—*Gabriel Adler, Costa Mesa, CA.*

Cheers to Belgian Beers Homebrew Competition, 21 entries—*Jon Larson, Portland, OR.*

GTA Brews Spring Showdown 2017, 61 entries—*Sean Owen, Toronto, ON.*



KUDOS—BEST OF SHOW

AHA/BJCP Sanctioned Competition Program

June 2017

XV KPD GRAND CHAMPION, 412 entries—

Dawid Bobryk, Biadystok, Poland.

Ohio State Fair Homebrew Competition, 580 entries—*Eric Carman, Oxford, OH.*

VI. Hrvatsko homebrew prvenstvo, 380 entries—*Martin Bedeković, Zagreb, Croatia.*

Summer Sizzler, 213 entries—*Joshua Veronee, Blythewood, SC.*

Barley's 22nd annual Homebrew Competition, 40 entries—*A.J. Zanyk.*

Because Beer Homebrew Competition 2017, 124 entries—*Ryan Dhillon, Kingston, ON.*

4th annual Town Hall Brewery Cider Competition (MN residents only), 11 entries—*Bob French, Afton, MN.*

Bluegrass Cup, 213 entries—*Tim Gerbracht, Vienna, VA.*

2017 Southern Taiwan Homebrew Competition, 63 entries—*Kai Ming Chen, Tainan, Taiwan.*

Morgan Cup, 87 entries—*Luis Castro, Walnut Creek, CA.*

HY62 HOP OFF Home Brew Competition - Pale Ale, 11 entries—*Jamie McKendry, Grove City, OH.*

Lift Bridge GABF Pro Am, 50 entries—*Tyler Miller, Minneapolis, MN.*

2017 Marin County Fair Homebrew Competition, 158 entries—*Sean O'Connor, CA.*

Open Season at the ZOO, 126 entries—*Brian Jones, Kansas City, MO.*

BrewHaHa, 13 entries—*Tim Breining, Austin, TX.*

Michigan Craftcom Homebrew Competiton, 50 entries—*Gary Black, MI.*

El Republicano Homebrewers Competition, 8 entries—*Chris Couper, Panama City, Panama.*

XII Encontro Nacional Das Acervas, 562 entries—*Martijn Doelman, Curitiba, Brazil.*

Copa Cerveza Colima 2017, 31 entries—*Ivan Zayas, Celaya, Guanajuato, Mexico.*

Carver's Brewing and Animas Alers ProAm, 45 entries—*Jeff Titus, Durango, CO.*

6th annual Larry Hartzog's Twisted Beer Fest & Homebrew Competition, 50 entries—*Barret Murphy, Baton Rouge, LA.*

ANTBREW Dream Brewing Cup Da-Lian Homebrew Super League, 26 entries—*Tony, Da Lian, China.*

West Coast Brewers Ironbrewer, 34 entries—*Neville Scott, Perth, WA.*

2017 Hilo Homebrew Competition, 48 entries—*Bill Brooks, Kailua, HI.*

Better Half Brew Off, 30 entries—*Ryan Lister, Lawrenceville, GA.*

4th annual MoM Hot Summer BrewOff, 290

entries—*Tim Squires, CarHop, Olathe, KS.*

Alamo City Cerveza Fest, 302 entries—*Eric Heinz and Kyle Autry, Houston, TX.*

North County Brewers "Be Kind To Your Liver"

Session Beer Competition, 19 entries—*Nigel Comerford, Dublin, Ireland.*

KGB vs. CRAFT - Celebrity Deathmash, 44 entries—*Dan Fick, Berkley, MI.*

Red River Valley Fair Home Brew Competition, 33

entries—*Tyler Mangin & Jon Lewis, Fargo, ND.*

July 2017

IPA Beachslap!, 25 entries—*Patrick Mackay, Gangneung, Korea.*

Copa Cerveza Regia, 149 entries—*Joaquin Lopez, Jalisco, Mexico.*

Brisbane Amateur Beers Brewers Club

Championship, 80 entries—*Daniel Angus, Brisbane, QLD, Australia.*

London vs Leeds New England IPA Homebrew Challenge (Club Members Only), 8 entries—*Fraser Withers.*

Toast Under the Oaks, 35 entries—*Bill Childress, Baton Rouge LA.*

Red,White, and Brew, 84 entries—*Jon Silvertooth, Long Beach, CA.*



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COMPETITION PROGRAM CALENDAR**

For complete calendar, competition and judging information go to
HomebrewersAssociation.org/pages/competitions



September 1, 2017

Schooner Homebrew Championship
theschooner.org
Racine, WI
Entry Deadline: 6/4/2017

September 2, 2017

Home Brew League: Solo Challenge
homebrewleague.us
Grand Rapids, MI
Entry Deadline: 8/31/2017

September 2, 2017

3º Copa CervaSerra de Cervejas
concurso.cervaserra.com.br
Caxias do Sul, RS, Brazil
Entry Deadline: 9/1/2017

September 3, 2017

iBrew Challenge
Singapore
Entry Deadline: 9/2/2017

September 6, 2017

Western Australian State Amateur Brewing Competition
wasabc.org
Bibra Lake, WA, Australia
Entry Deadline: 9/1/2017

September 9, 2017

Orpheus MeadFest
orpheuspc.org/orpheus-meadfest.html
Denver, CO
Entry Deadline: 9/2/2017

September 9, 2017

Barnstormer Homebrew Pro Am
barnstormerbrewing.com
Barrie, ON
Entry Deadline: 8/31/2017

September 9, 2017

Tanglefoot Homebrew Competition
jchomebrewer.com/homebrew-competition
Festus, MO
Entry Deadline: 8/12/2017

September 9, 2017

Malt Madness XI
lvhb.org
Allentown, PA
Entry Deadline: 8/24/2017

September 9, 2017

Home Brew League: Team Challenge
homebrewleague.us
Grand Rapids, MI
Entry Deadline: 9/1/2017

September 9, 2017

Old Forge BIG Beer and Odd Ale Competition
[kencarmen.wixsite.com/ofbb16](http://kencarman.wixsite.com/ofbb16)
Old Forge, NY
Entry Deadline: 9/8/2017

