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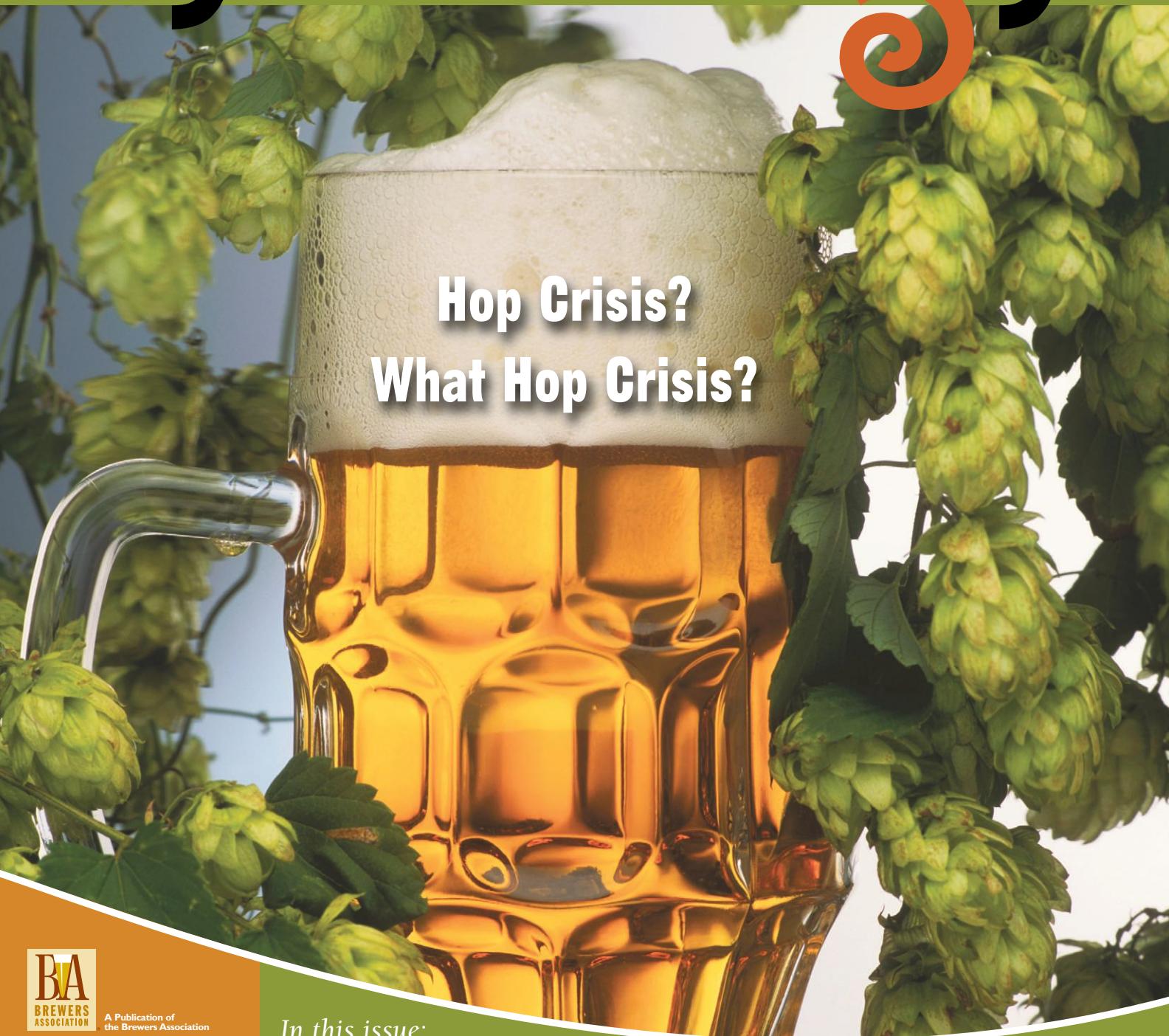
Volume 31 \* No. 5 | September/October 2008

# Zymurgy®

■ The Journal of the American Homebrewers Association ■



## Hop Crisis? What Hop Crisis?



A Publication of  
the Brewers Association

[www.beertown.org](http://www.beertown.org)

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YOU CAN  
BREW**

National  
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Conference

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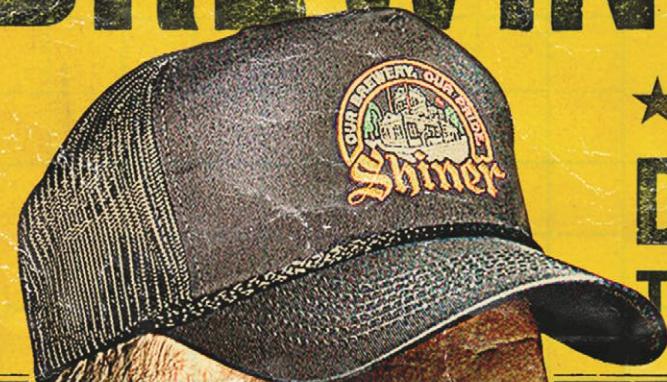
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*Richard Hartmann*

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**FOUR POINTS**  
BY SHERATON



