

FOR THE HOMEBREWER & BEER LOVER

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zymurgy®

The Journal of the American Homebrewers Association

The Perfect Pour



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the Brewers Association

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MARATHON
BREWING
SESSIONS

Homebrew
Club
Bars

PLUS: A Hoppy Visit with Danish Brewers



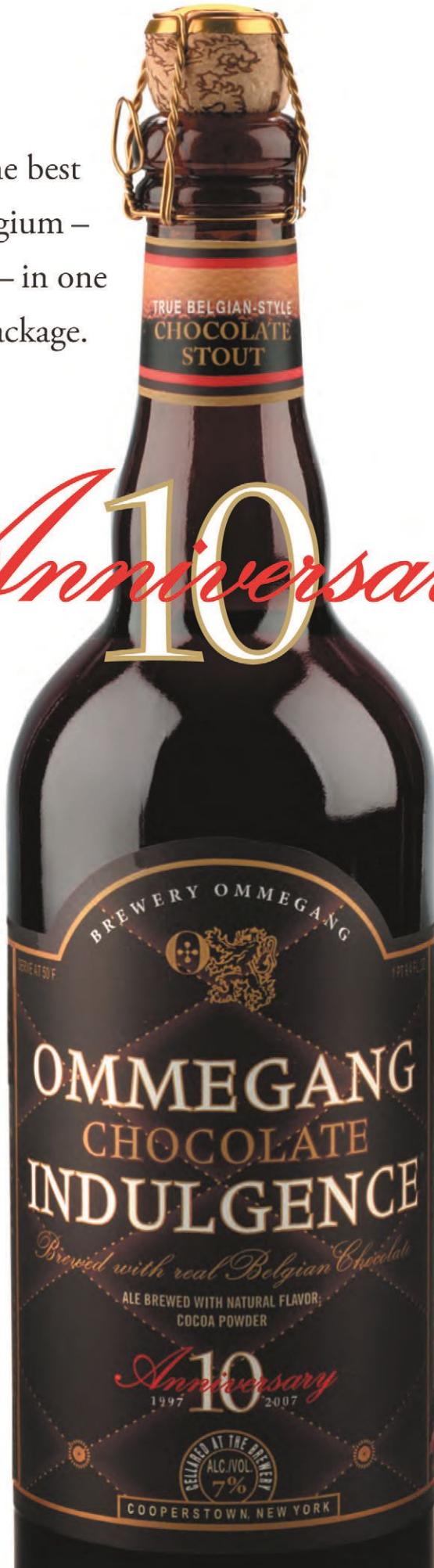
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Giving Back in a Big Way

Back in the September/October 2007 issue of *Zymurgy*, Tony Profera of the Carolina BrewMasters wrote about the club's annual Charlotte Oktoberfest for "The Last Drop". The event, which will celebrate 10 years in 2008, is thought to be the largest beer festival organized and run by a homebrew club in the nation, with more than 6,000 beer lovers converging on the Metrolina Expo Trade Center in 2007.

Profera mentioned late in the article that in 2006, the Charlotte Oktoberfest donated an eye-popping \$25,000 to the Multiple Sclerosis Society from event proceeds.

The donation amount doubled in 2007.

The Carolina BrewMasters donated \$50,000 from last year's event to local charities, including the Mid-Atlantic Chapter of the National Multiple Sclerosis Society, A Child's Place, and the Juvenile Diabetes Research Foundation.

"Our festival has always been about two issues near and dear to us: educating the Charlotte area on the wonderful qualities of craft beer, and giving back to our great city," said 2007 club president Brian Beauchemin.

In November, the BrewMasters received a 2007 Most Outstanding Volunteer Group Award from the Mid-Atlantic Chapter of the National Multiple Sclerosis Society at the society's annual board meeting.

"It was an honor to receive such an award," said Jeannette Smith, vice president of Oktoberfest for the Carolina BrewMasters. "Even better was the fact that everyone attending the meeting was completely shocked when we turned around and presented our donation. We received a standing ovation and it hits

home that what we're doing with our festival proceeds will truly impact many people's lives."

About 175 volunteers ensure that the Charlotte Oktoberfest takes place each fall, with 45 of those volunteers coming from the Carolina BrewMasters. Profera reports that it takes 60-80 people to work admissions alone. "Without help from the local community this festival simply would not be possible," he said.

The festival, at \$30 per ticket, sells out about a month in advance. In 2007, approximately 350 different craft beers from 100 breweries were available for festival-goers to sample along with homebrew provided by local clubs.

I asked Profera why he thinks the Charlotte Oktoberfest is so successful, and he offered a multitude of reasons. "Charlotte is one of many small to mid-sized cities with great weather and a population that likes to get together," he said. "Travel (and parking) is easy, and thankfully we are loaded with urban 'up and comer' professionals. Additionally, a core group of the Carolina BrewMasters membership has become emotionally tied to this event. We are driven to improve the festival each year. We love homebrew. We love craft beer. We want the community to share in the relatively new American wave of quality beer offerings."

The BrewMasters are currently looking for an outdoor venue for the 2008 event. You can read more about the BrewMasters' custom-built 11-tap bar that served up 35 kegs of homebrew at the Charlotte Oktoberfest in Drew Beechum's article on page 34.

Jill Redding is editor-in-chief of *Zymurgy*.

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Publisher _____ Brewers Association™

Editor-in-Chief _____ Jill Redding

Art Director _____ Kelli Gomez

Graphic Designer _____ Kerry Fannon

Graphics/Production Director _____ Stephanie Johnson

Senior Designer/Web Designer _____ Julie Lawrason

Sales & Marketing Director _____ Cindy Jones
cindy@brewersassociation.org

Advertising & Sponsorship _____ Chris Pryor
pryor@brewersassociation.org

Advertising & Sponsorship Coordinator _____ Stephanie Hutton
hutton@brewersassociation.org

Marketing Coordinator _____ Meghan Storey
meghan@brewersassociation.org

Circulation Coordinator _____ Brandi Tinder

American Homebrewers Association®

Director _____ Gary Glass

Membership Coordinator _____ Kathryn Porter

Project Coordinator _____ Janis Gross

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>> GET THERE!

Atlantic City Beer Festival

The third annual Atlantic City Beer Festival is set for March 8-9 at the Atlantic City Convention Center in New Jersey.

Known as "the Celebration of the Suds," the 2008 event is expected to feature the beers of more than 80 breweries, with 250 different beers to try.

Festival promoter Jon Henderson said the event is "shaping up to be our best yet. We'll have the public's favorite beers on hand for sampling and we'll be adding some exciting new flavors."

The festival includes Celtic music from Birnam Wood. Three beer tasting sessions will be held. Ticket prices are \$35 through March 1. Go to www.celebrationofthesuds.com for more information.

February 22-24

14th Cask Head Cask Ale Festival Brooklyn, N.Y.
Phone: 718-488-0430, Web:
www.brazenheadbrooklyn.com

March 1

Philly Craft Beer Festival Philadelphia, PA. Phone: 631-940-7290, Web: www.phillycraftbeerpfest.com

March 8

Kona Brewers Festival Kailua-Kona, HI Phone: 808-937-7596, E-mail: lara@konabrewersfestival.com, Web: www.konabrewersfestival.com

March 21-22

14th Annual Spring Beer & Wine Fest Portland, OR.
Phone: 503-238-3770, E-mail: stevwooldard@aol.com,
Web: www.springbeerpfest.com



April 6

13th Annual Classic City Brew Fest Athens, GA.
Phone: 706-254-BREW, Web:
www.classiccitybrew.com/brewfest.html

April 26

25th Annual San Francisco International Beer Festival San Francisco, CA. E-mail:
sfbeerfest@yahoo.com, Web: www.sfbeerfest.com



BREW POLL: Best Beers in America

It's time once again for *Zymurgy's Best Commercial Beers in America Survey*.

As homebrewers and beer lovers, *Zymurgy* readers have the most educated and adventurous palates on the planet. So for the sixth year, we are asking you, "Who brews the best beers in the land?"

The rules are simple: just write down a list of the 20 best commercial beers available in the U.S. market and send your list to jill@brewersassociation.org by March 14. Please also include your first and last name and where you live. You can vote for both domestic and imported beers, but they have to be available in the United States. We will tabulate the results and present them, along with clone recipes for some of the top beers, in the July/August issue of *Zymurgy*.

While you're voting, take a minute to review one of your top beers, in 150 words or fewer, and send that along as well (this is appreciated but not mandatory.) We'll include some of your comments in the July/August issue as well as in the "You've Gotta Drink This" in future installments of *Beeroscope*. Thanks for voting!



BREW NEWS: California Homebrew Club 'Award'



The oft-celebrated Anchor Brewing Company has a long-standing, little-known annual tradition. Since the mid-1980s, the brewery staff is inundated yearly with homebrew clubs reporting their year of beer.

After a careful and mysterious judging process, one club is proclaimed "California Homebrew Club of the Year." The winning club is treated to a February fete at the beautiful copper clad brewery in the heart of San Francisco's Portrero District. The staff opens the taps and prepares a feast to celebrate California's homebrewers' achievements. Staying with the club for a year is a trophy topped by the "Mug," a hand-hammered quart copper tankard built from the scraps of Anchor's imported German brewery.

For a record-breaking sixth time, the Maltose Falcons were selected for their efforts in 2007.



>> BEER SONG

A Prohibition Ditty

Mother's in the kitchen,
washing out the jugs.

Sister's in the pantry,
bottling the suds.

Father's in the cellar,
mixing up the hops.

Johnny's on the porch,
watching for the cops.

*Submitted by Zymurgy reader
Mike Kotecki*



BREW NEWS: 75 Years of Beer



YOU'VE GOTTA DRINK THIS

Victory Hop Wallop

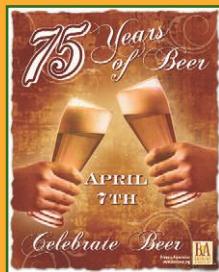


When you happen to be on the West Coast in a bastion of hoppy beers and you see that Pennsylvania's Victory shows up on the beer menu and is proclaimed as one of the best double IPAs ever tasted, you know something is right. Unfortunately, it also means that the secret is out! Golden in color and bitter in essence is how to describe this beer. The hops are only stated to be of the wild variety, no good data there. But it is known that it is a fresh hop beer and one that you can age at that. There is more mystery to this beer than known, that is for sure, but what is known is that it is pure pleasure.

Reviewed by Jeff Long, Sterling, Va.

If you've had a beer you just have to tell the world about, send your description, in 150 words or fewer, to jill@brewersassociation.org.

While the full repeal of Prohibition came on December 5, 1933, modification to the Volstead Act legalizing beer with 4.0-percent alcohol by volume (3.2-percent alcohol by weight) occurred on April 7, 1933. President Franklin Roosevelt signed the Cullen-Harrison bill into law, proclaiming, "I think this would be a good time for a beer."



From this date forward the country's brewers were back in business and Americans enjoyed legal beer—a full eight months before wine and spirits were once again legal. On April 7, 2008 beer lovers are invited to celebrate the 75th anniversary of the legalization of beer. Several craft brewers are planning celebrations, and a Web site has been set up for breweries to post their events and special brews. Go to www.75yearsofbeer.com to learn more. In the meantime, party like it's 1933 and celebrate your right to enjoy beer at your local brewery!



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by Ray Daniels



Jet Set Beer Styles

When I think of spring and homebrewing, I generally think of competitions—and from them about the style guidelines at their core. In the spring of 1990, I entered my first homebrew competition (put on by the Kenosha Bidal Society) and not long after that I entered the National Homebrew Competition (NHC) for the first time.

Like most of you, I am a student of beer styles. I certainly recognize that styles shift and evolve over time, so I thought it would be fun to look back at the style categories for my first NHC and see how they had changed. I pulled out my Spring 1990 issue of *Zymurgy* where the official entry information and style listings appeared and gave it a read. Boy, was I surprised!

Of course the listings from 18 years ago miss some of today's newer styles like the various "imperial" and wood-aged beers. But overall there were just 47 subcategories of beer in those 1990 guidelines compared to 78 listed by the Beer Judge Certification Program (BJCP) now. That's a lot of missing styles!

Next, the complete description of all the styles ran less than two pages. Compare that to the 30 pages it takes to cover this information today! Even adjusting for the increased number of styles, that's about nine times more information on each style.

Finally, there was very little quantitative information: no original gravities, no SRM color ranges, no IBU bitterness values. Many styles mentioned the expected abv, but usually as a single value rather than a range.

I suspect that the reliance on qualitative rather than quantitative descriptors was part of an effort to keep the hobby simple



Ray Daniels—1990 National Homebrew Competition

and accessible for everyone. Remember at that point, legal homebrewing was still less than a dozen years old. While accessibility was a laudable goal as far as homebrewing generally goes, the lack of quantitative info fell short when it came to clearly describing beers. Today, I certainly can't imagine trying to discuss beer styles without IBUs and original gravities.

Qualitative descriptors for color may be an exception. We can see color and have a lot of commonly shared words for describing it. Surely saying a beer is "copper to dark brown" is better for most people than saying it is 15 to 25 degrees SRM.

But even the qualitative tools weren't being put to best use in all cases in 1990. The category I entered that first year—Continental Dark—was simply said to be "dark" with "less sweetness, more hops and carbonation than their brown ale counterparts." As a result, I'm hard pressed today to say just what style or commercial beer it was really intended to represent. (The beer I entered

was from my 11th batch and I had yet to actually judge a beer myself.)

Other odd entries from those 1990 guidelines appear in various categories.

IPA was said to have "a healthy alcoholic content," but it was given as 5 percent which is pretty light for the style—and about right for pale ales.

Scotch ale was said to be "a style originating in France." That would certainly have surprised the brewers in Scotland and France. Scotch ales were once popular in Belgium...which at least neighbors France! The lighter Scottish ales weren't mentioned at all in the guidelines.

"Texas Brown Ale" was included: a hoppy brown ale popularized by homebrewers. Today we have "American Brown Ale" instead, but the assertive hoppiness has been moderated over the years. And many other styles (pale ale, IPA, stout) have been bifurcated into "American" and traditional substyles in the intervening years.

Porter had no subcategories back then indicating that its long and storied history had yet to be incorporated into the understanding of the style.

And there were only three styles of stout: dry, sweet and imperial. Today oatmeal, foreign and American make the list as well.

Most of these omissions are understandable: they were headed in the right direction and included information that was readily available or commonly accepted at the time in most cases. I point out the shortcomings not to belittle the efforts of the time, but to help everyone who is brewing today understand how far we have come.

During the 1990s, homebrewing blossomed. The ranks of homebrewers swelled and began to include more and more "serious" participants who viewed this not just as a fun thing to do a couple of times a year with friends, but as a life-long hobby with lots of opportunities for learning and exploration. Many came to the hobby bringing professional skills that would enrich homebrewing itself.

As younger homebrewers matured, they found opportunities to travel to Europe and drink the beers they were reading about and visit the breweries that made them. What they learned filled in the gaps in what we knew about classic styles.

Others did research: reading long-forgotten books on brewing, delving into technical journals that offered important insights and hard data.

And more people became involved. The BJCP guidelines we have today resulted from a collaborative process that consulted many sources and capitalized on the expertise of many individuals who had made special studies of individual styles. And it involved judgments by a group who had spent many years studying styles.

As we look back at the style guidelines of 1990 and wonder at their simplicity and incompleteness, intellectual honesty requires that we ask whether we might do the same in 2018 when looking at the styles of today. Personally, I don't think so. Of course some evolution will occur; some new styles will emerge. But by and large I think what we've got today is on the mark.

Barring some radical breakthrough in flavor notation, I think we've done about as good a job as we can do of describing the existing styles. But who knows, maybe there's a tongue-taste code, a 3-D modeling method for complex variables or an electronic olfactory synthesizer out there just waiting to serve homebrew passion. Until then, those hoping to understand styles today have a very fine resource indeed.

Ray Daniels is a former editor-in-chief of *Zymurgy* and director of Brewers Publications for the Brewers Association.

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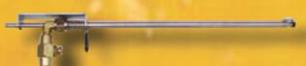
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by Professor Surfeit



The Perfect Beer Glass?

Dear Professor,

Jim Koch, already known as a brewer who unabashedly liberated countless P.O.W.s of the lager wars, has taken beer appreciation to a new level. His generous gift of properly designed and aesthetically appealing glassware to the "Beer Nation" may end this country's search for the perfect beer glass. This causes each of us to ask ourselves "Which beer paradigm will Jim Koch redefine next?" My question to you is: Have you researched the science of the design and can you confirm its perfection?