September 9, 2017

Clocktoberfest
broken-clock-brew.com/clocktoberfestcomp
Minneapolis, MN
Entry Deadline: 9/2/2017

September 10, 2017

Santa Cruz County Fair Homebrew
santacruzcountyfair.com
Watsonville, CA
Entry Deadline: 8/12/2017

September 10, 2017

Picnique Belga
graintglass.biz/competition
North Kansas City, MO
Entry Deadline: 9/3/2017

September 12, 2017

Copa Cerveceria Mitad del Mundo II
mitadelpmundo.beer
Quito, Ecuador
Entry Deadline: 9/6/2017

September 16, 2017

Tulsa State Fair Homebrew Competition
tulsastatefair.com/index.cfm?id=253
Tulsa, OK
Entry Deadline: 9/1/2017

September 16, 2017

Rocktoberfest Homebrew Competition 2017
cfahomebrew.org/rock.html
Redmond, OR
Entry Deadline: 9/8/2017

September 16, 2017

Commander SAAZ
saaz.org/cms/?page_id=1850
Cocoa Beach, FL
Entry Deadline: 8/21/2017

September 16, 2017

The Manhattan Homebrew Cup
New York City, NY
Entry Deadline: 9/13/2017

September 16, 2017

Concurso Cervejeiro Caseiro ACERVAES 2017
acervaes.com.br
Vitória, Brazil
Entry Deadline: 9/10/2017

September 16, 2017

Blue Ridge Brew Off
Asheville, NC
Entry Deadline: 8/24/2017

September 16, 2017

Victorian Amateur Brewing Championships
(Vicbrew)
vicbrew.org
Melbourne, Victoria, Australia
Entry Deadline: 8/26/2017

September 23, 2017

Salt City Homebrew Competition
comp.saltcitybrewclub.org
Syracuse, NY
Entry Deadline: 9/8/2017

September 23, 2017

Texas Mead Cup
texasmeadcup.com
Austin, TX
Entry Deadline: 8/31/2017

September 23, 2017

Oaktoberfest in the Dimond
oaktoberfest.bottletaps.com
Livermore, CA
Entry Deadline: 8/25/2017

September 23, 2017

Country Brewer Home Brew Competition
facebook.com/thecountrybrewerportmaquarie
Port Macquarie, NSW, Australia
Entry Deadline: 9/18/2017

September 23, 2017

Cáceres Beer 2017
Cáceres, Spain
Entry Deadline: 9/11/2017

September 23, 2017

Roberts Cove Germanfest Homebrew Competition
robertscovegermanfest.com
Crowley, LA
Entry Deadline: 9/18/2017

September 24, 2017

Concurso Londrinense de Cervejas caseiras
facebook.com/concursoconerva
Londrina, PR; BR
Entry Deadline: 9/22/2017

September 30, 2017

HAZtoberfest
brewcompetition.hazardhomebrewing.org
Erie, PA
Entry Deadline: 9/9/2017

September 30, 2017

2017 Maryland Microbrewery Festival Homebrew Competition
mdmicrobrewfest.brewcompetition.com
Westminster, MD
Entry Deadline: 9/16/2017

September 30, 2017

Pacific Brewers Cup
pbc.pacificgravity.com
Los Angeles, CA
Entry Deadline: 9/15/2017

September 30, 2017

I Concurso Outubro Mágico de Cervejas Caseiras
Santa Luzia, MG, Brazil
Entry Deadline: 9/16/2017

October 6, 2017

VETOberfest Brew-Off 2017
spartalegion.com/calendar-of-events
Sparta, WI
Entry Deadline: 10/6/2017

October 7, 2017

Tangled Up In Brew
facebook/Tangled-Up-In-Brew
Connellsville, PA
Entry Deadline: 9/23/2017

October 7, 2017

Valhalla: The Meadng of Life
brewdrinkrepeat.com/valhalla
Phoenixville, PA
Entry Deadline: 9/23/2017

AHA/BJCP SANCTIONED
COMPETITION PROGRAM CALENDAR

For complete calendar, competition and judging information go to
HomebrewersAssociation.org/pages/competitions



October 7, 2017

Easton Beer Fest Home Brew Competition
eastonbeerfest.com
Easton, MD
Entry Deadline: 9/16/2017

October 7, 2017

Brixtoberfest
brixtoberfest.brixiesbrewers.com
Brookfield, IL
Entry Deadline: 9/29/2017

October 7, 2017

Oktobersbest Homebrew Competition
maltinusers.brewcompetition.com
Cincinnati, OH
Entry Deadline: 10/1/2017

October 7, 2017

Tijuana Independent Beer Fest
Tijuana, BC, Mexico
Entry Deadline: 9/16/2017

October 8, 2017

Anchor Town Homebrew Competition
greatnorthernbrewers.org
Anchorage, AK
Entry Deadline: 9/24/2017

October 14, 2017

The Brew Hut Annual Homebrew Competition
thebrewhut.brewcompetition.com
Aurora, CO
Entry Deadline: 9/30/2017

October 14, 2017

Celebrewtion
goldcountrybrewers.org
Sacramento, CA
Entry Deadline: 10/6/2017

October 14, 2017

CPARC Foundation Home Brew Competition
Mechanicsburg, PA
Entry Deadline: 9/30/2017

October 15, 2017

Good Beer Homebrew Competition
goodbeerfestival.com
Salisbury, MD
Entry Deadline: 9/30/2017

October 16, 2017

Copa Cervezas de America
copacaervezasdeamerica.com
Santiago, Chile
Entry Deadline: 8/11/2017

October 17, 2017

Urban Chestnut's Homebrew Competition
urbanchestnut.com/urban-chestnut-homebrew-competition
Saint Louis, MO
Entry Deadline: 8/15/2017

October 21, 2017

HOPS BOPS XXXIII
hopsclub.org
Philadelphia, PA
Entry Deadline: 10/15/2017

October 21, 2017

Knickerbocker Battle Of the Brews
kbott.org
Clifton Park, NY
Entry Deadline: 9/30/2017

October 21, 2017

Sower's Cup Homebrew Competition
lincolnlagers.com/sowers-cup
Lincoln, NE
Entry Deadline: 9/30/2017

October 21, 2017

Oregon Brew Crew Fall Classic
fallclassic.oregonbrewcrew.org
Portland, OR
Entry Deadline: 10/13/2017

October 21, 2017

El Paso Home Brewing Competition
alepaso.com
El Paso, TX
Entry Deadline: 10/1/2017

October 21, 2017

12th Annual New England Regional Homebrew Competition
nerhbc.brewcomp.com
Manchester, NH
Entry Deadline: 10/6/2017

October 28, 2017

Greater Topeka Hall of Foamers Brew Bash
topekabrewers.com
Topeka, KS
Entry Deadline: 10/21/2017

October 28, 2017

Salmonid HBC Grim Reaper Challenge
Salmon, ID
Entry Deadline: 10/14/2017

October 28, 2017

Queen of Beer
Sacramento, CA
Entry Deadline: 9/30/2017

October 29, 2017

AIChE Beer Brewing Competition
aiche.org/brewbeer
Minneapolis, MN
Entry Deadline: 7/28/2017



For an up-to-date calendar
of AHA and BJCP events
go to the Events section of
HomebrewersAssociation.org

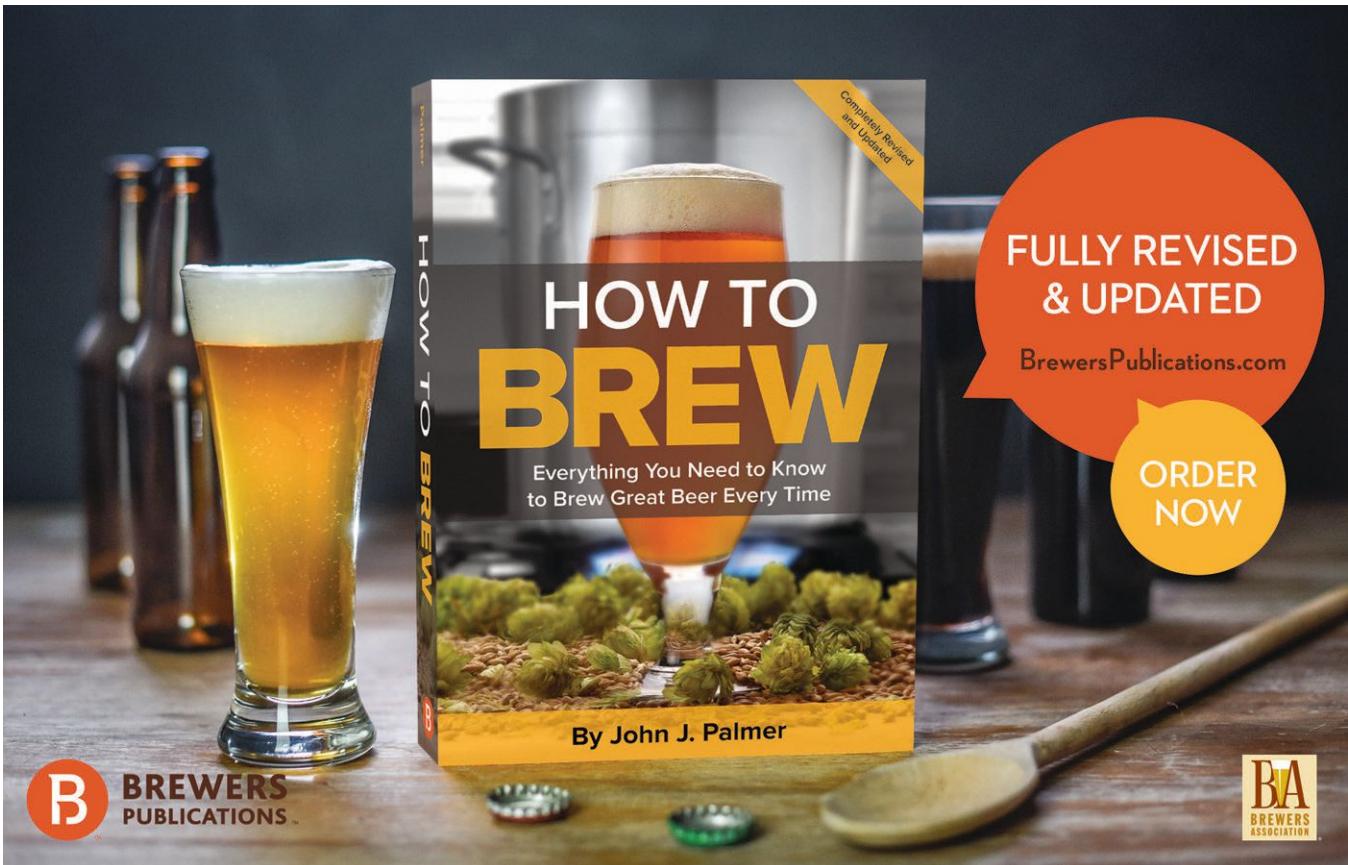
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COMMERCIAL CALIBRATION



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.



Prost Brewing Company

prostbrewing.com

August Schell Brewing Company

schellsbrewery.com

BJCP Style Guidelines

bjcp.org

Commercial Calibration Index

HomebrewersAssociation.org/pages/zymurgy/commercial-calibration

OUR EXPERT PANEL David Houseman, a Grand Master VI level judge and competition director for the BJCP from Chester Springs, Pa.; Sandy Cockerham, a Grand Master III level judge from Indianapolis, Ind. and an associate exam director and Midwest Representative for the BJCP; Scott Bickham, a Grand Master III 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 IX judge, principal author of the BJCP Style Guidelines, and president of the BJCP board who lives in Beavercreek, Ohio.

In the mid-1800s, a few years before Pilsner took Europe by storm, brewers in Bavaria and Austria were looking for ways to lighten the hue of their then-standard dark lagers. As it happens, maltsters in Britain had developed advanced kilning methods that made possible the production of very pale malt, one key to the success of India pale ale.