Russ Harbach

Proud member of the AHA and the Bell City Home Brewers & Vintners Racine, Wis.

Well Russ,

Indeed perfection is in the mouth, eyes, nose and ears of the beholder. I can attest that I have done extensive research quaffing many a brew with many a beer vessel. When I reach for my homebrewed ordinary bitter, I grab an English-style pint glass. When I'm toasting with a true-to-style homebrewed Pilsener, I seem to go for those thin, V-shaped, tall Pilsener glasses. When I have a German-style helles, the glass mug or the stone stein comes off the shelf. When a dubbel is about to assault me, I reach for a globed goblet. A porter or stout, a straight-up, thin-walled tumbler. I suppose in doing all these different types of glasses with memorable and stylistic brews, I am trying to take myself back to the original great experiences I had and where I had them. The glassware brings back memories.

Now then, let's touch upon where Mr. Koch has taken us. He obviously cares about the beer he makes and wants people to appreciate it to the max. To this end he has almost achieved perfection. Eyes, nose and mouth



glass whereby we could hear what the beer had to say to us, now that would be the ultimate friend. Wouldn't it?

Wait a minute. Listening to your beer may not have anything to do with the glass. I can hear it singing. I've had more than two beers? Everybody sings. But if only a glass could be designed to talk, sing or communicate the sound—now that would be the next paradigm. Meanwhile I'll hold the empty glass up to my ear and listen to the yeast roar.

Paradigmatically yours,
The Professor, Hb.D.

Yeast Storage Revisited

Dear Professor,

I have read all of Charlie Papazian's books and I am stuck on yeast culturing in *The Complete Joy of Homebrewing* (third edition). On page 267 he states, "You can be assured that the yeast will remain healthy and active for at least two to four weeks,

are experiencing the maximum exposure—Sam Adams style. But he has neglected to take us to the final frontier. I love listening to my beer. If there were some way to design a

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after which time you should propagate the yeast in another bottle of sterile beer wort. Through experience, I have discovered that if your bottle of yeast is not disturbed (no agitation or shaking), your yeast will survive for more than a year using this method and still make excellent beer."

I have two questions:

1. Is he continuously propagating the yeast to another bottle of sterile wort (every two to four weeks)?
2. Maybe I missed it, but is he then pitch-

ing the yeast directly out of one of these bottles into his batch of homebrew?

I am making a cherry spiced beer and I want to be able to propagate the "spicy" yeast to make a batch every three months or so. Any help on clarifying this would be greatly appreciated.

Thanks,
Ron Sandier

Dear Ron,

Mr. P. confides that he hasn't altered his method for yeast propagation for decades and is still quite satisfied with his beers. To answer your questions he says, "No, I'm not continuously propagating the yeast to another bottle every two to four weeks. What I meant to say is that if you don't happen to activate a yeast culture (on fermented wort) for a year, you will still have live yeast cells that can be coaxed to activity. So let's say that you haven't used a yeast culture that has been quietly stored and undisturbed for 11 months, and in a week you want to use it. You'll have to pour the fermented beer off of the sediment, then add a small amount of sterile wort and let it become active at room temperature. This may take a few days before you see any activity. Once this small amount of wort has worked its way through fermenting, go through the process again: pour off the fermented wort and add a cup or two or three of sterile wort to this now activated yeast and let it ferment out at room temperature. This sediment is then ready to pitch into your batch of beer. Take care to be clean and sterile (like swabbing the lip of the yeast culture jar with ethanol or proof vodka) and add more sterile wort to the culture jar. While your batch of beer is fermenting, so will your replenished yeast culture in the jar. Once the culture has fermented out, move it to cold storage where it will remain alive if kept undisturbed."

By the way chokecherries also are great in making a more intensely cherry flavored beer.

Aging gracefully,
The Professor, Hb.D.

Hey homebrewers! If you have a brewing-related question for Professor Surfeit, send it to "Dear Professor," PO Box 1679, Boulder CO 80306-1679; fax 303-447-2825; or e-mail professor@brewersassociation.org.

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by Our Readers

Finally, Some Reader Mail

Dear *Zymurgy*,

I'm responding to your plea for more input from brewers in the November/December issue of *Zymurgy*. I have two things to bring up:

1. I would like to see an issue with a lot of information on using oak chips and extended conditioning of beers. I don't have enough money or a big enough stomach to justify a real oak barrel, but love the idea of oak aging and other methods to improve my stronger ales.
2. The one issue I have with *Zymurgy's* recipes is that there is no standard batch size used. In the last issue I saw 5 gallons, 5.5 gallons, 10 gallons and 6 gallons. This is difficult for those of us

not good at math or without brewing software to do it for us. I would really like to see a standard 5 gallon conversion, since the majority of homebrewers probably do this size batch.

Thanks for listening!

Sincerely,
Eric Wentling

Big Beers and Loud Music

Dear *Zymurgy*,

I've never been inclined to write a letter to a magazine until I read the Editor's Desk in the latest issue encouraging some reader input. I enjoy your magazine exactly the way it is. I figured since I don't have any suggestions to make, I would send you all a picture of one of my homebrew labels (see sidebar). My homebrewery mascot is called "The Ocho." The label is from a golden Belgian beer that is 12-percent abv. It represents my love for loud music as well as "big" beers. Keep up the good work and have a homebrew!

Sincerely,
Scott M. Ballard
Augusta, Ga.

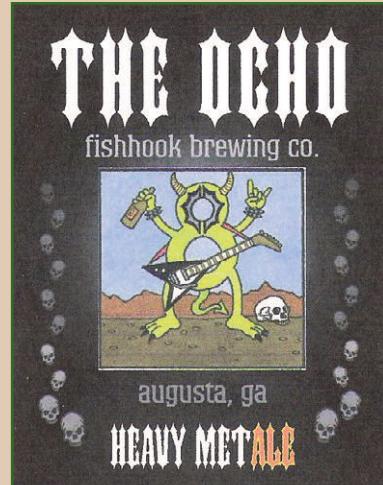
Updated Hops Poster?

Dear *Zymurgy*,

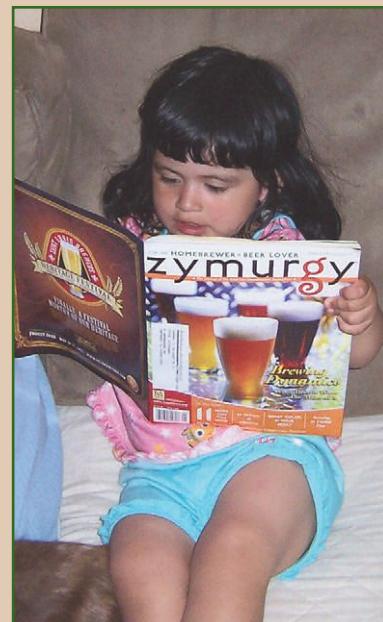
Thanks for the great things you are doing with the magazine. My husband and I have been brewing since 1995 and live here in South Alabama fighting a lack of education and selection of beers here in the Deep South.

Anyway, I've been thinking about this for a while and am glad you have invited us to make suggestions. In 1997 there was a great pullout hop guide poster that has lived on our lagering fridge since then for easy reference. However, so many new

FROM OUR READERS



Beer Label from Scott M. Ballard



It's never too early to start thinking about homebrewing. Two-year-old Veronica Sutkowski of Carteret, N.J. takes a peek at dad Steve's *Zymurgy*.

AMERICAN HOMEBREWERS ASSOCIATION GOVERNING COMMITTEE

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hop varieties are now available that aren't on the chart. I'm sure you can find the old chart and a new one would be greatly appreciated with updated information.

Thanks again,
Sharon Montefusco
Dothan, Ala.

Automating the Brewery

Dear *Zymurgy*,

In the November/December issue of *Zymurgy* you asked for more participation from readers and members so here goes. I have been homebrewing for just under two years. For Christmas 2005 my wife gave me a starter kit at my request. She doesn't drink beer and has since wondered if it was a good idea. In fact, I think she's sure it wasn't, but she tries to be a good sport.

I am a heating and air conditioning contractor as well as a temperature controls contractor and decided to automate my brewery. I have brewed two batches with the automation in place and am still

working out some minor bugs but all in all it works pretty well. I decided to automate my brewery in an effort to achieve greater accuracy with my mash and lauter temperatures. I'm looking forward to experimenting with different temperatures to see how it affects the taste. I am including some pictures.

Cheers,
Jeff Harwood

Not Enough Time...

Dear *Zymurgy*,

I just got my January/February issue of *Zymurgy* today, December 28. It contained a nice article on Crafting Dark Lagers for the Club Only column. Trouble is, entries are due on February 9. Brewing directions say, "Ferment for two weeks...Lager for at least four weeks..."

If I brewed this recipe tomorrow I still couldn't have it ready to submit on time. Why not print these helpful, informative articles in a more timely matter? Give us

CONVERTING TO EXTRACT

Most all-grain recipes can be converted to extract recipes by substituting the base malt (e.g. pale malt or pilsner malt) with light malt extract. Multiply the pounds of base grain by 0.73 for liquid malt extract or by 0.60 for dry malt extract. Specialty grains can be steeped in water at 150° F (65° C) for 30 minutes or so and rinsed with hot water. If you are doing a partial wort boil (as opposed to boiling the entire 5 gallons of a 5-gallon batch), you will want to increase your bittering hops slightly to make up for the increased concentration of the wort, which decreases hop utilization.

You can always ask your local homebrew supply shop owner to help you convert a recipe.

homebrewers a little time and who knows, it might increase the number and quality of entries.

Rick Stangel

AMERICAN HOMEBREWERS ASSOCIATION 2008 GOVERNING COMMITTEE ELECTION!

Your AHA Governing Committee representatives play a critical role for YOUR Association.

The AHA Governing Committee helps develop the benefits and programs of the AHA and provides direction for the AHA Staff.

PLEASE CAST YOUR VOTE TODAY!

Please read candidate statements and cast your ballot online at beertown.org/homebrewing.
For the 2008 election, there are eight candidates running for six open seats on the Governing Committee.

Candidates:

- | | |
|-----------------------------------|-------------------------------------|
| ■ Dave Bilger—Muncie, IN | ■ Jeff Renner—Ann Arbor, MI |
| ■ Harold Gulbransen—San Diego, CA | ■ Mark Tumarkin—Gainesville, FL |
| ■ Bob Kauffman—Lafayette, CO | ■ Roxanne Westendorf—Cincinnati, OH |
| ■ David Logsdon—Odell, OR | ■ Jamil Zainasheff—Elk Grove, CA |



ELECTION GUIDELINES:

In an effort to expedite the processing of election results, all balloting will be done online. Go to www.beertown.org/homebrewing, read the candidate statements and cast your vote. Vote for up to six (6) candidates. You will need to include your name, membership number and contact information. If you do not know your member number, or would like to become a member, call us toll free at 888-822-6273 or e-mail info@brewersassociation.org.

All ballots must be submitted no later than midnight Pacific Time, March 31, 2008.

All AHA members voting in the election are eligible for an additional entry in the Lallemand Scholarship drawing for Siebel Institute's two-week Concise Course. Check the appropriate box on the ballot to submit your entry into the drawing. The drawing will take place June 21, 2008 at the AHA National Homebrewers Conference in Cincinnati, Ohio.

Don't Forget the Extract

Brewers

Dear Zymurgy,

The November/December 2007 issue has four excellent articles on dark beers. Included with these articles are 11 recipes for stouts and porters. Not a single one of these recipes is for malt extract brewers. This is a recurring problem with *Zymurgy* magazine. With the exception of "World of Worts," there seems to be a snobbish "good beer can only be made all-grain."



PHOTOS FROM JEFF HARWOOD



I have been brewing for nearly 20 years, most of that time as an extract brewer. While I have brewed all-grain batches of beer, and occasionally brew partial mash beers, I prefer to brew extract beers with specialty grains. And I make good beer. *Zymurgy* is a better magazine when it includes recipes for all types of brewers.

Although it reveals my secret ingredient, I'm including a porter recipe of my own. This is one of my favorite beers, and it is always a hit among guests at my house. It might be interesting with either "essentia bina" or "Spanish juice" added.

Stephen Magill
Moretown, Vt.

Editor's Note: Thanks for your input, Stephen. We are making a more concerted effort to include extract versions of recipes whenever possible. I think you will notice a difference in this issue. Thanks also for including the recipe for Spike's Porter. Thanks to all of the readers who responded to my plea for input. Happy brewing!

Send your letters to Dear Zymurgy, PO Box 1679, Boulder, CO 80306 or e-mail jill@brewersassociation.org. Hey homebrewers! If you have a homebrew label that

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you would like to see in our magazine, send it to Kelli Gomez, Magazine Art Director, at the above address or e-mail it to kelli@brewersassociation.org. ☺

Spike's Porter

(submitted by Stephen Magill)

Ingredients for 5 U.S. gallons (19 liters)

6.7 lb	(3 kg) Light Liquid Malt Extract
1.0 lb	(0.5 kg) Crystal Malt, 60 degrees Lovibond
8.0 oz	(226 g) Chocolate Malt
2.5 oz	(71 g) Black Patent Malt
2.0 oz	(56 g) Willamette Hop Pellets, 4.1% alpha acid (60 minutes)
0.5 oz	(14 g) Willamette Hop Pellets, 4.1% alpha acid (10 minutes)
0.5 oz	(14 g) Willamette Hop Pellets, 4.1% alpha acid (end of boil) Wyeast 1214 Belgian Abbey yeast

Original Target Gravity: 1.052
Approximate Final Gravity: 1.014

Directions

Heat 6 gallons of water to 120° F (49° C) and add crushed grains in a nylon sparge bag. Continue heating until temperature is 165° F (74° C), then remove sparge bag of grains. Add Light Malt Extract.

Bring to a boil and skim top of boil with a slotted spoon. Add 60 minute hops and set the timer for 50 minutes. When the timer goes off, add the 10-minute hops and set the timer for 10 more minutes. When the timer goes off again, add end of boil hops and remove the pot from the heat. Cool wort and pitch with yeast.

I usually keg and force carbonate this beer, but it could also be bottled with 0.75 cup of corn sugar.

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An advertisement for the National Homebrew Competition. It features a large glass of beer with a thick head of foam on the left. To the right is a purple ribbon banner that curves across the bottom. A gold medal for the competition is prominently displayed on the ribbon. The background is a dark, star-filled space with a partial view of Earth.

American Homebrewers Association
A Division of the Brewers Association
www.beertown.org



by Amahl Turczyn Scheppach

Perfect Porters



Porters are divided into three subcategories, namely Brown Porter, Robust Porter and Baltic Porter. The first one is traditional English porter, and the oldest of the three. The second is a bit of a catch-all based on traditional porters, but encompasses more modern variations, notably American versions made with stronger black malt and hop character. Baltic porters are also in part based on traditional English brown porters, but incorporate the alcoholic strength of Imperial Russian Stouts and the lagering practices of brewing at Baltic latitudes.

Brown porters are the ancestors of modern day stouts, and originate with the “entire” style said to be favored by London’s laborer class in the 18th century. Modern brown porter does not have the acrid, sour, smoky or Brett characters of its historical ancestor. Rather, it favors clean dark malt, caramel, chocolate, nutty and bready character, with only light English hops (18-35 IBUs). Liberal use of black and/or roast malt should be reserved for robust porters, but brown porters definitely have more black and/or roast malt than an English brown ale (color is generally 20-

30 SRM). They fall somewhere between a brown ale and a robust porter.

London water, with its moderate carbonate

content, is best to use for this style, and adjuncts like various English brewing sugars (treacle, turbinado, demerara, molasses) and even grain adjuncts like corn are

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Boscos Little Rock Brewing Co. Little Rock	Left Hand Brewing Co. Longmont	New Belgium Brewing Co. Fort Collins	Iron Hill Brewery and Restaurant Newark, Wilmington	Granite City Food and Brewery Cedar Rapids, Clive, Davenport
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acceptable when used moderately. Like its predecessors, brown porter is still a session ale, and therefore should not exceed an original gravity of 1.052; finishing gravity is generally 1.008 to 1.014, leaving 4- to 5.4-percent alcohol by volume.

Robust porters have a fairly wide range, but all share a common trait in malt character, namely a relatively strong burnt black malt or roast flavor. Too much roast barley, however, and you are getting into stout territory—robust porters can have some roastiness, but their main distinction from stouts is in the amount of roast. Other malts may play supporting roles, so a robust porter may be dry or sweet, grainy, bready, toffee-like, or thin or rich in body. Adjuncts are allowable.