Gabriel Sedlmayr at Munich's Spaten brewery and Anton Dreher at Vienna's Klein-Schwechat brewery visited Britain and brought some of those new malting and kilning techniques back with them to the Continent. The resulting malts became the prototypes for Munich and Vienna malts, which went on to form the foundations for the Munich dunkel and Vienna lager styles we enjoy today.

In this installment of Commercial Calibration, our judges explore modern-day examples of these classic, light-for-their-time-but-dark-by-today's-standards amber lagers.

First up is Dunkel from Prost Brewing Co. in Denver, Colo. Prost's take on the style is inspired by the dark lagers brewed in and around Bamberg, which is located in the northern part of Bavaria known as Franconia. According to Prost, Franconian-style dunkel is typically a little stronger and drier than is its Munich counterpart.

The brewers at Prost create Dunkel using 100% Weyermann Munich II, Pilsner, and Carafa II malts, a decoction mash, and Hallertau Tradition hops. Two weeks of fermentation and five weeks of lagering yield the 25 IBU, 5.2% ABV beer that comes out the other side.

Related to Munich Dunkel is the Vienna lager, a style invented in Austria in the 19th century and kept alive in Mexico in the 20th. Vienna lager has undergone something of a resurgence in recent years as craft brewers have sought to please a thirsty public that increasingly demands more flavor with less alcohol.

August Schell Brewing Co. in New Ulm, Minn. is no newcomer to Vienna lager, having brewed its Firebrick since 1999. According to the brewery's website, this reddish-amber lager "has a subtle maltiness combined with a hint of hoppy taste that creates a mild, pleasantly drinkable beer."

August Schell notes that Firebrick is brewed using four specialty malts and is hopped with Vanguard, Chinook, and Hallertau. It took silver in the American-Style Amber Lager category at the 2002 Great American Beer Festival® and won gold for Vienna Lager at the 2014 World Beer Cup®.

Prost's Dunkel is made in an old copper brewhouse that was dismantled, boxed up, and shipped over from Germany, and Firebrick is named for the bricks that line the old boilers at the August Schell brewery. Grab one or both of these old-style amber lagers and taste for yourself why the best things are truly timeless.

THE SCORES



Dunkel—Prost Brewing Company, Denver, Colo.
BJCP Category: 8A, Munich Dunkel

THE JUDGES' SCORES FOR DUNKEL



DAVE HOUSEMAN



SANDY COCKERHAM



SCOTT BICKHAM



GORDON STRONG

Aroma: Little malt or hop aroma. There is a light toasted malt character with some chocolate malt, but clean without fruitiness, diacetyl, or DMS. No alcohol aroma. (8/12)

Appearance: Dark brown/amber color, appropriate to style. Brilliant clarity. Under-carbonated, so the head is rocky and thin and dissipates quickly, especially for this German style. (2/3)

Flavor: Chocolate malt character with toasted notes dominates, but without the rich melanoidins and bready complexity of Munich malt and a decoction mash. This dunkel is a bit sweet with just a balance of hop bitterness. Very light hop flavor. Very light, vegetal DMS present. No diacetyl. Clean lager with no fruity notes. No alcohol perceived. (15/20)

Mouthfeel: Medium body. Smooth, creamy mouthfeel without the liveliness of carbonation. No overt alcohol warming. (3/5)

Overall Impression: This is a drinkable beer, but to me it somewhat misses the Munich dunkel target. The light chocolate and toasted notes are pleasant, but rich, bready maltiness from Munich malts and a decoction mash would have added greatly to the beer. I would trade some of the chocolate for breadiness. While hop aroma or flavor are not necessary for the style, a little more would have added to the complexity. Higher carbonation would have made this a crisper lager and lightened the body. A carbonated sample on tap would go well with American bar appetizers such as fried mozzarella sticks or a cheese and charcuterie board. (7/10)

Total Score: (35/50)

Aroma: Medium-high malt aroma is a mix of grain and bread crust. I also get slight nuttiness and toffee. No hop aroma or esters. This beer has a slight aged note in the nose, like light umami. (9/12)

Appearance: Medium-dark brown with red highlights. Clarity is good. Medium-low ivory head is slightly frothy and retention is below average. (2/3)

Flavor: The moderate malt is rich with bread crust, cocoa, and light nutty tones. Medium-low hop bitterness provides an anchor for the malt. There is no observed hop flavor. Fermentation character is clean, and the beer finishes off dry. Alcohol is barely evident in the flavor. (17/20)

Mouthfeel: Medium-plus body, somewhat silky with moderate carbonation. Feels very rounded on the palate but there is a tiny burst of alcohol heat at the swallow. (4/5)

Overall Impression: This beer is lightly rich and cleanly fermented, and it gives me fond memories of sitting in German beer gardens. It is not cloyingly sweet but rather has layers of malt complexity. The bread crust and chocolate made me wonder if this was my main course or my dessert. (9/10)

Total Score: (41/50)

Aroma: Moderate toasted malt supported by subtle dark chocolate notes and medium-low caramel notes. As it breathes, I get a slight winey character that is usually due to oxidation. The fermentation profile is clean, but there is a very low level of dark fruit melanoidin esters. There is no perceptible hop aroma, which is appropriate for this style. (10/12)

Appearance: Brownish-copper with moderate effervescence, but the head dissipates too quickly compared to most classic German-style lagers. Excellent clarity. (2/3)

Flavor: Moderately high melanoidins up front, supported by toasted breadcrumbs and moderate caramel and toffee sweetness. No hop flavor, but hops do provide just enough bitterness to prevent malt sweetness from dominating. Dark fruit is more intense here than in the aroma. These raisin and fig flavors are pleasant but would be more appropriate in a bock. Medium finish with a little dryness from the roasted malts. (15/20)

Mouthfeel: Moderately low carbonation makes this heavier on the palate than classic examples. It could be a little creamier. Low alcohol warmth is pleasant and within the boundaries of the style. (3/5)

Overall Impression: This easy-drinking and flavorful beer would be welcome in a Munich beer garden. Melanoidin notes offer depth, and chocolate notes add complexity. Dark fruit esters are also interesting, and when combined with the light roasted dryness, I am reminded of a clean Scottish export. (8/10)

Total Score: (38/50)

Aroma: Rich malt, deep toast, barest hint of cocoa. Malt is medium to medium-high intensity. Very low hops, if any. Subtle yeast character, squeaky clean. Nothing off. Malt dominates. Clean, fresh, and inviting. (11/12)

Appearance: Medium-sized beige head with large bubbles and fair retention. Bright clarity. Very deep coppery color, brownish. Looks great, but disappointed the head collapsed so quickly. (2/3)

Flavor: Rich malty flavor is fairly strong, like toasted bread crust. Clean fermentation profile, neutral yeast character. Medium-low bitterness, medium-low floral hop flavor. Malt dominates the balance, as it should. Dry finish. Well lagered. (18/20)

Mouthfeel: Medium-full body. Super smooth. Medium carbonation. Not warming or astringent. No flaws. (5/5)

Overall Impression: Wow, this is one of the best American-made examples of this style I've ever had. Malty but not sweet. Dry but with a lower bitterness that leaves the malt prominent. The dryness makes it very easy to drink, but with a definite malty impression. Superb. Clean and fresh. Seems well-fermented and lagered. Except for the head, this beer seems spot on. Classic. Anyone studying for the BJCP exam should try to find this as a commercial example. (9/10)

Total Score: (45/50)



THE JUDGES' SCORES FOR FIREBRICK



Aroma: Light toasted malt with noticeable background hop aroma. Some alcohol aroma evident. No DMS or diacetyl. Clean, crisp, lagered aroma without fruity esters. Very inviting. (10/12)

Appearance: Brilliant clarity. Orange-amber color is appropriate. Dense, rocky, beige head with very good retention. Well carbonated. (3/3)

Flavor: Toasted malt with moderate to high hop bitterness and light, spicy hop flavor. Noticeable alcohol. Clean, crisp lagered character. No fruitiness. Fairly dry finish with a touch of sweetness. Alcohol is a bit sharp. No caramel/crystal or roasted malt noted. (17/20)

Mouthfeel: Medium-light to medium body. Smooth with some sharp edges in the mouthfeel from hops and alcohol. Medium alcohol warming. Well carbonated and well attenuated. (4/5)

Overall Impression: Very enjoyable toasted maltiness with spicy hop undertones. Refreshing. Hop bitterness is a little too assertive but still quite drinkable. I'd welcome exchanging 20 percent less bittering hops for additional finishing hops. It's been well lagered, but there are some chalky, mineral notes as the beer warms. Excellent beer to have with veal picante, Weiner- or schweineschnitzel, or steak au poivre. (8/10)

Total Score: (42/50)

Aroma: The initial impression is medium-low spicy with a perfume-like hop aroma. A slight note of DMS is corn-like but not vegetal. Malt falls just shy of medium and is bready with a hint of crust. Light sweetness. A tiny burst of sulfur adds interest. (9/12)

Appearance: Reddish-amber and very clear. Moderate pale ivory head is finely bubbled and has a bit of rockiness. Excellent retention. (3/3)

Flavor: Moderate malt—bread, a touch of cracker, and a hint of bread crust. Very low corn-like note of DMS. Bitterness is moderate and lingers long into the finish and balances the malt. Finish is off dry due to a very light sweetness that lasts throughout and seems to be alcohol-derived. Hop flavor is very low with floral and spice notes. Cleanly fermented. (16/20)

Mouthfeel: Medium body with medium high CO₂ and a light carbonic bite that helps lead this to a fairly crisp finish while still making for a smooth sipper. (5/5)

Overall Impression: A very well crafted and delicious lager. This seems to be more in the American style with a firm bitterness. If I changed anything, it would be to boost the malt aroma and flavor just a touch to make this a bit more complex. (7/10)

Total Score: (40/50)

Aroma: Moderate grainy sweetness. There is some toasted malt, but the malt profile is not as rich as the better Continental examples. Moderately low spicy hops are evident and add complexity. Very low DMS is pleasant and not vegetal. Clean fermentation profile, but as it warms, I pick up some green apple notes. (7/12)

Appearance: Light copper with a tightly textured white head that lasts well. Pristine clarity. A very attractive beer. (3/3)

Flavor: The first sip brings moderately low malt sweetness with lightly toasted notes, a little caramel, and some light grainy notes. The malt is interesting, but more melanoidin richness would be welcome. Malt gradually fades to a fairly dry finish, with hop bitterness that grows slowly before eventually balancing. Green apple notes add fruitiness that undermines the toasted malt character. The finish is fairly dry, with some low papery notes from oxidation. (16/20)

Mouthfeel: Medium-light body, with a pleasant level of CO₂ that adds texture and fullness. It's fairly smooth, but light metallic notes detract a little from the finish. (4/5)

Overall Impression: This is a pleasant session beer that is well conditioned and well crafted. More malt complexity and richness would be welcome without making it a Märzen. Lower acetaldehyde would also bring out the malt character and soften the balance. There is a little oxidation that is hard to avoid when shipping samples in warm weather. (7/10)

Total Score: (37/50)

Aroma: Relatively neutral. Light malt has a grainy-sweet character, but there's not much toast—could be more intense. Light floral hops are in balance with the malt. A low sulfur note persists, but it is clean otherwise. (8/12)

Appearance: Very deep gold color, borderline amber, but on the low side of the style. Medium-sized off-white head with tiny bubbles and good retention. Clear but not brilliant. (3/3)

Flavor: Medium bitterness, medium hop flavor, medium malt flavor, and dry with a sulfury yeast bite. All components are in balance. Malt again lacks depth and significant toast, as it does in the aroma. Grainy-sweet malt with just a light toast. Floral-spicy hops. Sulfury flavor persists, but a clean fermentation nonetheless. Fresh. (15/20)

Mouthfeel: High carbonation gives it a little bite, probably a bit much. Medium to medium-full body. Not warming. (4/5)