Hop character can either be low, letting the dark grains provide balance, or very high in aroma, flavor and bitterness (IBUs 25-50+). Hops can be English, American or both. Some of the more popular mod-

ern American examples of robust porter are aggressively hopped, including dry hops, and feature enough black malt to give the resulting beer a tar-black appearance (22 to 35+ SRM is allowed). Alcohol



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can also vary widely (4.8- to 6-percent by volume), with original gravity varying from 1.048 to 1.065, finishing from 1.012 to 1.016.

Baltic porters are basically strong, dark lager beers, and are quite different from the other two subcategories, though the malt profile more nearly resembles brown



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Category 12 Porter

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Shipping/Drop-off Location:

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Hosted by Ron Smith and the Foam Blowers of Indiana (FBI) of Indianapolis, Ind. For more information contact Ron Smith at ron-smith@marketwisesolutions.com.

Brown Porter

Recipe is based on "Who's Your Taddy Porter" from *Brewing Classic Styles* by Jamil Zainasheff and John Palmer.

Ingredients

for 5.5 U.S. gallons (21 liters)

2 cans	Coopers Light Malt Extract (7.5 lb, or 3.4 kg)
1.0 lb	(0.45 kg) Brown Malt
1.0 lb	(0.45 kg) Crystal Malt (55 L)
10.0 oz	(0.28 kg) Chocolate Malt (475 L)
2.0 oz	(57 g) *Golding hops, 4.75% alpha acid (60 min)
0.5 oz	(14 g) *Golding hops, 4.75% alpha acid (10 min) Wyeast 1028 London Ale Yeast or White Labs WLP013 London Ale Yeast Coopers Brewery Carbonation Drops for bottling

Directions

Steep grains in 2 gallons (7.6 L) cool water, heat to 170° F (77° C) strain and sparge with 2/3 gallon (2.5 L) hot water. Stir in malt extract and bring to a boil. Add bittering hops and boil for 50 minutes, then add aroma hops and continue boiling for 10 minutes. Cool the wort, then pour into fermenter with enough cold water to make 5.5 gallons (21 L). Aerate and pitch yeast when temperature drops to 67° F (19° C). Ferment at 67° F (19° C) for one week or until fermentation is complete. Age in secondary for one week at 67° F (19° C). Prime with Coopers Brewery carbonation drops at bottling.

*Use a similar aroma hop if Golding hops are unavailable.



porter. One could think of them as a strong version of schwarzbiere, but their grain bill should produce a beer that is dark brown, not black (17 to 30 SRM). Lager smoothness is an important trait here. No burnt or roast character should be evident in a Baltic porter, but chocolate, coffee, molasses, dark fruit, caramel, toffee, licorice and even port-like vinous flavors are all welcome. In fact, layered complexity of these flavors along with a healthy dose of alcohol defines a good Baltic porter. Base malts are usually Vienna or Munich, to develop the dark malt complexities.

Hops (Continental varieties should be used rather than American) should only be present in the background, to balance without intruding too much on malt complexity. Adjuncts may be used with restraint, but take care not to thin the beer too much. Original gravity can be as low as 1.060, but is commonly closer to 1.090, finishing in the range of 1.016 to 1.024. Likewise, an alcohol content as low as 5.5 percent by volume is within the style, and may go as high as 9.5 percent, but nearly all Baltic porters weigh in between 7 and 8.5 percent. IBUs are typically between 20 and 40.

Amahl Turczyn Scheppach is a former craft brewer and associate editor for *Zymurgy*, and now brews at home in Lafayette, Colo.

Original Specific Gravity: 1.057

Final Specific Gravity: 1.013

IBU: 27.5

ABV: 5.2%

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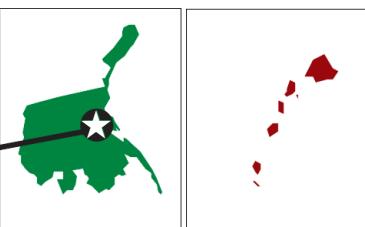
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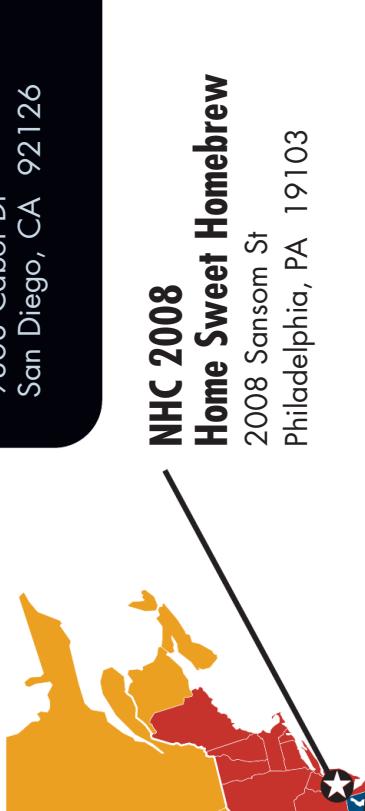
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Setting Up a Homebrew Kegerator



By
**Tom
Hargrave**

Illustrations
by
Mike Moran



Setting up a homebrew kegerator can be a rewarding Saturday afternoon project. The real benefit of a homebrew kegerator is “no more bottling,” or at least you only need to bottle your beer for competitions and friends. Also, there is also a certain amount of satisfaction to drawing a glass of your own beer from your kegerator.

Refrigerator

The most important part of your kegerator is the refrigerator itself. Used refrigerators can be an excellent deal but it's wise to do some basic checking before hauling your \$45 find home. Bring along a thermometer to measure the inside temperature of the refrigerator. If it's not running, have the seller plug it in and come back an hour later. If the inside temperature does not cool to at least 45° F, walk away. Also, examine the seal around the door. If you see signs of rust, the door gasket is probably leaking. You can also check the door gasket by closing the door on a dollar bill and then trying to pull it out in several places. The dollar bill should not pull out easily.



Kegerator Conversions

All kegerator conversions contain the same basic elements.

CO₂ tank:

Most often a 5-pound tank, but sometimes a 20-pound tank. A 20-pound CO₂ tank will be the most economical to fill or exchange, but a 5-pound CO₂ tank will be much easier to handle and can often be placed inside the kegerator with the kegs.

CO₂ regulator:

The lowest cost regulators will have only a single gauge that will display your regulator setting. Even though a two-gauge regulator will cost a little more, it is worth it because the second gauge (the tank gauge) will tell you when your CO₂ tank is close to empty.

CO₂ lines:

Most often a single line or a line with a tee for multiple kegs. Most of the time the line is 1/4" ID. Some more extravagant multi-keg conversions run their CO₂ through a manifold with an individual shutoff and check valve for each keg.

CO₂ disconnects:

These attach the CO₂ lines to the Cornelius kegs. CO₂ disconnects also incorporate their own internal shutoff valves that turn off the CO₂ when disconnected from a keg.

Converting a refrigerator into a kegerator involves building a shelf for the kegs (if you need one), initially placing the kegs inside and routing the CO₂ lines, drilling a hole for the main CO₂ line (if the CO₂ tank will be outside the refrigerator) and mounting the faucets or beer tower.

Before converting a refrigerator, it's important to follow a couple of simple rules. First, never drill or cut into a refrigerator that is plugged in. Second, before drilling

or cutting into a refrigerator, find out where the refrigerant lines are (see the sidebar for tips). The last thing you want to do is to drill into the side of a refrigerator and be greeted with a hiss, the sound of escaping freon!

If installing a beer tower, you must cut a hole in the top of the refrigerator or freezer that is close to the same size as the opening in the bottom of the tower. This lets cold air circulate into the bottom of

the tower, keeping the beer shanks and beer lines cold. Beer faucets that are installed through the refrigerator side or door are mounted through 7/8" holes. It's much easier to drill a smaller hole from the inside first, then drill the 7/8" hole from the outside. This will guarantee that no shelves or brackets get in the way of the beer shanks. A pony tap-based system is the easiest to install because in most cases, you can place everything inside the refrigerator. But this is the most inconvenient kegerator conversion because you have to open the refrigerator door to draw a beer. (For detailed instructions on constructing a kegerator, go to www.kegkits.com.)

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Cornelius (or Corny) keg:

There are two choices here, pin lock (Coke) or ball lock (General Beverage or Pepsi). The difference between the two systems is how the disconnects attach to the keg. With pin lock, a collar is twisted to lock the disconnects onto the keg. With ball lock, a collar is lifted and then dropped down to lock the disconnects onto the keg. Both systems are available new or used.

Liquid disconnects:

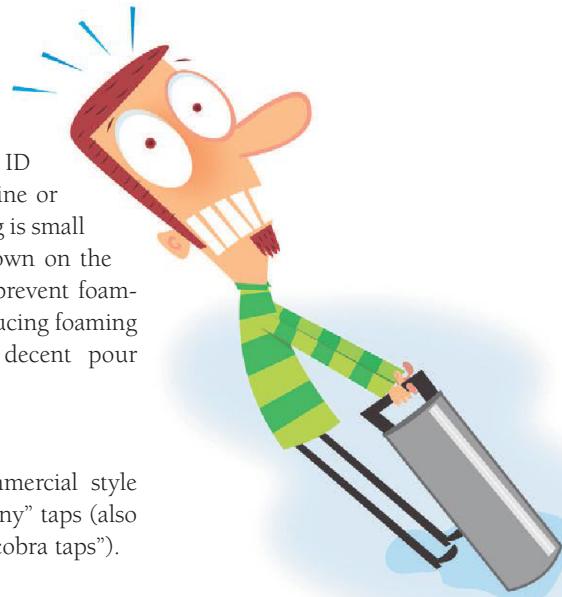
These attach the beer lines to the Cornelius kegs. And just like the CO₂ disconnects, the liquid disconnects also incorporate their own internal shutoff valves that turn off the beer when disconnected from a keg.

Beer line:

This should always be 3/16" ID and should be heavy beer line or BIB tubing. The 3/16" tubing is small enough to slow the beer down on the way to the tap, helping to prevent foaming. The ideal length for reducing foaming while still maintaining a decent pour speed is usually 5 to 6 feet.

Beer faucets:

Can be a beer tower, commercial style beer faucets or low-cost "pony" taps (also known as "picnic taps" or "cobra taps").



Balancing Your System

It's nice to be able to hold a glass under your beer faucet, pull the tap handle and watch a 12-ounce glass of beer fill, leaving a 1/2" of head on top of the glass. But this does not come about by accident. Two things are required—proper carbonation and a properly balanced system.

To achieve proper carbonation, your homebrew must be carbonated (depending on style) to somewhere around 2.5 volumes of CO₂. Using a carbonation chart makes carbonation easy to calculate (see Table 1). You only need to know the temperature of your beer and your regulator pressure to look up your carbonation level. Or you can look up your refrigerator temperature, follow the chart to the desired carbonation level and then follow over to the ideal regulator pressure setting.

To balance your system, you need to measure the inside temperature of your kegerator and then use a carbonation chart to determine the ideal setting for your CO₂ regulator. In most cases, this setting will be between 9 and 12 PSI (depending on temperature). If you had free flowing beer, even at 9 PSI, the beer would pour out of the faucet too fast and you would have a serious foaming prob-

lem. A properly balanced system works by slowing the beer as it flows to the faucet. A length of 3/16" beer line is the ideal tool for slowing the beer because it provides a

gradual drop in pressure from the keg to the tap. In all but the most carbonated beers being delivered by 9-12 PSI, the ideal length is 6 feet. If you prefer your

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beer in the 45-50° F range, the beer line will need to be about 8 feet. This is because the ideal pressure for 45° F beer is about 15 PSI, requiring a little more pressure drop and a longer line to the faucet. Beer towers need a little less restriction because the beer is also being pushed uphill to the tower and most beer towers come with a 5-foot beer line.

Note, there is no way to pour overcarbonated beer without foaming problems because the beer will foam in the hose on the way to the beer faucet.



"Pony" tap (also known as "picnic taps" or "cobra taps")



Kegerator on the inside



Kegerator from the outside

Photos courtesy of Tom Hargrave

Locating the Refrigerant Lines

Before drilling holes in your new or used refrigerator, you need to determine where any refrigerant lines may be. If you don't and you drill or cut into one of them, you'll instantly turn your kegerator into a piece of roadside art.

All refrigerators and freezers have an inside coil, an outside coil and a compressor. There will be a pressurized refrigerant line running from the compressor to the outside coil, a second line connecting the outside and inside coils together, and a third line connecting the inside coil to the compressor. Convertible refrigerators can be separated into four types, with each type having its own refrigerant line routing. These include small countertop refrigerators that are about 4.7 cubic feet with no freezer compartment, full-size refrigerators with top side freezers, chest freezers, and upright freezers without refrigerant lines built into the shelves.

With any refrigerator or freezer, the door is the safest place to drill because it will never have any refrigerant lines. You do need to watch for electrical wiring in any door with a built-in ice and water dispenser.

Countertop Refrigerator: Countertop refrigerators are most often converted into a kegerator with a beer tower on top. These refrigerators fall into two groups, those with a full height black coil on the back and those with no coil on the back. The inside coil is easy to identify—it's the plate that sits across the inside back of the unit.

If your refrigerator has a full height coil in the back, there should be no problem drilling through the top or either side of the refrigerator. If your refrigerator does not have a coil on the back, it has a coil in either side connected with a small tube that runs across the top of the refrigerator. This line can be found and marked by removing the decorative top, plugging in the refrigerator and then immediately feeling around the top. Very shortly, you will feel a warm strip that runs across the top. The center of this strip is the refrigerant line. Mark it with a piece of tape.

Full-size Refrigerator: The inside coil of a full-size refrigerator will be wrapped around the freezer. The outside coil on most will be on the back of or underneath the unit with a fan. In either case, you can easily see the coils. It's safe to drill through the sides of any of these with one exception. Many of these refrigerators have a low current coil on the outside that is used to warm the cabinet and prevent sweating. Drilling into this coil could cause a serious electrical shock. Always unplug the refrigerator before drilling into the cabinet.

Chest Freezer: The inside and outside coils always wrap around the cabinet in a chest freezer. Because of the way the refrigerant lines are usually run, I don't recommend trying to drill through the sides of a chest freezer. Instead, you need to build a collar out of 2x4s or 2x6s and mount your faucets through the collar or install a beer tower on the freezer lid.

Upright Freezer: An upright freezer may have coils similar to the arrangement in a chest freezer or it may have a coil in the back and a circulating fan inside. If no coils are visible, the only option is drilling through the door. If the upright freezer has a full-length coil on the back and a circulating fan inside, it is safe to drill through either side.

Cleaning your Kegerator

Just like any commercial draft system, the cleanliness of your kegerator will affect the taste of your beer. But cleaning does not have to be a major chore if you follow a few basic rules. First, after you are done assembling your kegerator, put sanitizer in a clean Cornelius keg and use CO₂ pressure to flush it through all of your taps. Then follow with clear water.

The next step is to attack contamination at its source—the beer faucets. Think about the way a beer faucet works—you draw a glass of beer and walk away. But what did you just walk away from? You left the entire inside and front area of the faucet wet with beer and it's just waiting for some microbe or mold to come along and start growing. And when something does come along, it will grow right past your beer faucet and into your beer line.

Fortunately, the solution is very simple. The only tools you need are a spray bottle filled with cheap vodka and a dish towel. At least every two days (every day is even better), place the towel under the faucets and use the sprayer to flush out the mouth of your beer faucets. The alcohol in the vodka will act as a food-safe sanitizer while the water flushes out any beer residue.

The next step to cleaning is to routinely flush the entire system with sanitizer. You don't need any special tools or a cleaning kit for this. Just use one of your Cornelius kegs to flush the system just like you did when you first assembled your kegerator.

Your beer faucets can be periodically disassembled and cleaned, but never use a beer line brush on the inside of your beer lines. A brush could scratch the inside surface, giving bacteria a place to grab onto.

The final step is to replace all of your beer lines about every two years to prevent the buildup of beer stone.

Tom Hargrave has been brewing beer since 1977. His favorite beers are lagers, particularly a good Märzen or bock. He originally began offering complete kegerator kits on eBay, but soon launched www.kegkits.com, which also sells homebrew ingredients.

Table 1: Pressure Required for Desired Carbonation

Directions: Look down the left column to find your keg temperature, and read across to the number in the column corresponding to the desired carbonation level. That number is the CO₂ pressure to apply to the beer, in psi.

Temp (°F)	Volumes of CO ₂ desired										
	2	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3
32	3.5	4.4	5.4	6.3	7.3	8.2	9.2	10.1	11.0	12.0	12.9
34	4.3	5.3	6.3	7.3	8.2	9.2	10.2	11.2	12.1	13.1	14.1
36	5.1	6.2	7.2	8.2	9.2	10.2	11.2	12.3	13.3	14.3	15.3
38	6.0	7.0	8.1	9.1	10.2	11.2	12.3	13.3	14.4	15.4	16.5
40	6.8	7.9	9.0	10.1	11.2	12.3	13.4	14.4	15.5	16.6	17.7
42	7.7	8.8	10.0	11.1	12.2	13.3	14.4	15.5	16.7	17.8	18.9
44	8.6	9.7	10.9	12.1	13.2	14.4	15.5	16.7	17.8	19.0	20.1
46	9.5	10.7	11.8	13.0	14.2	15.4	16.6	17.8	19.0	20.2	21.3
48	10.4	11.6	12.8	14.0	15.3	16.5	17.7	18.9	20.1	21.4	22.6
50	11.3	12.5	13.8	15.0	16.3	17.6	18.8	20.1	21.3	22.6	23.8
52	12.2	13.5	14.8	16.1	17.3	18.6	19.9	21.2	22.5	23.8	25.1
54	13.1	14.4	15.7	17.1	18.4	19.7	21.1	22.4	23.7	25.0	26.3
56	14.0	15.4	16.7	18.1	19.5	20.8	22.2	23.6	24.9	26.3	27.6
58	15.0	16.4	17.8	19.2	20.6	21.9	23.3	24.7	26.1	27.5	28.9
60	15.9	17.3	18.8	20.2	21.6	23.1	24.5	25.9	27.4	28.8	30.2
62	16.9	18.3	19.8	21.3	22.7	24.2	25.7	27.1	28.6	30.0	31.5
64	17.8	19.3	20.8	22.3	23.8	25.3	26.8	28.3	29.8	31.3	32.8
66	18.8	20.3	21.9	23.4	25.0	26.5	28.0	29.6	31.1	32.6	34.1
68	19.8	21.4	22.9	24.5	26.1	27.6	29.2	30.8	32.4	33.9	35.5
70	20.8	22.4	24.0	25.6	27.2	28.8	30.4	32.0	33.6	35.2	36.8
72	21.8	23.4	25.1	26.7	28.4	30.0	31.6	33.3	34.9	36.5	38.2
74	22.8	24.5	26.2	27.8	29.5	31.2	32.9	34.5	36.2	37.9	39.5
76	23.8	25.5	27.2	29.0	30.7	32.4	34.1	35.8	37.5	39.2	40.9
78	24.9	26.6	28.4	30.1	31.8	33.6	35.3	37.1	38.8	40.5	42.3
80	25.9	27.7	29.5	31.2	33.0	34.8	36.6	38.3	40.1	41.9	43.7

Table, developed by Alan Edwards, originally appeared in September/October 2001 Zymurgy.

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The Perfect Pour

USING A NITRO TAP

BY AMAHL TURCZYN SCHEPPACH

There is nothing quite like a perfectly poured pint of dry stout from a nitrogen blend tap. Several other ale styles are also appropriate for a “nitro” tap as well: Boddington’s, Irish red ale, and even some Scottish ales do very well with this kind of tap setup, but achieving the perfect pour at home isn’t just a matter of getting the correct kegging equipment and brewing an appropriate style of beer. You will need to balance several key elements and perfect your pouring technique to reach Nitro Nirvana.

Nitro taps work by forcing carbonated beer through a perforated restrictor plate. This breaks the CO₂ out of solution and causes that famous cascade of fine bubbles in the glass. Those bubbles rise slowly to the surface of the beer to form a rich, velvety layer of foam. It is important to note that by removing the restrictor plate, a nitro tap will function quite well as a normal tap, so it is not necessary to only use it for these types of beer.

You will also need a tank of 75-percent nitrogen to 25-percent CO₂ blended gas (sometimes called “Guinness gas”) and a regulator. While most gas blend cylinders have a valve for use with a nitrogen regulator (CGA-580 threads), there are some companies that supply gas blend cylinders with a valve for use with a CO₂ regulator (CGA-320 threads). If the valve on the cylinder is for nitrogen and you already have a CO₂ regulator, you can easily fit your CO₂ regulator to a nitrogen valve cylinder by using an adapter. All this equipment is readily available from welding supply stores. You’ll also need thermostat-controlled refrigeration—a “kegerator” setup is recommended.

Most nitro beers are poured at 42° F. This is the best compromise between getting a full-flavored beer and one that will pour correctly. Since we’re pouring homebrew here, and most of us have neither the equipment nor the desire to pasteurize or sterile filter our beer, this temperature is also low enough to keep most ale yeasts dormant. (At higher temperatures, extra carbonation as the beer conditions in the keg can make it harder and harder to avoid foaming over time.) It’s also important to note that the beer temperature needs to be maintained all the way to the tap. With a kegerator setup, this is pretty easy, but if your dispense lines travel from, say, a cold room to a bar top tap manifold, you will have to come up with a creative way to keep the beer in the lines chilled.

The second element is pressure. With a 75/25 blend of nitrogen and carbon dioxide, you’ll want to dispense at a pressure of 38 PSI. Please note that this is a much higher head pressure than recommended for beers dispensed with pure CO₂—they

would quickly overcarbonate. The reason a nitrogen blend is used is because nitrogen gas doesn’t dissolve into beer nearly as readily as CO₂, so you are able to maintain the necessarily high pressure to push the beer through the restrictor plate without causing your beer to overcarbonate.

That brings us to the next element, which is the level of carbonation in your homebrew. Anything over 2 volumes of CO₂ will cause foaming with a nitro tap at the recommended head pressure. (One liter of liquid with two liters of CO₂ dissolved into it is said to be at a carbonation level of 2 volumes of CO₂.) There are further complications here, like beer viscosity, but in general 1.5 volumes should get you close to a classic pour at this pressure,

Two Steps to the Perfect Pour

Step one:

Start with a clean pint glass. Place the glass at a 45° angle, one inch below the faucet. Do not let the glass touch the faucet. Open the faucet all the way. After the glass has filled three-quarters of the way, close the faucet completely and put the glass down. The beer will cascade into a foamy head that will fill the glass to the brim, and will then gradually settle.

Step two:

When there is a clear division between the beer and the foam, open the tap completely and direct the stream of beer straight down the middle of the glass. Fill the glass completely. A proper two-step pour will take approximately two minutes. For best results, don’t rush it.

Irish Red Ale

Recipe for 5 U.S. gallons (19 liters)

Ingredients

7.0 lb	(3.18 kg) pale ale malt
6.0 oz	(170 g) 90°L caramel malt
6.0 oz	(170 g) 55°L crystal malt
6.0 oz	(170 g) 10°L crystal malt
3.0 oz	(85 g) 150°L crystal malt
4.0 oz	(113 g) roast barley
1.0 lb	(0.45 kg) flaked barley
0.5 oz	(14 g) Northern Brewer pellet hops (9% alpha acid) 60 min
1.0 oz	(28 g) Fuggle pellet hops (5% alpha acid) 15 min
2.0 oz	(56 g) East Kent Golding hops (5.5% alpha acid) 1 min
	Irish ale yeast

Directions

Mash grains at 152° F (67° C) for one hour. Mash out for 10 minutes at 158° F (70° C). Sparge and boil for 90 minutes adding hops at specified intervals.

Extract Recipe: Substitute 5.5 lb light malt extract syrup for pale malt and flaked barley. Steep specialty grains in 160° F (71° C) brewing water for 30 minutes. Strain, rinse and remove grains. Dissolve extract and proceed with boil.

Original Target Gravity: 1.052

IBUs: 35

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using the Irish Red Ale recipe. Obviously, under-carbonation is preferable to over-doing it—it is much easier to put a little more gas into solution with forced carbonation than it is to remove it!

Finally, you need to keep everything very clean. It's a great idea to take the tap and lines apart and clean them after every keg. Just a bit of stone buildup on your restrictor plate can cause foaming, and if you have everything else right, troubleshooting for the cause of the foaming can be quite frustrating. Also, keep your glassware clean. Grit or hard water deposits will cause nucleation sites and bring that dissolved gas right out of solution. Conversely, soap residues can kill head retention, so if you must use soap, make sure to rinse with very hot water and polish the inside of the glass with a bar towel to remove any scum.

Amahl Turczyn Scheppach is a former craft brewer and associate editor for Zymurgy, and now brews at home in Lafayette, Colo.



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party



homebrew club bars

by drew beechum

Ah, that satisfied smirk creeps across your face when pulling the very first pint of beer on your spiffy two-tap kegerator reborn from an old broken down fridge. Gleaming, it stands a monument. What do you do when those few taps just aren't enough and the party's calling for more beer?

This issue vexes many clubs. Just how many individual dispense rigs can you have at a club get-together? The need is greater when your club starts pouring 20, 30, even 40 beers for a major home-brew festival party like the Southern California Homebrewers Festival (SCHF) or pouring your beer at commercial festivals like the Carolina BrewMasters Charlotte Oktoberfest (6,000 happy customers and climbing and 36 kegs down). Tales abound of some brewers' epic charitable house parties cracking these numbers!

How do you clean up the endless tangle of cobra lines and give every beer the presentation it deserves? With a little money and some mechanical know how, you and your club can have a portable bar rig that showcases your efforts with the style they deserve.

The whys

How can owning a big party bar make a difference for you or your club? Typically, the Maltose Falcons proudly display our wares at four major shindigs. A few years back, we noticed that the amount of beer brought was dropping off, despite a growing membership and attendance. Turns out, members were frustrated that their beer missed being served from our 13-tap bar and ended up forlorn with a cobra line. As our serving capacity has grown to more than 40 different taps, more beer keeps arriving!

Gaining neatness and efficiency from a centralized draft system simplifies the party day, particularly later on. Instead of worrying after myriad CO₂ tanks, regulators and ice buckets, monitoring and adjusting any keg is handled easily. Thinking green, massed kegs and large cooler boxes or tubs reduce ice consumption.

Outsiders misperceive us as moonshiners keeping an eye peeled for those darn revenuers. More than one suspicious mind has been set at ease by the shining taps topped with custom tap handles. Watching new

party attendees realize the depth and breadth of talents of homebrewers and that we mean business in our little backyard hobby is a great treat. As Kent Fletcher, Falcons builder extraordinaire, and I towed the bar to a beerfest, driving down tony Santa Barbara's main drag, residents greeted us with gaping jaws and cheers for his masterpiece draft system.

Design considerations

Designing a proper bar requires balancing your needs, options, funds and the tools and skills at hand. Where is the bar service happening? How many beers do you plan to serve? How do you plan to move the bar? Where does the bar reside when not in use? In terms of cost, our bars all cost between \$200 and \$500 to make and equip.

Portability is the primary concern for most of us. Some bars profiled break down into small pieces that fit comfortably in a pick-up truck, while others require trailers and brute force to move. Increased setup time at your party site is the tradeoff with an ultra-portable bar, so consider how much time you have to spend assembling your masterpiece. Our older portable "Back Bar" takes a solid three hours from flat-packed to up-and-pouring-beer. Contrast that to the new "Front Bar" pouring beer in under a half hour at the cost of requiring larger transport.

Many beer festivals happen outdoors with loads of happy drinkers wandering around and the occasional over-indulger. Water, sand, dirt, trees, fearless dive-bombing squirrels and the natural leaning stance of the relaxed beer drinker combine with natural wear and tear to grind away that shiny new bar smell. In addition to protecting your bar by keeping it out of direct contact with the ground, you will want to use stout materials for a hoard-surviving bar. Cleaning the bar immediately after use is as critical to the quality of your bar and beer as is thorough cleaning of your kegs. Fight the desire to veg after a long beer festival—clean the taps and surfaces and make that bar shine!

Hunting for bar parts is the sort of shopping I can get behind. While I normally advocate purchasing top quality parts, unless the bar is in operation regularly,



Barley Engineers' bar disassembled for transport.



Barley Engineers' Bar

less expensive rear seal faucets will suffice. Include in your bar "toolbox" a cheap faucet spanner, a stout faucet, gaskets, quick disconnects and markers. The great auctioneer of the internet, eBay, is a great source for old bar equipment, including draft towers and beer engines. Instead of buying a tower, take a lesson from the Barley Engineers of San Diego and make a modern style "U" pipe from PVC water pipe mounted with shanks and faucets.

At home, we can get away with a single tank, regulator and gas line to pressurize and serve from our lines. Using a single tank and line at a fest leads to foamy or slow pours and the hassle of swapping tanks. The simplest approach is a single regulator that is "tee'd" into multiple gas lines, but you have no capability to adjust pressure for each keg. The black plastic screw-together manifolds are a safe bet. They allow you to restrict the gas flow and are easily expandible. If you plan on serving from beer engines, consider aiding the longevity of the keg by installing a "cask breather" valve (starting at about \$80). Fed with 1-31 PSI, the breather will blanket the beer with CO₂ on every pull and keep your kegs fresh. As a bonus, it can service multiple engines. Steve Jones of Tennessee experimented and now recommends low-pressure propane regulators (\$10-30) with added flares as a substitute.

Even if serving only real ale, you need to keep the chill on your beer. Your guests want to taste the cold! The standard answer of large tubs or trash cans of ice work, but thick polystyrene sheets glued together to form custom keg boxes work even better. Hard to find and more expensive than other options, the efficiency of an aluminum cold plate for pouring frosty beer is difficult to beat. Lastly, if you can find power, consider building a refrigerated brew trailer or a masterpiece like Pastor Tom's "Brewpastor's Altar."

Commercial bars know that paying customers only buy what they know you have. They may not be paying, but guests still need to see what you have on tap! Placing erasable signs above every tap handle is a start. An old blackboard backing allows easy labeling of the Brewpastor's Altar. Large dry erase boards on an easel or

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suspended with ropes (ala the Barley Engineers) are essential for a crowded environment and reduce dilly-dallying in front of the taps. Use bright fluorescent markers for punch and get the one person with legible writing to do it!

Be prepared for success! Unveil the new setup and discover demand outstripping your tap space. Be wise and plan for additional draft points or spots for mounting new hardware, such as beer engines.

Enough theory—what have your peers created? All of these bars have been featured at large scale festivals or the AHA National Homebrewers Conference and kept crowds happy with flowing suds. Do the world a favor and make your local beer bar blush when you roll down the street with a load of homebrew love.

Maltose Falcons' Front and Back Bars (36 Taps of Chaotic Love)

In the mid 1990s, the club decided we needed a better way to pour our beer at parties. Soon-to-be Falcons' president Kevin Baranowski volunteered to build a mobile bar for the club. Working from plywood, Kevin fashioned a simple fold-flat design with 13 taps. Complete with signage and drip trays that feed into buckets and decorative Hashell Dammett statues, the bar is a mainstay for the club. The hinged foldout side-wings have flaps that



Maltose Falcons' Front and Back Bar



Maltose Falcons' Bar in action and disassembled



Sculpted resin tap handles in the form of the club mascot

sit on the ground. Four foam keg boxes filled with beer and ice hold the edifice upright. Mounted on short shanks, the faucets feed to labeled ports on the back-side of the bar. Setup includes unfolding the bar and attaching the plastic gas man-



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ifold and 13 foam-wrapped beer lines. Place the kegs into the boxes and tap and go. (Surprisingly, a fair amount of time is devoted to deciding where to place different beers). Covering the back with a popup canopy helps preserve ice. Small dry erase signboards above each tap allow drinkers to peruse.

An outrageously cheap eBay find of two three-tap brass towers (\$80!) inspired Falcons' "Brewgyver" Kent Fletcher to con-



Beanie's Bar

struct a home for them and our club's two beer engines. Current Falcon vice president John Aitchison, owner of a tavern service company, donated a six-circuit cold plate to chill the beer. Built of solid furniture grade oak, the bar is heavy enough that it now has its own steerable wheel assembly for movement. Internally, a plastic manifold serves the six taps and a cask breather valve that handles the four beer engines. (Remember, plan for new additions! We gained two engines from the membership). The bar has power distribution to feed lights under the front bar surface and a pump to drain water from the cold plate and boost its efficiency. The six tapped kegs are stored under the bar top with the four beers on cask kept on minimal ice in a tub. Facilitating repairs and movement, the bar top removes from the base and the surface slides out for replacement. Magnets inside the towers allow signs to be "clipped" in front of the taps for the crowd to read. Resident club artist Cullen Davis sculpted resin tap handles in the form of the club mascot. This bar made its debut at the 2003 SCHF and pressed into Hospitality Suite duty for the 2004 Vegas and 2007 Denver National Homebrewers Conferences.