Overall Impression: A well-made clean, balanced beer. Carbonation is a bit high, and the beer lacks the malty richness of the best examples. The yeast character is a bit forward and has a sulfur edge. I'd prefer it to be cleaner, maybe using a less sulfury yeast or giving it more lagering time. The beer is well crafted and drinks nicely, but it has some slight style issues. (7/10)

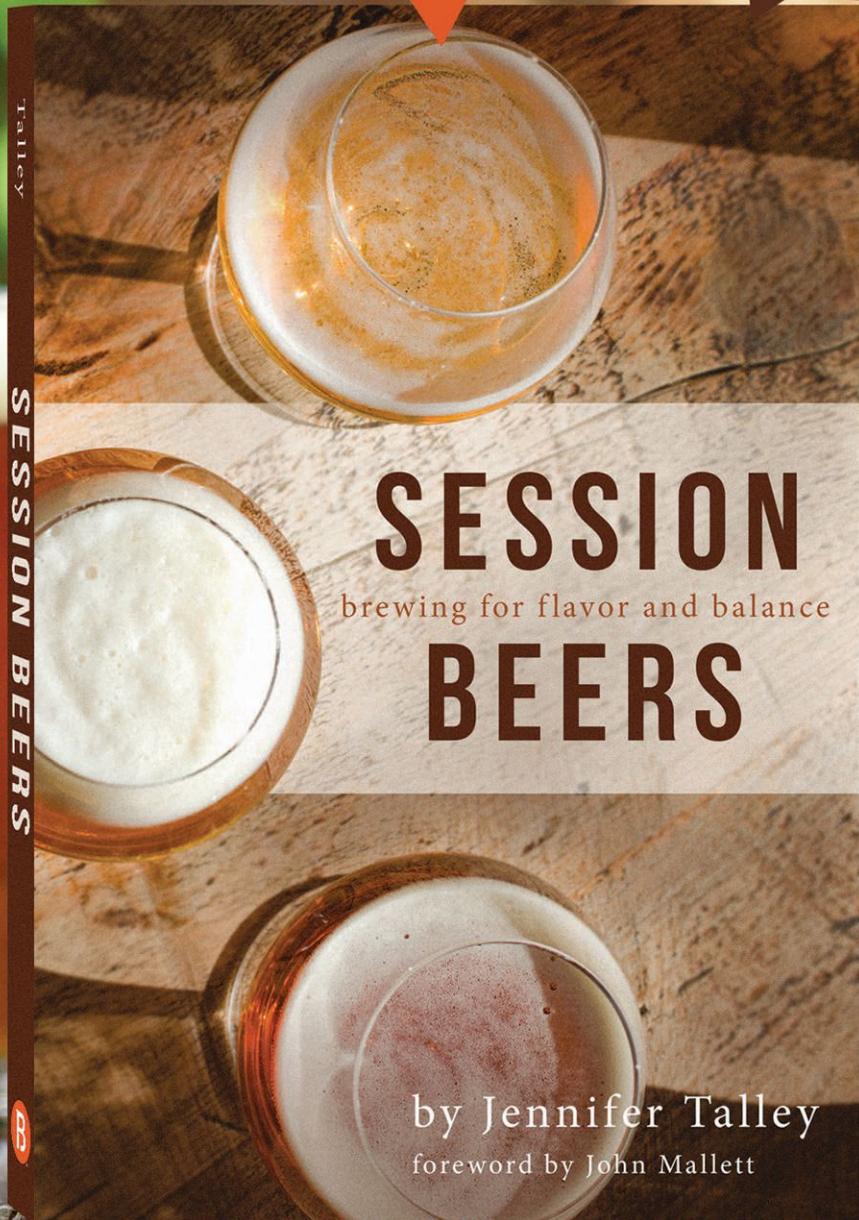
Total Score: 37/50

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By Charlie Papazian



Seismic Moments. Not Forgotten.

Last year, the 2016 Great American Beer Festival® (GABF) marked the 35th anniversary of an event that has had extraordinary impact on the beer world. I've been to every festival session since 1982—something north of 100 sessions. On the awards stage, it was a special moment in my 38-year Association career to be presented a gold medal by the Brewers Association and Colorado Governor (and former brewery owner) John Hickenlooper. Indeed, I was totally surprised and speechless.

Trembling a bit, my first reaction was pointing to all the brewers in the audience to acknowledge that the transformation of America's beer culture has been their doing and that they deserve equal recognition for what you achieve every day of your brewing career.

But in my heart and gestures, I was up there also thanking you for the gift of being able to be there. In the back of my mind, I recalled a quote I've had tacked on my office bulletin board for more than 20 years. That quote is from Kathy Ireland: former supermodel, Zymurgy magazine cover girl, and currently founder/CEO of a \$2 billion business. Giving advice about "How to take a Compliment" she offered this:

A compliment is a gift. It's not relevant that you may not agree with the giver's opinion of you. In some ways the compliment is not even about you; it's about the fact that someone else cared enough to think of you and to share his or her thoughts in a positive way. So the best way to handle one? With a heartfelt 'Thank You.'

So yes. Thank you to craft brewers and homebrewers. And subsequently, as I reflect on past recent moments, I want to share a few special experiences and moments that have meant much to me.



Colorado Governor John Hickenlooper presented Charlie with a 35-year recognition award at the 2016 Great American Beer Festival competition awards ceremony.

I cannot recall how many times I have presented Great American Beer Festival medals and World Beer Cup® awards on stage. This year alone at GABF, I fist bumped 1,200 times. On stage, I pose for photos with many hundreds of winning brewers and their staffs. There, I am in the middle or on an end, putting my arm around the closest person in the group.

I always knew it, but at this year's event those momentous moments revealed the impact of being a winner on stage. It struck me like a truckload of beer! Winning an award is a seismic experience for everyone



Check out a slideshow of Charlie presenting awards to GABF and World Beer Cup winners over the years @ HomebrewersAssociation.org/CPFistBump

who comes onto that stage. Literally seismic. As I put my arms around winning brewers, I can feel the shaking, excitement, and body tremors each winner experiences.