Two RC airplane enthusiast Falcons serve their homebrew annually at their favorite flying festival. After years of using big blue barrels filled with ice and wrapped with blankets, Richard "Beanie" Webster and Craig Frump assembled a wood-fronted 13-tap folding bar. Instead of folding flat like the original Back Bar, Beanie's Bar folds and latches into a box shape that houses the lines. Replacing the plain foam boxes of previous designs are hearty aluminum-skinned foam-lined boxes with drains. A homemade copper manifold handles gas distribution and power runs little bar lights. Folded down, the bar fits into a small space, but the 15 space keg boxes take up more room. Saving a bunch of money by using scrap materials, Beanie opted for the more expensive and polished forward seal faucets. This bar debuted at the 2007 SCHF and was an instant hit, bringing bar capacity to a whopping 40 taps of brew.

Barley engineers SCHF bar

The Barley Engineers have a proud tradition of being the first SCHF attendee out the gate with a big bar to show off their wares. Their original design, featured back in the Winter 1996 issue of *Zymurgy*, was recently retired after realizing they were spending more than a day refurbishing it every year. Recognizing that inevitably all things must pass, they built a new bar featuring 26 beers on tap and two on hand pump.

Like the original (*continued on page 46*)

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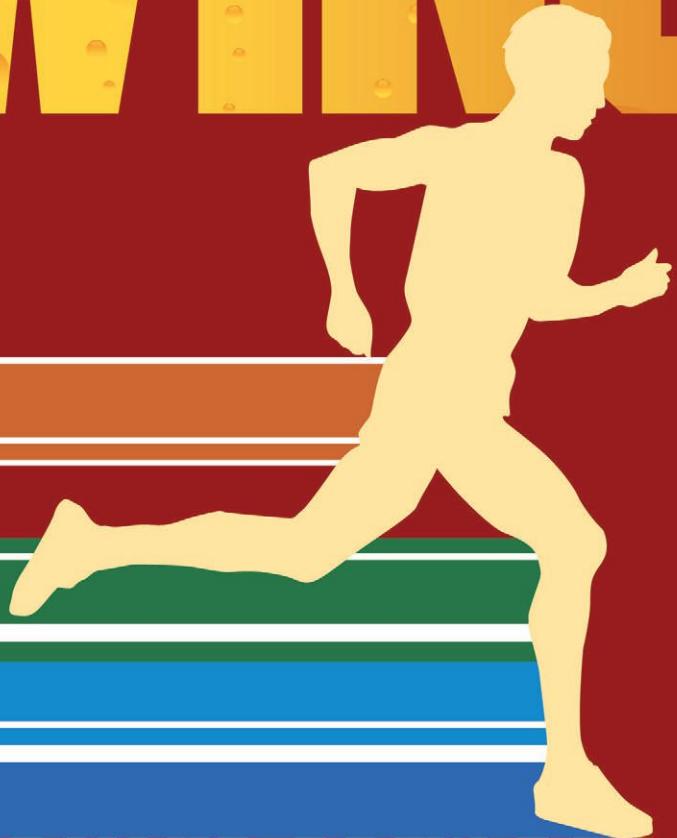


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MARATHON BREWING



MAKING THE MOST OF YOUR BREW DAY
BY TED HAUSOTTER

Each year I find myself in the position of juggling brew time with work, hobbies and family. I'm always running out of time to brew all the different beers I like. My solution? Brew them all in a few marathon brewing days.

What's a marathon brewing day? This is when I dedicate one very full day to brewing, starting at 6 a.m. and continuing late, sometimes until midnight. I have brewed 50 gallons in five different batches, all in one day. Whether it's a lack of brew days, wanting to enter beer in competitions, or just needing a large amount of beer for an activity, marathon brewing is the answer.



The trick is to do two things at the same time—easy enough when waiting for water to heat up, but more demanding as the process continues. It normally takes me about five hours to brew a 10-gallon batch of beer. With multiple batches, while you are sparging a batch, the next batch can be mashing. If you have enough pots, you can have batches boiling, sparging and mashing at the same time. You can avoid washing between batches; I always do, just giving everything a rinse between uses. Overall, enough time is saved to kick out a beer every three hours after the first beer is done. That's 17 hours to complete five batches.

Tips

First, avoid time wasters. Heating water is the biggest. Always keep a full pot of hot water. You will use it for mash, sparge or boil kettle makeup. The next step is to batch work items. Measure all your malt at one time. Use garbage bags to store it. Grind it in batches also. Measure the hops the same way, all at once, and store them in pint mugs. Line them up in order so you know when to add them. Another big time waster is mashing for a time limit. If the mash shows conversion with an iodine test, it is converted. Letting the mash rest longer will result in very minor changes in the mash profile. Move on to the next step. It is a rare moment in marathon brewing when you can sit and take a break.

Equipment issues can be a bit harder to handle. It will take a lot of carboys, pots and storage containers for the sweet wort prior to boiling. Talk to other brewers for equipment that you are missing—maybe you can borrow it. Other options are to get food-grade buckets from restaurants. Try to avoid pickle buckets, though, as they will taint a few batches before the pickle flavor is gone. I have even mashed in a bucket when I brewed a five-batch day. With most malts, conversion is most-

Sugar Math

One of the most important aspects of marathon brewing is sugar math. Or, simply put, calculating the amount of sugar in your wort. For all calculations drop the leading 1, using just the tailing numbers. For example, for a specific gravity of 1.050, use 50.

To calculate the amount of sugar units (SU) needed, multiply expected gravity (EG) by total volume of the finished beer. For example, a 5-gallon batch of Pilsner at 1.050 would have 5 gallons \times 50 EG = 250 SU. At this point we don't care about the gallons, just the SU required to make the beer.

To calculate the collected sugar units, multiply specific gravity (SG) of the wort by the gallons collected. An example would be 4 gallons of Pilsner wort at SG of 1.070, 4 gallons \times 70 SG = 280 SU collected.

To adjust to the proper gravity take the SU expected minus SU collected. If it is positive, more wort is needed and conversely, if it is negative you have extra wort. Add it into the next batch or adjust your recipe based on the amount of SU collected.

To continue with the Pilsner example, 250 SU expected – 280 SU collected = -30 SU, or 30 extra SU. To convert to gallons, use a ratio based on the factor 1 gallon = 1.070 SG (adjust based on your sample readings). SG is actually the SU/gallon. $30 \text{ SU} / 70 \text{ SU/gallons} = .429$ gallons of wort is extra. Add 3.571 gallons of wort, adjust to 5 gallons and add for your boil off. Your wort is now at the right gravity for what you are expecting. The other option is to increase the volume of the finished beer to match. The calculations are as follows: $270 \text{ SU} / 50 \text{ SU/gallon} = 5.4$ gallons of finished beer. Add for boil off and increase all your hop additions. Hop addition factor is $5.4 \text{ gallons} / 5 \text{ gallons} = 108\%$. An example is boil hops at 3 oz \times 1.08 = 3.24 oz hops required.

Equipment List

This is an ideal list. Marathon brew days can be accomplished with different combinations of equipment. Size the equipment to your beer recipes.

- 2 cook stove burners (a gas camp stove works well for heating hot water)
- 1 mash sparge tun
- 1 hot liquor tank (hot water)
- 2 boil kettles (if doing partible mashing, 1 will work but slower)
- 3 5-gallon buckets
- 2 to 10 carboys
- 2 to 10 kegs, or
- 100 to 500 12-ounce bottles

ly complete within the first 15 minutes before a significant temperature change can take place. Fermentation can take place in kegs, carboys or buckets. If you use buckets, rack as soon as primary is complete to reduce oxidation.

Planning Your Brews

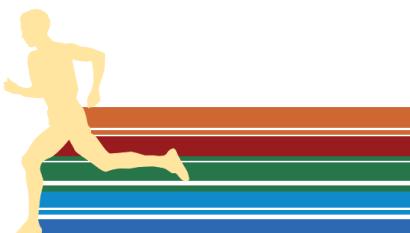
The easiest way to do a multi-brew day is to make a big mash and pull many differ-

ent beers from it. The challenge is to find compatible grain bills. If you start with a Pilsner malt base, you can pull the first running for a triple or Belgian strong golden. The lower gravity runnings can be used for Pilsners, cream ales, blond ales and wheatless wheat beer, as there are mostly fermentation and hop flavor differences. The mash is not that important. Other options are a Helles bock with sec-



Marathon Brewing Rules of Success

1. Start the brew day with all your equipment clean and ready for use.
2. Brew a batch of beer prior to a marathon brew day to get used to brewing a beer after a few months off.
3. Brew up prior batches for yeast starters.
4. Talk to your local brewery for large yeast starters.
5. Try a double batch day before trying three or more in the same day.
6. Keep your hot liquor (hot water) tank full all the time.
7. Keep your aeration stone in the hot liquor tank. It will usually be above pasteurization temperatures.
8. Do all water salt adjustments in the boil kettle. This allows you to have beers with different water hardness from the same mash.
9. Try to avoid decoction mashes. If you feel they are needed and you can't wait for a different brew day, adjust them to single or double decoction.
10. Schedule any step or decoction mashes to the second or third batch. This gives you time to develop wort ready to boil while you do a more lengthy mash process.
11. After the first beer has been chilled, disconnect your pump or counterflow chiller from the brew pot and connect it into the discharge, making a closed loop in your chilling system. This prevents it from getting dirty and you should be able to just attach to the brew pot on the next batch.
12. Measure out the Irish moss and place it with your hops so you don't forget.
13. Have your fermentation vessels sanitized prior to completing the boil so you can quickly transfer when the wort is chilled.



ond runnings for Octoberfests or Doppelbocks with the second runnings as Munich Dunkels. If you make a barley-wine or old ale, pull the second runnings for a bitter—the traditional British partigyle mashing method. If you want brown ale, add some crystal malts to the mash tun to bring out more color and flavor after you pull the first runnings. In fact, I always do this as specialty malt flavors are less in second runnings. I always continuously sparge, adding water the whole time.

It will be necessary to adjust your gravity levels for each batch. In the beginning they can run obscenely high, above 1.090. Use "Sugar Math" from the sidebar to determine how to calculate the correct amount of wort to give desired results.

If your beer recipes can't be combined for a partigyle style mash, it is going to take more work and coordination to run multiple mashes. Start the first mash as soon as possible. While it is converting, keep more water heating to sparge, measure your malt bill and grind it. As soon as an iodine test shows conversion, start sparging. Your next mash can be started in another container like a picnic cooler, or wait for the mash tun to become available. Now that you have the sweet wort started, keep different batches going, slowing down on the mashing only for lack of places to put it. As soon as about half the wort is collected, start heating for boil. Most beers will benefit from a full 90-

minute boil. Start chilling as soon as the boil is complete. Normal heat, boil and chill time takes about two-and-a-half hours, so it is important to start the next batch right away or use two boil pots. With multiple batches, it is important to have your chiller and fermentation vessel ready and sanitized for use.

Marathon brewing is a lot of work and takes dedication both now and in the future when you need to decide: "Should I drink a triple, perhaps a Pilsner or better yet a cream ale?" The down side is one full day spent over a hot stove; the upside is tantalizing your taste buds with different beers.

To save even more time on your marathon brew day, you can skip the mash and use extracts. In addition to not having to do a mash, using extracts also cuts back on the boil time for each batch—the process of making extract performs much of the function of boiling wort, so lengthy boils are not necessary with extract brew. And, if you do a concentrated wort boil, you will cut back on your chilling time. We have included extract versions of each of the following recipes.

Good luck with your brewing marathon!

Ted Hausotter is an award-winning homebrewer from Baker City, Ore. and the Mountain/Northwest regional representative for the Beer Judge Certification Program.

26 Gallon Blond Beer Marathon

The following recipes are for 5.25 gallons per batch. This allows for hop absorption and just enough extra to call it a 26-gallon brew day. Recipes are based on 80% mash efficiency.

Combined Mash or Megamash

Some compromises are needed for a megamash. Adjust all base malts to Pilsner and use 150° F (65° C) for mash temperatures for the entire batch. It will fill larger than a 15-gallon pot. An ice chest works well, or fill your 15-gallon pot and add mash to it as room develops.

43.88 lb (19.9 kg) German Pilsner malt
2.5 lb (1.1 kg) Wheat malt

Combine 13 gallons water with mash and sparge as normal. Adjust collected wort to the proper original gravity by using "sugar math." (see sidebar)

Triple

Ingredients

for 5.25 U.S. gallons (19.8 liters)

12.0 lb	(5.5 kg) German Pilsner malt
0.5 lb	(227 g) Wheat malt
1.25 lb	(0.6 kg) Corn sugar or candy sugar
0.95 oz	(27 g) East Kent Goldings 4.7% alpha whole hops 90 min
1.25 oz	(35 g) East Kent Goldings 4.7% alpha whole hops 30 min
1.0 oz	(28 g) East Kent Goldings 4.7% alpha whole hops 5 min Wyeast 3522 Belgian Ardennes or 3787 Trappist yeast or White Labs WLP 500 Trappist ale yeast

Original Gravity: 1.080

IBU: 31

Directions

Individual batch mash with 3.7 gallons at 149° F (65° C) or see the section above for combining mashes. Collect 5.25 gallons of wort for an adjusted gravity of 1.071. The sugar will take it up to 1.080 when it is added during the fermentation process. Boil for 90 minutes. Ferment at 70° F (21° C). After a few days of fermentation, boil sugar in a small amount of water for 15 minutes to sanitize. Cool sugar solution and add to the fermenting wort.

Extract Version

8.0 lb	(3.6 kg) Extra light dry malt extract
1.25 lb	(0.6 kg) Corn sugar or candy sugar
2.25 oz	(64 g) East Kent Goldings 4.7% alpha whole hops, 45 min
1.25 oz	(35 g) East Kent Goldings 4.7% alpha whole hops 30 min
1.0 oz	(28 g) East Kent Goldings 4.7% alpha whole hops 5 min Wyeast 3522 Belgian Ardennes or 3787 Trappist yeast or White Labs WLP500 Trappist Ale Yeast

Directions

Bring 2 gallons (7.6 L) of water to a boil. Turn off burner and stir in extract. Return to boil and add 45 minute hops. Add remaining hops at 30 minutes and 5 minutes from end of boil as indicated in the recipe. After a 45-minute boil strain wort into a fermenter with 3 gallons (11.4 L) of cold water. Top up with cold water for a total of 5.25 gallons (19.9 L). Pitch yeast

when temperature drops below 70° F (21° C). Ferment at 70° F (21° C). After a few days of fermentation, boil sugar in a small amount of water for 15 minutes to sanitize. Cool sugar solution and add to the fermenting wort.

Directions

Add grain to 2 gallons (7.6 L) of water and add heat. Strain out grains when temperature reaches 170° F (77° C). Turn off burner and stir in extract. Bring to a boil and add first hop addition. After 15 minutes of boil, add 30 minute hops. Follow recipe above for remaining hop additions. After a 45 minute boil strain wort into a fermenter with 3 gallons (11.4 L) of cold water. Top up with cold water for a total of 5.25 gallons (19.9 L). Pitch yeast when temperature drops below 50° F (10° C). Ferment at 50° F (10° C).

Bohemian Pilsner

Ingredients

for 5.25 U.S. gallons (19.8 liters)

7.0 lb	(3.2 kg) German Pilsner malt
0.5 lb	(227 g) Wheat malt
0.5 lb	(227 g) Carapilsner
1.45 oz	(41 g) Saaz 4% alpha whole hops 90 min
1.45 oz	(41 g) Saaz 4% alpha whole hops 30 min
0.5 oz	(14 g) Saaz 4% alpha whole hops 5 min
0.5 oz	(14 g) Saaz 4% alpha whole hops 0 min Wyeast Laboratories 2124 Bohemian lager yeast or White Labs WLP800 Pilsner Lager Yeast

Original Gravity: 1.045

IBU: 38

Directions

Individual batch mash with 2.4 gallons at 152° F (66° C). Collect 5.25 gallons of wort for an adjusted gravity of 1.042. Add first hop addition while collecting wort. If you are using a megamash, steep the Carapilsner while heating the wort for boil. Remove grains when wort temperature reaches 170° F (77° C). This will take the OG up to 1.045. If you are not doing a megamash, add the Carapilsner to the main mash as normal. Boil for 90 minutes. Ferment at 50° F (10° C).