I don't know why this year was so different for me, but I was mentally stunned and impacted to have been conveyed that special energy experienced with participa-

ELBRO NERKTE REMAKE 2017 BROWN ALE (ALL-GRAIN)

Batch Size:	5.5 US gallons (21 L)
Original Gravity:	1.056 (13.8 B)
Final Gravity:	1.014 (3.5 B)
Extraction Efficiency:	79%
Bitterness:	About 38 IBU
Color:	16 SRM (32 EBC)
Alcohol:	5.7% by volume

MALTS

6 lb.	(2.7 kg) Maris Otter pale malt
3.5 lb.	(1.6 kg) Munich malt (10L)
8 oz.	(227 g) aromatic malt
8 oz.	(227 g) honey malt
4 oz.	(113 g) chocolate malt
1 oz.	(28 g) debittered black malt

HOPS

0.67 oz.	(18 g) Vanguard, 6% a.a. @ 60 min (4 HBU/112 MBU)
0.75 oz.	(21 g) Mt. Hood, 6% a.a. @ 60 min (4.5 HBU/126 MBU)
0.75 oz.	(21 g) Mt. Hood, 6% a.a. @ 30 min (4.5 HBU/126 MBU)
1 oz.	(28 g) Aramis or Santiam @ 0 min
1 oz.	(28 g) Aramis or Santiam, dry hop

YEAST

Ale yeast of your choice

ADDITIONAL ITEMS

1/4 tsp.	(1 g) powdered Irish moss @ 10 min
3/4 cup	(175 mL) corn sugar for priming bottles or 0.33 cups (80 mL) corn sugar for kegging

BREWING NOTES

A step infusion mash is employed to mash the grains. Add 11 qt. (10.5 L) of 140° F (60° C) water to the crushed grain, stir, stabilize and hold the temperature at 132° F (56° C) for 30 minutes. Add 5.5 qt. (5.2 L) of boiling water, add heat to bring temperature up to 155° F (68° C), and hold for about 30 minutes. Then raise temperature to 167° F (75° C), lauter, and sparge with 3.5 gal. (13.2 L) of 170° F (77° C) water. Collect about 5.5 gal. (21 L) of runoff. Add 60-minute hops and bring to a full and vigorous boil.

The total boil time will be 60 minutes. When 30 minutes remain, add the 30-minute hops. When 10 minutes remain, add the Irish moss. When 0 minutes remain (when boiling is done), add the 0-minute hops. After a total wort boil of 60 minutes, turn off the heat and place the pot (with cover on) in a running cold-water bath for 30 minutes. Continue to chill in the immersion or use other methods to chill your wort. Then strain and sparge the wort into a sanitized fermenter. Bring the total volume to 5.5 gal. (21 L) with additional cold water if necessary. Aerate the wort very well.

Pitch the yeast when temperature of wort is about 70° F (21° C). Ferment at about 70° F (21° C) for about one week or until fermentation shows signs of calm and stopping. Rack from your primary to a secondary and add the hop pellets for dry hopping. If you have the capability, "cellar" the beer at about 55° F (12.5° C) for about one week.

Prime with sugar and bottle or keg when complete.

tion at the Great American Beer Festival. They are moments never to be forgotten. The room is indeed electric with a very unreal high energy.

Just before the 2016 Great American Beer Festival, I was in Japan as a judge for the Japan Craft Beer Association's International Beer Competition. Sixty international beer judges participated. Volunteers and staff were busy preparing for both the competition judging and the three-day beer festival soon to open. During the judge orientation, I was asked to say a few words about the competition volunteers. With a few minutes to organize my thoughts I expressed heartfelt thanks for the passionate and dedicated role volunteers play at beer events all over

**"WORLDWIDE,
THE PASSION FOR
BEER AND BREWING
AND THE COMMUNITY
WE BELONG TO
IS MORE IMPACTFUL THAN
I CAN IMAGINE."**

the world and particularly at this Japan Craft Beer Association event. I finished my three-minute talk, and spontaneously the room took on a special and unforgettable life of its own. All 60 judges stood

and roared a long and heartfelt standing ovation. Through the standing ovation, I couldn't help but notice on the other side of the room that several volunteers were close to or in tears.

Reflecting, this too, was a seismic moment I will not forget. As I recall 35 years of the Great American Beer Festival and the critical role competition and festival volunteers have played to help assure successful events, that moment in Japan on the other side of our world embodied an important element of our craft brewing community. Worldwide, the passion for beer and brewing and the community we belong to is more impactful than I can imagine. The experience of that realization is beyond words.

ELBRO NERKTE REMAKE 2017 BROWN ALE (PARTIAL-MASH)

Batch Size:	5.5 US gallons (21 L)
Original Gravity:	1.056 (13.8 B)
Final Gravity:	1.014 (3.5 B)
Extraction Efficiency:	79%
Bitterness:	About 38 IBU
Color:	16 SRM (32 EBC)
Alcohol:	5.7% by volume

MALTS

8 lb.	(3.6 kg) amber malt extract syrup or 6.8 lb. (3.1 kg) dried amber malt extract
8 oz.	(227 g) aromatic malt
8 oz.	(227 g) honey malt
4 oz.	(113 g) chocolate malt
1 oz.	(28 g) debittered black malt

HOPS

0.67 oz.	(18 g) Vanguard, 6% a.a. @ 60 min (4 HBU/112 MBU)
1.25 oz.	(35 g) Mt. Hood, 6% a.a. @ 60 min (7.5 HBU/210 MBU)
0.75 oz.	(21 g) Mt. Hood, 6% a.a. @ 30 min (4.5 HBU/126 MBU)
1 oz.	(28 g) Aramis or Santiam @ 0 min
1 oz.	(28 g) Aramis or Santiam, dry hop

YEAST

Ale yeast of your choice

ADDITIONAL ITEMS

1/4 tsp.	(1 g) powdered Irish moss
3/4 cup	(175 mL) corn sugar for priming bottles or 0.33 cups (80 mL) corn sugar for kegging

BREWING NOTES

Heat 1.5 qt. (1.4 L) water to 172° F (77.5° C) and then add crushed grains to the water. Stir well to distribute heat. The temperature should stabilize at about 155° F (68° C). Wrap a towel around the pot and set aside for about 45 minutes. Have a homebrew.