Extract Version

5.0 lb	(2.3 kg) Extra light dry malt extract
0.5 lb	(0.2 kg) Carapilsner
2.5 oz	(71 g) Saaz 4% alpha whole hops, 45 min
1.45 oz	(41 g) Saaz 4% alpha whole hops, 30 min
0.5 oz	(14 g) Saaz 4% alpha whole hops, 5 min
0.5 oz	(14 g) Saaz 4% alpha whole hops, 0 min Wyeast Laboratories 2124 Bohemian lager yeast or White Labs WLP800 Pilsner Lager Yeast

Original Gravity: 1.046

IBU: 30

Directions

Collect 5.25 gallons of wort for an adjusted gravity of 1.043. If you are using a megamash, steep the Carapilsner while heating the wort for boil. This will take the OG up to 1.045 when it is added. If you are not using a megamash, add the Carapilsner to the main mash as normal. Individual batch mash with 2.4 gallons at 150° F (65° C). Boil for 90 minutes. Ferment at 68° F (20° C).

Extract Version

5.0 lb	(2.3 kg) Light dry malt extract
0.5 lb	(0.2 kg) Carapilsner
2.33 oz	(66 g) Cascade 5% alpha whole hops 45 minutes
0.5 oz	(14 g) Cascade 5% alpha whole hops 15 minutes Wyeast Laboratories 1056 American Ale yeast or White Labs WLP001 California Ale yeast

Directions

Add grain to 2 gallons (7.6 L) of water and add heat. Strain out grains when temperature reaches 170° F (77° C). Turn off burner and stir in extract. Bring to a boil and add 45 minute hops. After 30 minutes of boil, add 15 minute hops. After a 45 minute boil, strain wort into a fermenter with 3 gallons (11.4 L) of cold water. Top up with cold water for a total of 5.25 gallons (19.9 L). Pitch yeast when temperature drops below 68° F (20° C). Ferment at 68° F (20° C).

(19.9 L). Pitch yeast when temperature drops below 50° F (10° C). Ferment at 50° (10° C).

Cream Ale

Ingredients

for 5.25 U.S. gallons (19.8 liters)

6.9 lb	(3.1 kg) German Pilsner malt
0.5 lb	(227 g) Wheat malt
0.75 lb	(340 g) Corn Sugar
0.5 oz	(14 g) Hallertau 5.2% alpha whole hops 60 min
0.9 oz	(25 g) Hallertau 5.2% alpha whole hops 30 min Wyeast 2112 California Lager yeast or White Labs WLP810 San Francisco Lager yeast

Original Gravity: 1.048

IBU: 20

Directions

Individual batch mash with 2.2 gallons at 150° F (65° C). Collect 5.25 gallons of wort for an adjusted gravity of 1.042. Add corn sugar to take the OG up to 1.048. Boil for 90 minutes. Ferment at 64° F (17° C).

Original Target Gravity: 1.050

IBUs: 20

Directions

Individual batch mash with 2.6 gallons at 150° F (65° C). Collect 5.25 gallons of wort for an adjusted gravity of 1.050. Boil for 90 minutes. Ferment at 50° F (10° C).

Extract Version

5.75 lb	(2.6 kg) Extra light dry malt extract
1.0 oz	(28 g) Hallertau 5.2% alpha whole hops, 45 minutes
1.0 oz	(28 g) Hallertau 5.2% alpha whole hops 30 minutes Wyeast 2206 Bavarian Lager yeast or White Labs WLP833 German Bock Lager yeast

Directions

Bring 2 gallons (7.6 L) of water to a boil. Turn off burner and stir in extract. Return to boil and add 45 minute hops. Add remaining hops at 30 minutes from the end of boil. After a 45 minute boil strain wort into a fermenter with 3 gallons (11.4 L) of cold water. Top up with cold water for a total of 5.25 gallons (19.9 L). Pitch yeast when temperature drops below 64° F (18° C). Ferment at 64° (18° C).

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Extract Version

4.75 lb	(2.6 kg) Extra light dry malt extract
0.75 lb	(2.1 kg) Corn Sugar
1.0 oz	(28 g) Hallertau 5.2% alpha whole hops, 45 minutes
0.9 oz	(26 g) Hallertau 5.2% alpha whole hops 30 minutes Wyeast 2112 California Lager yeast or White Labs WLP810 San Francisco Lager yeast

Directions

Bring 2 gallons (7.6 L) of water to a boil. Turn off burner and stir in extract and sugar. Return to boil and add 45 minute hops. Add remaining hops at 30 minutes from the end of boil. After a 45 minute boil strain wort into a fermenter with 3 gallons (11.4 L) of cold water. Top up with cold water for a total of 5.25 gallons (19.9 L). Pitch yeast when temperature drops below 64° F (18° C). Ferment at 64° (18° C).



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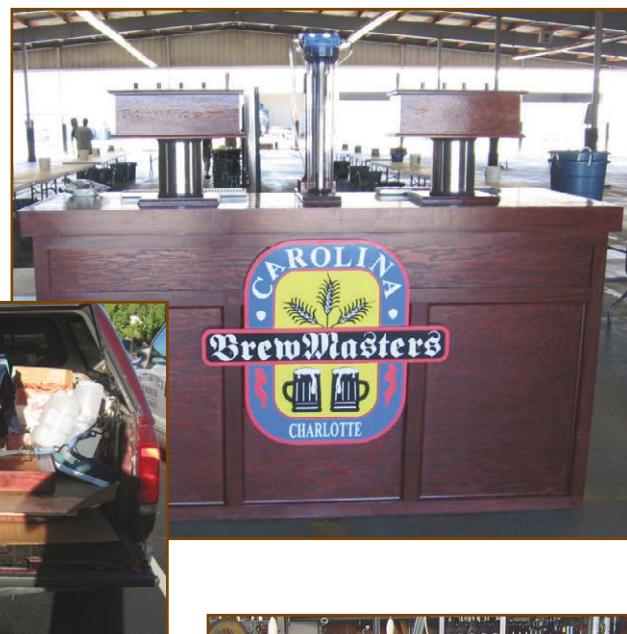
Homebrew Club Bars (continued from 39)

bar, the break-apart flat assembly includes thin-walled sides supporting a sturdy top. The tap space and line routing is accomplished by sections of spray painted PVC piping. PVC, the low-cost choice, allows hand tightening and adjustment of the bar elements as assembly occurs. Fixed mounting points off the back edges allow sturdy pulls off the beer engines. A major improvement over their old bar is the use of industrial tubs loaded from behind instead of the front top loading that stopped service on the older bar. Drains built from gutter material provide a low-cost means of direct waste flow into catch buckets. Incorporating the past, they added back an original vinyl covering to the base of the bar.

Carolina BrewMasters oktoberfest bar

Pouring 11 beers and more than 30 kegs in a few short hours is par for the course for the Carolina BrewMasters during their Charlotte Oktoberfest. Tony Profera and his crew built a massive break-flat wooden bar featuring eight Ventmatic faucets, two stout faucets and the Hopinator, a large custom-built Randall the Enamel Animal. Building their design around two removable old professional Irish Coffin Box towers, the bar is a statement in solidity and ease of use. Chilling each side are large red tubs holding six kegs apiece powered by separate CO₂ manifolds with backflow protection. Gas

Carolina BrewMasters' Bar assembled and disassembled



cylinders rest in a wheeled oak box for service. The system breaks down completely, fitting into the rear bed of a pickup truck.

BrewPastor's altar (tom Hart)

Tom Hart, a Presbyterian minister in New Mexico and former president of the Dukes of Ale brew club, made a huge splash at the National Homebrewers Conference in Denver with his BrewPastor's Altar. Hart jokes, "Every beer drinker has a church key, and I decided I wanted an altar!"

A freezer-based bar with an Irish Coffin top sporting five taps and two hand



BrewPastor's Altar

pumps, the Altar is perfect for self-service situations with available power. Oak board and plywood braced with pine struts form a frame around an old slate blackboard, which serves as the mounting surface for the taps. To ease opening the new heavy top, Hart mounted the taps behind the hinge of the new freezer collar he built. Increasing the "bar-like" appearance of the freezer is an overhanging front oak surface. The CO₂ manifold and temperature controller mount on a fold-down access panel behind the taps. Painting the freezer black completes the illusion of the altar and inspires devout worship. Are you contemplating a home bar? For a few dollars and more tool time, Hart's design is within the reach of anyone building a basic freezer collar.

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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 widely available commercial beers (or meads or ciders) using the BJCP score-sheet. We invite you to download your own scoresheets at www.bjcp.org, pick up a bottle of each of the beverages and judge along with them in our Commercial Calibration.



For this issue we take a look at two German-style lagers brewed in the U.S.

First up is a light lager, Stoudt's Gold, a Munich-style Helles from Stoudt's Brewing Company in Adamstown, Pa.

One of the brewery's four flagship beers (along with American Pale Ale, Scarlet Lady Ale and Pils), Stoudt's Gold is “widely recognized as one of the finest German-style beers brewed in America,” according to the brewery Web site.

“Brewed with the finest specialty malts and noble hops, this light-bodied, easy-drinking lager features a subtle balance of sweet malt and clean crisp hops.”

Stoudt's Gold is brewed with Perle, Hallertau and Saaz hops, and two-row, Munich and Vienna malt. It is 4.7-percent alcohol by volume with suggested pairings of roasted chicken and fish. Judge Scott Bickham called it “a nice session beer.”

Next up is a dark lager, Sprecher Black Bavarian Style, an “intensely dark Kulmbacher style lager.” Sprecher, based in Glendale, Wis., notes that Black Bavarian is currently entering competitions as a strong porter. Brewed with two-row pale, black patent, caramel and chocolate malts, it has aromas of coffee, caramel and chocolate. It also exhibits a smoked quality that is “unusual but interesting, accentuating the roasted complexity,” according to judge Gordon Strong.

Sprecher Black Bavarian is 5.8-percent alcohol by volume. Sprecher won the Small Brewing Company of the Year and Small Brewing Company Brewmaster of the Year titles at the 2004 Great American Beer Festival.

Our expert panel includes David Houseman, a Grand Master III judge and competition director for the BJCP from Chester Springs, Pa.; Beth Zangari, a Grand Master level judge from Placerville, Calif. and founding member of Hangtown Association of Zymurgy Enthusiasts (H.A.Z.E.); Scott Bickham, a Grand Master II 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 IV judge, principal author of the 2004 BJCP Style Guidelines and president of the BJCP Board who lives in Beavercreek, Ohio.



ON THE WEB

BJCP Style Guidelines

www.bjcp.org

Stoudt's Brewing Co.

www.stoudtsbeer.com

Sprecher Brewing Co.

www.sprecherbrewery.com

THE SCORES



Stoudt's Gold Lager—Stoudt's Brewing Co., Adamstown, Pa.
BJCP Category: 1D Munich Helles

THE JUDGES' SCORES FOR STOUDT'S GOLD LAGER



DAVE HOUSEMAN



BETH ZANGARI



SCOTT BICKHAM



GORDON STRONG

Aroma: Malty with a slightly bready Pils malt character and some sulfury DMS in the background. No hop aroma. No diacetyl or fruity fermentation esters. Just as I remember the Helles served in Munich. (11/12)

Appearance: Bright clarity. Thick, rocky white head with good retention. Gold color. All appropriate to style. (3/3)

Flavor: Hop bitterness assertive for the Helles style even with the firm, sweet, Pils malt base. Lingering bitterness in the finish. Balance is more toward hop bitterness than maltiness. Low noble hop flavor. No diacetyl. No fruity fermentation esters. Sulfury DMS in the flavor is more assertive in flavor than aroma, yielding a light cider character. A faint, almost roasted barley-like astringency in aftertaste, perhaps from specialty malts. (12/20)

Mouthfeel: Medium body but a thinnish mouthfeel due to astringency, carbonation and cidery flavor. Some alcohol warming is noticeable. Not the malty smoothness that is expected of the style. (2/5)

Overall Impression: Quite drinkable beer with higher hop bitterness and lingering astringency that prevents this from achieving the Munich Helles style. A refreshing lawnmower beer that's almost Pilsner in nature. I've had this beer many times but not recently. Seems like there have been significant recipe or process changes at the brewery. (6/10)

Total Score: 34/50

Aroma: Grainy and bready sweet malt character. Low spicy, cinnamon hop aroma. Some creamed corn DMS present, but otherwise very clean. Sweet malt becomes more prevalent as the beer warms a bit, as does some alcohol. (10/12)

Appearance: Golden, brilliant clarity. Creamy white head forms, but dissipates rather quickly to mist on the surface and ring of bubbles around the glass. (3/3)

Flavor: Grainy, bready slightly sweet malt, with firm hop bitterness; hop flavor is subdued by the bready malt flavor, with not as much sweetness as promised by the aroma. Very clean fermentation characteristic. Balance is toward the hop bitterness that lingers into the finish. (14/20)

Mouthfeel: Medium body with creamy carbonation that dances on the tongue, along with a slightly chalky, mineral feel, drying out the finish. No alcoholic heat or astringency. Finishes dry, crisp and clean. (4/5)

Overall Impression: This is a very refreshing and tasty beer that could use a little more malt sweetness for balance. The spicy hop aroma and fairly assertive bitterness reflect somewhat the style's heritage as a derivative of German Pils (which derives from the Czech), with the DMS reminiscent of a Classic American Pils. This example still holds its own against the classic imports, for all its Americanism. Would be a wonderful refresher any time. (8/10)

Total Score: (39/50)

Aroma: Initial burst of sulfur, fading to a pleasant grainy malt nose. I get a hint of green apple that is more likely acetaldehyde rather than esters, but no other fermentation byproducts. Low floral hop notes are acceptable in this style. (8/12)

Appearance: Pale straw color with brilliant clarity and decent head retention. The beer is clear enough for me to read through my tasting glass. (3/3)

Flavor: Soft malt up front—very light toastiness with a little caramel. Green apple notes are also noticeable and detract a little from the malt character. Clean fermentation profile, as should be the case for this style. The finish has a high apparent bitterness from grain tannins accenting a moderate hopiness. I also get some mineral notes in the finish. Malt/hop balance is a little on the dry side. (15/20)

Mouthfeel: A little astringency along with a faint soapiness. Carbonation seems a little low for a lager. (3/5)

Overall Impression: This is a very nice session beer. The balance between malt and hops is good, but would be better with a little less acetaldehyde and a softer (less grainy) finish. The Export style is tough to master, but this sample is exemplary for an American microbrewery. (7/10)

Total Score: (36/50)

Aroma: Medium-light spicy noble hop aroma—a little strong for the style. Low sulfur. Grainy malt aroma, lacking the rich Pils malt character of the best German versions. No esters, diacetyl, DMS or other significant faults. Generally clean, although not as pure in character as the best examples. (8/12)

Appearance: Tall, frothy, pure white head. Medium-gold color. Very clear. Head settled slowly. (3/3)

Flavor: Medium spicy noble hop flavor initially, with a light grainy malt flavor following. Low sulfur. Medium bitterness lasts into the dry finish. The bitterness and hop flavor tend to dominate the malt, which is not the best balance for this style. The lager character is fairly clean, but not squeaky clean. The malt has a slightly "hard" grainy flavor, not the rich sweet Pils malt character I expect. (12/20)

Mouthfeel: Medium body, medium carbonation, very light grainy astringency. (4/5)

Overall Impression: Hops are a little strong throughout, but the malt lacks the richness of the German standard bearers. It comes across as more Kölsch-like to my taste. The spice of hops, bitterness and grainy malt are in balance, with the hops coming out on top. The aftertaste of hops and bitterness is probably the biggest detractor. I'd like the malt flavor to have more of the continental "elegance" and the yeast character to be a little less sulfury. I'd review the grain source as well as the yeast strain and lagering regime. It's drinkable and tasty, but I'm looking for this to be a Pils malt showcase. (6/10)

Total Score: (33/50)



THE JUDGES' SCORES FOR SPRECHER BLACK BAVARIAN



Aroma: Light, roasted malt aroma up front. No hop aroma. No DMS. No diacetyl. Clean, lager fermentation without fruity esters. (10/12)

Appearance: Black with brown tinges. Bright clarity but nearly opaque. Dense brown head with adequate retention. Very nice looking beer. (3/3)

Flavor: Sweet caramel malt with noticeable roasted malt character exhibiting burnt malt notes of black malt, not really appropriate to the style. Substantial hop bitterness balances the malt sweetness. No hop flavor. Dark malts result in dark fruit notes of currants and dates but no fermentation esters. Sweetness up front yields to a dry finish from hops and roast malts. No diacetyl or DMS. Alcohol not noticeable. (14/20)

Mouthfeel: Medium to medium-full body. Initial creamy mouthfeel finishes with a dryness that verges on astringent. Low alcohol warming. (3/5)

Overall Impression: A dark lager that could pass as a sweet stout or robust porter. The dark malt is too assertive with burnt notes for a best example of the Schwarzbier style. Still very enjoyable. Would be nicely paired with roast pork or wild game. (7/10)

Total Score: (37/50)



Aroma: Moderate sweet chocolate caramel malt aroma, like a dark chocolate covered caramel. No hop aroma detected, nor any esters or off aromas. Very clean ferment. (10/12)

Appearance: Deep brown-black with garnet highlights. Brilliant clarity. Biscuity tan head forms of fine, tight bubbles to one-third of glass, then slowly dissipates, leaving a delicate lace on the sides of the glass. (3/3)

Flavor: Chocolate roasty malt flavor, more chocolate than coffee. Roast character rather pronounced in the flavor, a bit smoky even, drying mid-palate and finish. Very low hop bitterness with very low spicy hop flavor. Balance is toward the roasty malt, with some caramel sweetness coming forward as the beer warms a bit. Clean finish with lingering roasty, dry smokiness that is a little stout-like. (13/20)

Mouthfeel: Medium body with moderate carbonation, and slightly astringent finish. No alcoholic warmth or other harshness. (4/5)

Overall Impression: Malt presentation is a little less sweet than expected, with a more pronounced smoked roast than coffee like. The caramel sweetness balances out as the beer warms a bit, and allows the spicy hop flavor to come forward, reminiscent of cinnamon coffee, though not as sweet. A lovely accompaniment to alder or fruitwood smoked salmon or ploughman's lunch. (7/10)

Total Score: (37/50)



Aroma: Roasty notes up front, followed by rich chocolate, toffee and caramel. There is a light fruitiness along with some alcohol, both of which are a little higher than most German examples of this style. I also get some faint citrus notes, but cannot tell if they are from hops or esters. (9/12)

Appearance: Deep brown color, creamy beige head with impressive retention. Clarity is also on the money. (3/3)

Flavor: Rich, delicious maltiness that takes the palate on a journey from sweet caramel through dark chocolate, ending with a solid roasty finish. These malt flavors are accompanied by blackberry and stone fruit notes—not as much as in a Baltic Porter, but treading dangerously close to the dividing line between ale and lager. Just enough hops to provide enough bitterness to balance the malt. Seems a little big for style, but has some luscious malt flavors. (16/20)

Mouthfeel: Rich and creamy, leaving some residual sugars on the lips. Just a little astringency, but at an appropriate level for this style. (4/5)

Overall Impression: Very enjoyable beer with a ton of malt flavor and complexity. Even now, the head is still standing, which speaks to the excellent conditioning. The only fault is that it is a little big for what is normally a standard strength beer in Germany (which is consistent with the alcohol content of 6 percent). (7/10)

Total Score: (39/50)



Aroma: Chocolate, lightly smoky, and a hint of dark caramel. Very clean lager character with just a whiff of sulfur. The malt complexity shows a highly roasted character. Very light hops. The smoke/roast quality dominates. The smoke is a little unusual but plays up the roast character. (9/12)

Appearance: Tall, deep tan head with tiny mousse-like bubbles. Very dark brownish black color. Opaque. The head settled very slowly—excellent conditioning. (3/3)

Flavor: Roasted malts with some smoke, medium bitterness. The moderate hop bitterness is accentuated by the roasted grain and smoke bitterness. Very clean lager character; no esters—nice. Dry finish, but somewhat offset by a fullish body. Hint of alcohol flavor. The bitterness level is welcome, although it's a bit aggressive. The roast is pushing the limits, and the smoke is a touch over the top for my taste. Some of the flavors are approaching a porter, which is usually a warning sign for me that the roast is too high. Otherwise, it's a very nicely done beer. (14/20)

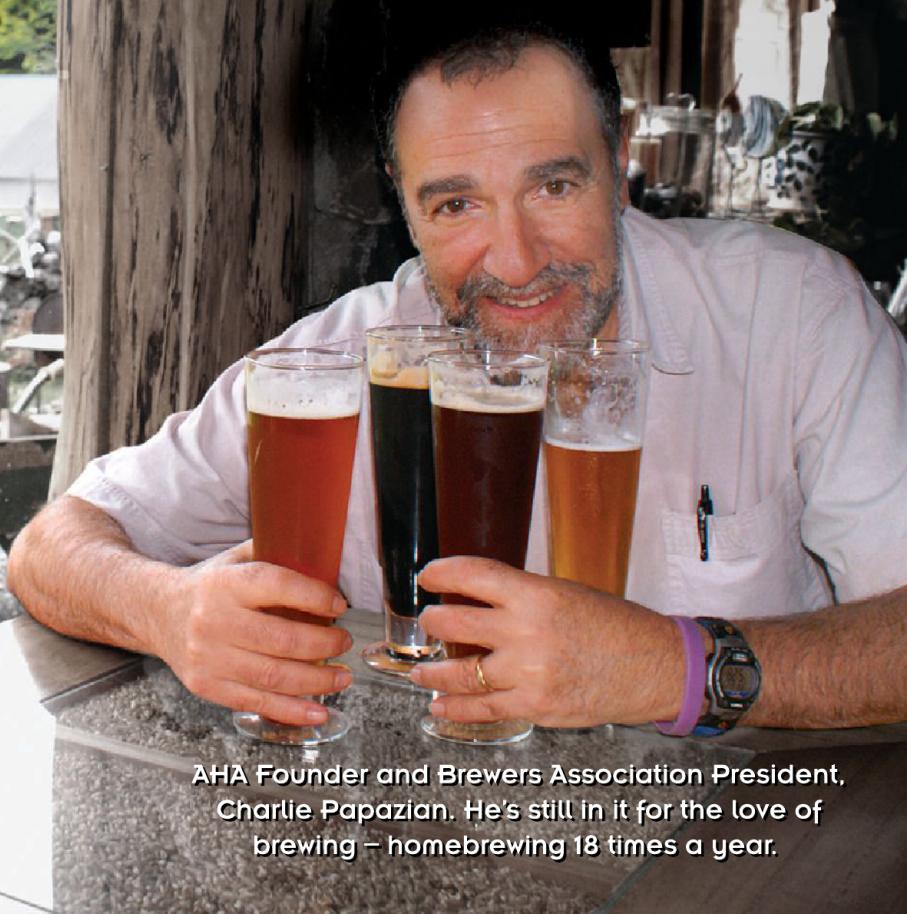
Mouthfeel: Medium body. Medium-high carbonation, which makes it seem fuller-bodied. Some roasted grain astringency. Slightly alcohol warmth is unusual. Might be a bit big. (3/5)

Overall Impression: The smoked quality is unusual but interesting; it isn't overwhelming and it accentuates the roasted complexity. The roasted flavors have a very dark chocolate note, which is tasty. The alcohol character is a little high; that might smooth out with additional lagering.

Total Score: (36/50)

Stay away from my beer...

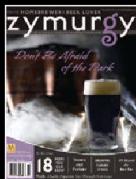
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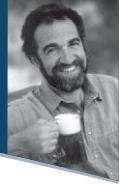


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by Charlie Papazian



Why Homebrew?



AFTER ALL THESE YEARS I STILL GET ASKED THE QUESTION, "CHARLIE, ARE YOU STILL FINDING TIME TO BREW?" THE ANSWER, OF COURSE, IS "YES."

Tomorrow I am looking forward to immersing myself into my personal brew world for this year's final and 20th batch of homebrew (that doesn't include one batch each of peach-elderberry mead and chokecherry wine). OK, I can't take credit for every one of the 20 batches. My wife, Sandra, brewed a batch of IPA and a "Broken-Chicken" Lager this past summer, but I did drink it.

I've been making homebrewed beer since 1970. It would be a challenge for me to go through all my brewing journals and figure out how many batches I've brewed. Quite frankly, I'd rather spend my time

planning or brewing my next batch.

After all these years I still get asked the question, "Charlie, are you still finding time to brew?" The answer, of course, is "Yes." "How do you find time with all

the traveling you do?" Yes, I find myself on the road or in the air about three-and-a-half to four months out of the year, but I can assuredly answer, "I make it a priority, because I enjoy brewing beer so much."

Bunga-Toggles Agave-laced Barleywine

All-Grain Recipe

Ingredients for 5.5 U.S. gallons (20 liters)

8.0 lb	(3.6 kg) Pils or pale malt
3.0 lb	(1.36 kg) Munich malt (7 L)
8.0 oz	(225 g) Belgian or other aromatic malt
4.0 oz	(113 g) Belgian Special-B malt
2.5 lb	(1.15 kg) light malt extract syrup or 2 lb (900 g) light dried malt extract
3.5 lb	(1.6 kg) Agave extract syrup
2.0 oz	(56 g) Perle 7.8% alpha (15.6 HBU/437 MBU) 60 min
0.75 oz	(21 g) Vanguard hops 6% alpha (4.5 HBU/126 MBU) 30 min
1.0 oz	(28 g) Santiam hop pellets 5% alpha (5 HBU/140 MBU) 10 min
2.0 oz	(56 g) Cascade hops, 1 min
0.6 oz	(16 g) New Zealand Nelson B Sauvin hop pellets, dry hopping
0.25 tsp	(1 g) powdered Irish moss
	Your favorite yeast—ale or lager
0.75 cup	(175 ml measure) corn sugar (priming bottles) or 0.33 cup (80 ml) corn sugar for kegging

Target Original Gravity: 1.097 (23.1 B)

Approximate Final Gravity: 1.017 (4 B)

IBUs: about 67

Approximate color: 15 SRM (30 EBC)

Alcohol: 10.6% by volume

Directions

A step infusion mash is employed to mash the grains. Add 12 quarts (11.5 liters) of 140° F (60° C) water to the crushed grain, stir, stabilize and hold the temperature at 132° F (53° C) for 30 minutes. Add 6 quarts (6 liters) of boiling water and add heat to bring temperature up to 155° F (68° C) and hold for about 30 minutes. Raise temperature to 167° F (75° C), lauter and sparge with 3.5 gallons (13.5 l) of 170° F (77° C) water. Collect about 5.5 gallons (21 liters) of runoff. Add malt extract, agave extract syrup and 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 10-minute hops and Irish moss. When 1 minute remains add the 1-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. Strain and sparge the wort into a sanitized fermenter. Bring the total volume to 5.5 gallons (19 liters) 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 7 to 12 days or when fermentation shows signs of calm and stopping. Rack from your primary to a secondary. 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.



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Why do I brew? The answer is simple—it is still fun for me. I love the routine of planning and preparing the ingredients the days before. Then there's the anticipation of waking up in the morning and going out to my brew garage. If it's summer, I open the garage door and the sun comes streaming in from the horizon and takes the chill out of the early morning air. If it's winter and freezing cold, the anticipation of warmth and humidity generated by the steaming kettles creates uncompromised tropic-like comfort. I mash in, set the timer and have breakfast. I'm brewing, the aroma of malt and hops soon fills the air, and I simply love it.

This is what I do 15 to 20 times a year for enjoyment. Yes, I do other things for enjoyment too. But tomorrow I get to immerse myself in the world of beer and brewing for a few hours. I can't help but think of the millions of others throughout history who have gone through the same routine. I imagine that in each brewer's world there is the same sense of enjoyment, accomplishment and creation repeated over the centuries. And then aromas inspire familiarity and my anticipation evolves. I am spending my time making something really good, and not only will I really like this stuff, but I'll get to share it with friends and they will magi-

Bunga-Toggles Agave-laced Barleywine

Malt Extract Recipe

Ingredients for 5.5 U.S. gallons (21 liters)

7.5 lb	(3.4 kg) light malt extract syrup or 6 lb (2.7 kg) light dried malt extract
2.0 lb	(908 g) amber malt extract syrup or 1.6 lb (725 g) light dried malt extract
8.0 oz	(225 g) Belgian or other aromatic malt
4.0 oz	(113 g) Belgian Special-B malt
3.5 lb	(1.6 kg) Agave extract syrup
2.5 oz	(70 g) Perle 7.8% alpha (19.5 HBU/546 MBU) 60 min
1.0 oz	(28 g) Vanguard hops 6% alpha (6 HBU/168 MBU) 30 min
1.0 oz	(28 g) Santiam hop pellets 5% alpha (5 HBU/140 MBU) 10 min
2.0 oz	(56 g) Cascade hops, 1 min
0.6 oz	(16 g) New Zealand Nelson B Sauvin hop pellets, dry hopping
0.25 tsp	(1 g) powdered Irish moss
	Your favorite yeast—ale or lager
0.75 cup	(175 ml measure) corn sugar (priming bottles) or 0.33 cup (80 ml) corn sugar for kegging

Target Original Gravity: 1.097 (23.1 B)

Approximate Final Gravity: 1.017 (4 B)

IBUs: about 67

Approximate color: 15 SRM (30 EBC)

Alcohol: 10.6% by volume

Directions

Place crushed grains in 2 gallons (7.6 liters) of 150° F (68° C) water and let steep for 30 minutes. Strain out (and rinse with 3 quarts/3 liters hot water) and discard the crushed grains reserving the approximately 2.5 gallons (9.5 liters) of liquid to which you will now add malt extract, agave extract syrup and 60 minute hops. 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 10 minute hops and the Irish moss. When 1 minute remains add the 1-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. Strain out and sparge hops and direct the hot wort into a sanitized fermenter to which 1 gallon (4 liters) of cold water has been added. If necessary add cold water to achieve a 5.5-gallon (21 liter) batch size. Aerate the wort very well.

Pitch the yeast when temperature of wort is about 74-76° F (23.5-24.5° C). Ferment at about 74° F (23.5° C) for about one week or when fermentation shows signs of calm and stopping. Rack from your primary to a secondary. 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.

cally feel the contentment, fun and excitement I experienced when I brewed it.

People brew for different reasons. For some it's a daily job and a great responsibility. For others it's about giving back to friends or perhaps about making a type of beer that you can't find otherwise. And then there's always the beer you love to enjoy. I've known avid homebrewers who have "retired" from homebrewing. I suppose it wasn't fun anymore or perhaps other, more important priorities emerged to steal away the sense of enjoyment that homebrewing offered. Many often return to the hobby of homebrewing, just because they've reconfigured their priorities and realized that they really could make time for a batch or two every few months—and that they missed the kinds of things I speak about above.

Yes, there are a few other objective reasons why I brew. Generally speaking I make a wide variety of lagers and ales and many are replications of classic brands or beer experiences. Others are new, fringe and experimental. Generally speaking I love the taste of my beer because it is fresh, stable and I can't find the qualities of my homebrewed beers in commercially available versions. You see, I tend to personalize and "tweak" the classically and deliciously available commercial beers I like with customized combinations of specialty malts and a wide variety of distinctive hops.

There is another objective reason and that is, well, homebrewing is part of my job. Brewing new creations, using and becoming familiar with malt and hop varieties, and experimenting with different techniques is something that enhances my perspective at the Brewers Association and my involvement with the American Homebrewers Association. I just so happen to like my work as well. Though, even if I didn't have this job, I'm absolutely positive that I'd still be tinkering with my brew formulas and techniques—just as I do now. I'm me and I love creating new, good stuff.

Some friends call me fussy. Well, then, fussy I am. I love the opportunity to customize great brews to my own taste. It's a perpetual dance.

I haven't tired of the hobby, perhaps because I keep the process relatively simple. Few gadgets, fewer things to maintain. Hands-on brewing is not a hindrance, but rather a catalyst for enjoyment. That's just me. For others it certainly is justifiably different.

Why we homebrew is an unending volume of reasons. Keeping it fun and enjoyable is a good thing. It has kept me brewing for 38 years, one 5-gallon batch at a time.

Here's a new creation made in part with agave extract syrup, which is highly fermentable. It's robust, high in alcohol, with malt and hop complexity, and easy to make. The dry hops will impart a passion fruit aroma. Best aged for six months or more.

Let's cut the shuck and jive and get on with a recipe.

Charlie Papazian is founder of the American Homebrewers Association.

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New England Regional Homebrew Competition

The New England Regional Homebrew Competition, New England's largest, took place on November 3 at Milly's Tavern in Manchester, N.H. The second annual competition was hosted by New Hampshire homebrew club Brew Free or Die and the Southern Maine Homebrewers. It was sponsored by Portland, Maine's own Gritty McDuff's. Co-organizer Michael Fairbrother filled in a few more details about the competition's organization.

Zymurgy: How are proceeds from the competition entry fees used?

MF: This past year we raised a record amount of \$2,000 for the American Cancer Society, in memory of Don Merkey (BFD, AHA and BJCP judge who passed away back in 2005).

Zymurgy: How was Milly's Tavern as a venue this year?