After 45 minutes, add heat to the mini-mash and raise the temperature to 167° F (75° C). Then pass the liquid and grains into a strainer and rinse with 170° F (77° C) water. Discard the grains.

Add more water to the sweet extract you have just produced, bringing the volume up to about 2.5 gal. (9.5 L). Add malt extract and 60-minute hops and bring to a boil.

The total boil time will be 60 minutes. When 30 minutes remain, add the 30-minute hops. When 10 minutes remain, add Irish moss. When 0 minutes remain (at the end of boiling), add the 0-minute hops. After a total wort boil of 60 minutes, turn off the heat.

Immerse the covered pot of wort in a cold-water bath and let sit for 15–30 minutes, or the time it takes to have a couple of homebrews.

Then strain out and sparge hops and direct the hot wort into a sanitized fermenter to which 2.5 gal. (9.5 L) of cold water has been added. If necessary, add additional cold water to achieve a 5.5 gal. (21 L) batch size. Aerate the wort very well.

Pitch the yeast when temperature of wort is about 70° F (21° C). Ferment at about 70° F (21° C) for about one week or until fermentation shows signs of calm and stopping. Rack from your primary to a secondary and add the hop pellets for dry hopping. If you have the capability, “cellar” the beer at about 55° F (12.5° C) for about one week.

Prime with sugar and bottle or keg when complete.

Over the past two years I have had many moments that I consider career highs. Since mid-2015, I have interviewed more than 100 craft-brewing pioneers, most of whom got started 25 to 30 years ago. I've known most of them that long.

Spending quality time while immersed in a 50-minute conversation suspends me in a world that I never knew. My 38-year career has been an endless string of two- to four-minute conversations. To have the privilege to sit down and listen to the stories of craft brewing pioneers has often left me speechless. The interview is a roller coaster journey into the past. And that in itself reflects the rollercoaster journey that becomes

the personal recollections of emergence, struggles, survival, achievements, failures, passion, vision, loves found and loves lost, philosophy, and insights.

After a string of two or three days of interviews, I am emotionally drained. I recover slowly in a day or two. Then I am in disbelief awe of what I heard, saw and felt. Days later, I reflect and I realize I have had another series of career highs. They are seismic and continue to provide perspective that serve as life's moments to remember. Not forgotten.

So, let's cut the shuck and jive and get on with the recipe. Here's one based on the

legendary brown ale recipe in my book, *The Complete Joy of Homebrewing* and featured in one of the very early issues of Zymurgy. Elbro Nerkte brown ale was immensely popular in the early years of the homebrewing renaissance. Here's a significant modern-day tweak to a delicious brown ale hopped with legacy hops and a blend of toasted and brown malts that contribute complexity and deliciousness beyond your dreams.

Charlie Papazian is founder of the American Homebrewers Association and the author of *The Complete Joy of Homebrewing*.



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Homebrewing 15 Floors Up: The Challenges of a Small Condo

Imagine you're an all-grain brewer trying to make quality homebrew. You live on a remote tropical island with limited supplies, ridiculous shipping costs, no air conditioner, an 80° F (27° C) water supply, no outdoor space, and a kitchen measuring less than 50 square feet (4.6 m²)! Those are the challenges I face living in a small condo in Honolulu, Hawaii.

I had started out brewing small extract batches on my stovetop, followed by full boils using a propane burner. But, when my wife and I bought our first home—a 15th-floor condo downtown—something had to give. With no backyard, I could only use my electric stovetop. My tap water doesn't get cold, and the entire condo is 80° F (27° C). How could I properly chill wort and maintain the right fermentation temperature? Eventually, I overcame these space and climate challenges and brewed my first gold-medal beer. Here's how I did it.

I store my all-grain brewing equipment *everywhere*. I keep stuff in all sorts of places and use various closets to store two 10-gallon (37.9-liter) coolers, an 8-gallon (30.3-liter) kettle, two Ss Brewtech Brew Buckets, and a chest freezer for fermenting.

After storage, my next major challenge is heating strike and sparge water and boiling 7 gallons (26.5 liters) of sweet wort. Obviously, I don't use a propane burner in my living room. I experimented with water on my stovetop to see how long it would take (two hours later—no boil), so, I researched and found a plug-in heating element that attaches to the side of my kettle. Voilà! Now I can boil wort in 30 minutes.

Chilling wort is the next big challenge. I tried traditional ice baths, but they took too long. With two roaming cats, the longer my wort stays outside the fermenter, the greater the chance of cat-hair contamination. I needed a contained system. An immersion chiller wouldn't do much with our tepid tap water, so I came up with a heat transfer system that routes wort through a device and into my fermenter.

I bought 40 feet (12.2 meters) of copper tubing from the local hardware store, wound it up into four different coils, and attached them with small pieces of silicone tubing and hose clamps. This way it's easy to disassemble and store. I use additional silicone tubing to route from the kettle to a pump and from the pump to the coils, which are placed in an ice bath. Now I'm able to get my boiling wort to under 70° F (21° C) within 10 minutes. It's a lot to sanitize, but it works.

In this climate and with no A/C, there's only one option for fermentation: a temperature-controlled chamber. For years, I used a dilapidated mini fridge with faulty seals, which caused condensation. Now I have a new 5-cubic-foot (142-liter) chest freezer taking up half a closet, allowing me to control fermentation within one



degree. This has made a major impact on the quality of my beer. I also store my coolers, fermenters, yeast starters, stir plate, and flask in the freezer. After I brew, I use it for my corny kegs, which saves even more space over bottling.

The rest of my process is mostly standard. I fly or batch sparge, and I use gravity to transfer strike and sparge water and to run off from the mash tun to the kettle. Now, if I could only figure out how to drink my kegged beer and ferment the next batch simultaneously. Until then, I guess I'll have to drink up to make space, something my wife is happy to help with. Mahalo and cheers!

Scot Ahlers is a homebrewer living in Honolulu, Hawaii.

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