MF: Milly's Tavern was very generous in

Moose Pond Peach Cider

Best of Show—Mark Healey (Southern Maine Homebrewers)

**Recipe
for 6 U.S. gallons**

3.0 lb	Vinoka Peach Cider Kit
	wildflower honey
	WLP735 French White Yeast

Original Target Gravity: 1.090

Final Target Gravity: 1.008

Primary fermentation: 4 weeks

Secondary fermentation: 8 weeks

Directions

Dissolve Bentonite from the cider kit into about two quarts of hot water, then pour mixture into sanitized fermenter. Add honey and apple concentrate from kit to fermenter with enough warm water to make six gallons (24 L) at about 80° F (27° C). Pitch liquid yeast and ferment at 75 to 80° F (25 to 27° C) for four weeks. When fermentation is complete, rack to secondary, chill to 55° F (13° C), and let settle for 8 weeks. Clarify, stabilize with kit Potassium Metabisulfite and Potassium Sorbate (if desired), force carbonate (if desired) and package. More detailed instructions for making the cider kit can be found on the Vinoka Web site at: www.vinoka.com/instructions/instructions_cider_24.pdf.

donating the space. We had some logistical challenges (cooler space, lighting, etc.) that will cause us to evaluate other alternatives for 2008. We are lucky to have such great supporters! Gritty's has been our competition sponsor for the last two years, and they donated a significant amount of money to help run the event, and a ton of T-shirts, glasses, hats, etc. We had an overwhelming amount of support from the brewing community, which allowed us to cover the costs of the competition, provide medals, prizes, and all the shipping and handling, with the biggest benefit of being able to do some good for the community and for the American Cancer Society.

The logistics to run such a competition are just mind-boggling and we couldn't have done it without the support of both homebrew clubs, and all the sponsors.

Zymurgy: You got about 250 entries this year. Is this typical?

MF: This was by far our largest competition to date. We had entries from 16 states including California, Connecticut, Florida, Massachusetts, Maryland, Maine, Michigan, Minnesota, Missouri, North Carolina, New Hampshire, New Jersey, Rhode Island, Texas, Virginia and Vermont.

Zymurgy: Since it's New England, you must get quite a few cider entries as well. Is that part of the reason you hold the competition in the fall?

MF: Yes, with 16 entries this year, and a cider taking best of show (Mark Healey of the Southern Maine Homebrewers), cider plays a big part in the competition. The

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AHA SPECIAL EVENTS

For Information on 2008 AHA Rallies, please see www.AHArally.org

March 31–April 11

AHA 30th Annual National Homebrew Competition—Entry Deadline Multiple Sites Across the U.S. Contact: Janis Gross, Phone: Phone: 888-822-6273 x 134, E-mail: janis@brewersassociation.org, Web: www.beertown.org/events/nhc

April 12–27

AHA 30th Annual National Homebrew Competition—First Round Judging Cincinnati, OH. Contact: Janis Gross, Phone: 888-822-6273 x 134, E-mail: janis@brewersassociation.org, Web: www.beertown.org/events/nhc

April 30

AHA 30th Annual National Homebrewers Conference—Early Registration Ends Contact: Bradley Latham, Phone: 888-822-6273 x 145, E-mail: bradley@brewersassociation.org, Web: www.AHAconference.org

May 3

AHA Big Brew/National Homebrew Day Contact: Janis Gross, Phone: 888-822-6273 x 134, E-mail: janis@brewersassociation.org, Web: www.beertown.org/events/bigbrew

June 19–21

AHA 30th Annual National Homebrewers Conference Cincinnati, OH. Contact: Bradley Latham, Phone: 888-822-6273 x 145, E-mail: bradley@brewersassociation.org, Web: www.AHAconference.org



KUDOS—BEST OF SHOW

AHA/BJCP Sanctioned Competition Program

October 2007

AHA Club-Only Competition Bock, 28 entries—Scott Endicott, Salt Lake City, UT.
KROC-World Brewers Forum, The Art of Dark Brews, 24 entries—CK BrewCrew, Arvada, CO.
Inaugural DSB Deathmatch, 26 entries—Paul Zahn, Greenwood, SC.
Dixie Cup XXIV, 904 entries—Andrew Elliott/Jeff Hilland, Houston, TX.
ACT Competition, 160 entries—Dan Rayner, Canberra, ACT.
Pacific Brewers Cup, 240 entries—Brett Rahn, Tustin, CA.
Top Twister Pro-Am, 95 entries—Chan & Eileen Lay, Richmond, VIC.

November 2007

Novembeerfest, 133 entries—Dean Priebe, Leavenworth, WA.
Franco Belgian Challenge Cup, 22 entries—Stefan Berggren, Madison, WI.
2007 THIRSTY Classic, 79 entries—Wayne Bowman, Iowa City, IA.
Turkey Shoot 2007, 113 entries—Ben Schwab, Severna Park, MD.
California State Homebrew Competition, 235 entries—John Watson, Sunnyvale, CA.
FOSSILS Porter Competition, 19 entries—Scott Boyer, Borden, IN.
All About Ales 2007, 31 entries—Kevin Tighe, Ajax, ON.
HOPS BOPS, 94 entries—Dave Grosch, Flemington, NJ.
Knickerbocker Battle of the Brews, 186 entries—Fritz Fernow, Brooklyn, NY.

Wizard of SAAZ Homebrew Competition, 30 entries—Timothy Russell, Monessen, PA.

Fall Classic, 219 entries—William L. Schneller, Portland, OR.

Bay Street Bash, 53 entries—Jerald Jameson, Savannah, GA.

Richmond Wort Hog Brew Fest, 25 entries—Brian Richards, Marquette, MI.

2007 BURP Real Ale Competition, 49 entries—Wendell Ose, Reston, VA.

16th Annual Great Brews of America Homebrew Competition, 174 entries—Al Hazan, Stroudsburg, PA.

Land of the Muddy Waters, 206 entries—Douglas Wich, Skokie, IL.

Worthog Brewers Annual National Competition 2007, 21 entries—Andre de Beer, Pretoria, Gauteng.

December 2007

New England Fall Regional Homemade Beer Competition, 134 entries—Mickey Brown, Middlebury, CT.
9th Annual Palmetto State Brewers Open, 333 entries—Robert Leach, Aiken, SC.
Humpy's Big Fish Homebrew Competition, 78 entries—Flash Lubitsch-White, Anchorage, AK.
AHA Club-Only Competition Pilsner, 30 entries—John Huck, Vancouver, WA.
HOTV Holiday Hoopla I, 15 entries—Michael Harper, Portland, OR.
Happy Holiday Homebrew Competition 2007, 345 entries—Norman Jufer, Ontario, CA.
Great Lakes Olde World Syder Competition, 142 entries—Jeff Carlson, Grand Rapids, MI.
The Onion Homebrew Competition, 87 entries—Ron Fitch, Eagan, MN.

overall quality of the ciders we got this year was incredible!

Zymurgy: Where do the majority of your judges come from?

MF: The support from the Northeast judges was very impressive. We had a great mix of BJCP and Professional judges. We had more than 50 people helping judge and steward the event, and since a few categories were so large, we did some pre-judging where judges drove as far as 70 miles (after work) to help us judge into

the wee hours of the night.

Zymurgy: Who ponied up for prizes, and what were some of the better ones?

MF: We had 35 sponsors. Prizes included hops, malt, T-shirts, hats, glasses, gift certificates, bottle openers, bar towels, beer signs—the list goes on and on. The prizes for Best of Show, Brewer of the Year, Mead Maker of the Year, and Cider Maker of the Year were the most prestigious. I would say we had over \$4,000 worth of prizes donated. I actually had winners calling my house

to say how happy they were with the prizes! For a complete list of sponsors please see www.bfd.org/NERHBC/index.php.

Zymurgy: What were some of the more unusual entries you received?

MF: We saw an incredible jump in the number of wood-aged beers this year.

Amahl Turczyn Scheppach is a former craft brewer and associate editor for Zymurgy, and now brews at home in Lafayette, Colo.



AHA/BJCP SANCTIONED COMPETITION PROGRAM CALENDAR



Want to discuss judging, beer styles, competitions and exams? Join the BJCP Members Forum at www.bjcp.org/phpBB2/index.php.

To register a new competition, please go to www.bjcp.org/apps/comp_reg/comp_reg.html. Check the AHA or BJCP Web sites to see the latest calendar of events. Competition organizers: please remember to submit your results promptly using our electronic system. Competitions not filing organizer reports will not be allowed to register in the future.

Interested in becoming a beer judge? See www.beertown.org/homebrewing/scp/judge.html for information.



March 1

19th Annual Reggae and Dredhop Denver, CO. Contact: Bob Kauffman. Phone: 303-913-5722, E-mail: acmehbrew@juno.com Web: www.hopbarley.org

March 1

Boston Homebrew Competition Boston, MA. Contact: Michael LaCharite. Phone: 207-319-4293, E-mail: emaineiacman@yahoo.com Web: www.wort.org

March 1

Best Florida Beer Competition 2008 Dunedin, FL. Contact: Nelson Crowle. Phone: 727-534-6944, E-mail: Nelson@DunedinBrewersGuild.com Web: www.DunedinBrewersGuild.com

March 1

2008 Peach State Brew-Off Atlanta, GA. Contact: Chris Collier. Phone: 770-436-6932, E-mail: ccollier@lanierclothes.com Web: www.coverthops.com

March 7

Kona Brewers Festival Home Brew Competition Kailua-Kona, HI. Contact: Rocket Rod Romanak. Phone: 808-325-7449, E-mail: kbhomebrewcontest@gmail.com Web: www.konabrewcontest.googlepages.com

March 8

10th Annual UKG Drunk Monk Challenge Aurora, IL. Contact: John Kleczewski. Phone: 630-621-3342, E-mail: jkleczewski@mindspring.com Web: www.knaves.org/DMC/index.htm

March 8

IBU Open Des Moines, IA. Contact: Ron Staab. Phone: 515-360-0435, E-mail: ronaldgstaab@yahoo.com Web: www.iowabrewersunion.org

March 8

Tanunda Show—Home Brew Section Tanunda, South Australia, AU. Contact: Kenneth Jermey, Phone: 0885244542, E-mail: kjeremy@internode.on.net, Web: www.tanundashow.org.au

March 8

Bockfest Cincinnati, OH. Contact: Ray Snyder. Phone: 513-759-2573, E-mail: raysnyder@fuse.net, Web: www.bloatarian.org/bockfest.html

March 8

UNYHA 30th Annual/17th Empire State Open Rochester, NY. Contact: Tina Weymann. Phone: 585-482-3346, E-mail: tweymann@hselaw.com Web: www.unyha.com

March 14

McChord Club Brewfest McChord AFB, WA. Contact: William Parker. Phone: 253-982-3281, E-mail: william.parker-2@mcchord.af.mil Web: www.62services.com/other_pages/brewfest.html

March 15

Hudson Valley Homebrewers 18th Annual Homebrew Competition New Paltz, NY. Contact: Al Alexa. Phone: 845-255-8685, E-mail: aalexa@aol.com Web: www.hbd.org/hvhb

March 15

Shamrock Open XIII Raleigh, NC. Contact: Dave Buning. Phone: 919-467-2791, E-mail: ncbuning@juno.com Web: www.hbd.org/carboy

March 15

Great Arizona Homebrew Competition Phoenix, AZ. Contact: Traci Kuhfuss. Phone: 602-499-0151, E-mail: tkuhfuss@cox.net Web: www.brewarizona.org

March 28

Bluebonnet Brewoff Dallas/Ft. Worth, TX. Contact: James Dorman. Phone: 903-450-5554, E-mail: jimdorman@hotmail.com Web: www.bluebonnetbrewoff.com

March 29

AHA Club-Only Competition Perfect Porter Challenge Zionsville, IN. Contact: Ron Smith. Phone: 317-873-6976, E-mail: RonSmith@MarketWiseSolutions.com Web: www.beertown.org/homebrewing/schedule.html

March 29

Chicago Cup Challenge Blue Island, IL. Contact: Michael Peiter. Phone: 219-864-4666, E-mail: paradoc1@earthlink.net Web: www.bossbeer.org

March 29

March in Montreal Boisbriand, QC, Canada. Contact: Martin Stutz. Phone: 450-979-1420, E-mail: mim.2008@yahoo.ca Web: www.homebrewers.ca

April 11

Titletown Open XIV Green Bay, WI. Contact: Michael Conard. Phone: 920-388-2728, E-mail: mconard@itol.com Web: www.rackers.org

April 12

Maltose Falcons Mayfaire Woodland Hills, CA. Contact: Martin Carman. Phone: 818-710-0647, E-mail: brewer@carmanfamily.net, Web: www.maltosefalcons.com

April 12

2008 South Shore Brewoff Mansfield, MA. Contact: Kevin Farrell. Phone: 781-874-1774, E-mail: kevin.farrell@nuance.com Web: www.southshorebrewclub.org

April 19

Golden Growler Wausau, WI. Contact: Travis Skroch. Phone: 715-687-9941, E-mail: tappr@yahoo.com Web: www.bullfalls-homebrewers.org/2008GG.html

April 19

COHO Spring Fling 2008 Bend, OR. Contact: Brett Thomas. Phone: 541-948-4504, E-mail: flopingsoscar101@msn.com Web: www.cohomebrewers.org

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*Cover 2 is the inside front cover. Cover 3 is the inside back cover. Cover 4 is the outside back cover.

A Hoppy Visit with Danish Brewers

It was "Beers Across the Ocean" when the Cascade Brewers Society hosted commercial brewers from Denmark last October at the Ninkasi Brewing Co. in Eugene, Ore. The Danish brewers toured breweries, visited a hop farm and attended the Hood River Hop Fest to taste fresh hop beers before heading to Denver for the Great American Beer Festival.

The Eugene get-together came about because one of the Danish brewers, Christian Andersen of Ølfabrikken, has been brewing his version of my Rye IPA recipe since the brewery opened four years ago. Christian and I have been trying to get together for a beer ever since, and this was the perfect opportunity!

After a hop farm tour, the group headed to Eugene to taste homebrews and talk beer. About 20 members of the Cascade Brewers Society brought beers for tasting. The big hits were Russ Kazmierczak's Smoked Bock, made with home smoked malt, and Robin Chitwood's Oktoberfest, which Christian declared "the best Oktoberfest I've had in the United States!"

The Danish brewers get a lot of their inspiration from homebrewers, and that was apparent from some of the beers they brought. Besides their version of Rye IPA, Ølfabrikken had a fantastic double IPA (you can also find their excellent porter on import shelves), and Mikkeller brought their Beer Geek Breakfast stout (made with flaked oats, molasses and gourmet coffee) as well as their Stateside IPA. It seems that American-style IPAs are taking Denmark by storm these days.

For me, the high point was getting to exchange versions of Rye IPA with Christian. While he kept to the basics of the original recipe, I found his take on the beer

Christian Andersen (left)
and Denny Conn finally meet for a toast.



to be quite different from mine. It seemed to have a different hop profile—perhaps Centennial instead of Columbus—and the body was also quite different, not as "chewy" as mine.

Christian had just returned from Finland, where he did a Rye IPA together with a Finnish microbrewery, and it was voted Beer of the Year in Finland. I had an opportunity to interview Christian for The Last Drop.

Denny Conn: What's the homebrewing scene like in Denmark?

Christian Andersen: A lot of people have started homebrewing the last few years. The other day I even saw beer kits in the supermarket. There is also a big homebrew competition every year where the winners of the national homebrew contests in Scandinavia compete against each other.

DC: Did you start as a homebrewer?

CA: I homebrewed for four years before taking the big leap to start Ølfabrikken.

DC: What was your favorite part of

your trip to the Pacific Northwest?

CA: My visit to Hair of the Dog. Their beers are available in Denmark and it was amazing to learn that everything takes place in this tiny 4-barrel brewery.

DC: What beers did you try here that particularly impressed you?

CA: I had the chance to taste fresh hop beers for the first time, many of which were amazing.

DC: Many homebrewers have visions of opening their own brewery someday. What made you decide to start Ølfabrikken?

CA: It was a desire to always have enough of my own beer around. When you make a really good beer as a homebrewer, you only need to have friends over for a night or two and it is all gone. The beer types that we ended up doing were a lot more interesting than what we thought it was possible to sell.

Denny Conn is a member of the Cascade Brewers Society and the AHA governing committee.

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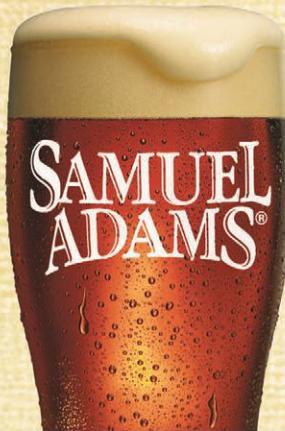
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