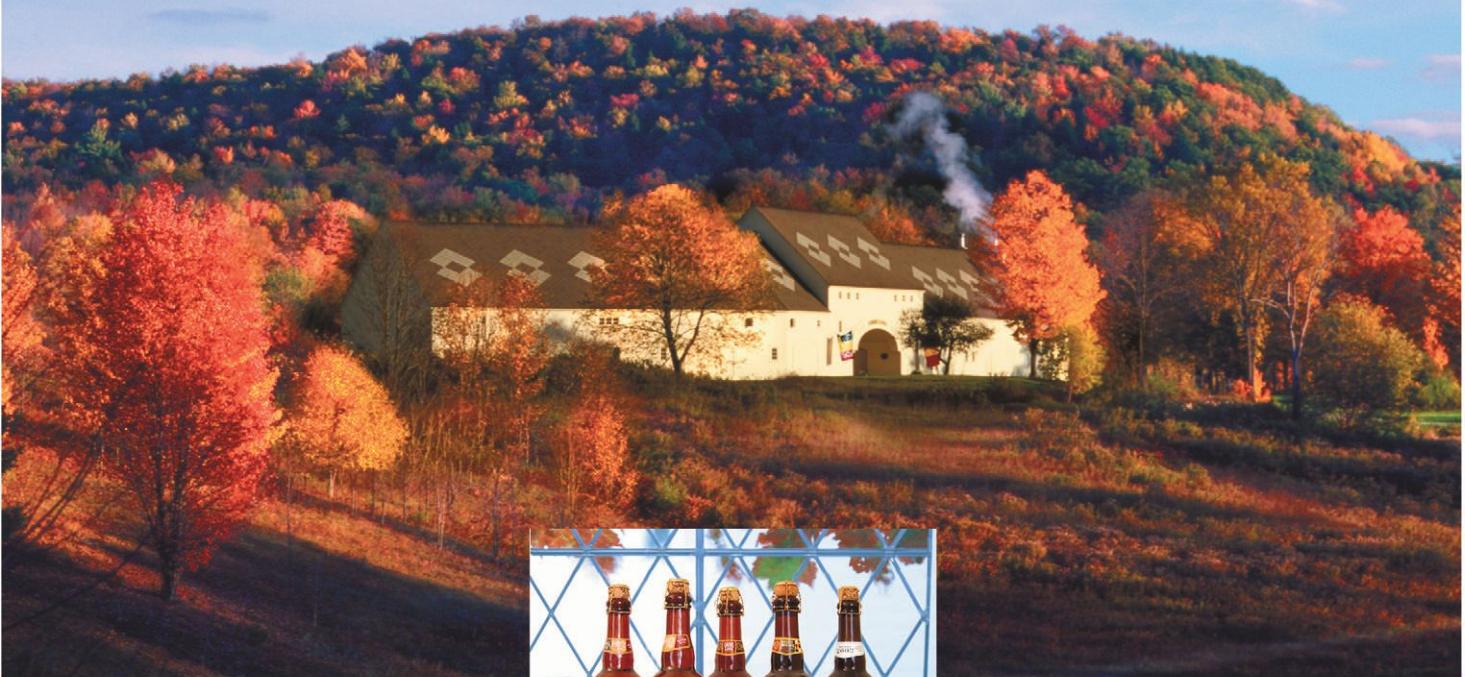
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## Ales for Females

**W**omen and craft beer are in vogue right now. Having witnessed the first female recipient of a World Beer Cup® brewer of the year award (Tonya Cornett of Bend Brewing Co.), the first meeting of the Pink Boots Society at the Craft Brewers Conference in San Diego, and a recent meeting of the Ales4Females women's beer club based out of Left Hand Brewery in Longmont, Colo., I can attest to that.

While the Pink Boots Society is a group of professional women brewers, cellar-women, and lab techs, the recently formed Ales4Females is a group of women who simply like craft beer.

It's the first of its kind known to be based out of a brewery, although there is a thriving women's beer club in Philadelphia (*In Pursuit of Ales*) that formed in 2006. (And if you know of others, please let me know!)

Left Hand tasting room manager Cinzia Wallace, whose husband, Eric, is one of the co-founders of Left Hand, and Sue Smith-Troy, a homebrewer and bartender in the tasting room whose husband, Bryce Troy, also works at the brewery, noticed a distinct lack of women in the tasting room and decided to do something about it. In Left Hand's January 2008 newsletter, the Ales4Females' first meeting was announced for the last Monday of the month. Seventeen women showed up.

Now, several months later, Ales4Females has already outgrown its meeting site, with 39 women showing up for the biggest gathering so far.

Smith-Troy and Wallace wanted the club to be educational as well as social. At the May meeting, AHA member Joanne Knipmeyer gave a brief history of women in brewing. That was followed by a beer

and food pairing of spent grain bread with Left Hand Haystack Wheat and Milk Stout, pana cotta with Imperial Stout, and a discussion of the next month's meeting. Many attending the group are homebrewers, some are just interested in learning more about craft beer, and some are there simply to socialize and drink beer.

"I remember there was one woman at the first meeting," recalled Smith-Troy. "She and her husband had a 'date night' but she really wanted to come to the meeting."

The woman brought her husband to the tasting room one evening, ordered a beer for herself and then suggested beers that her husband might like. He looked at Smith-Troy and asked, "Are you the woman responsible for my wife putting beer and chocolate together?"

Smith-Troy said the food and beer pairings are a staple of the meetings (they even paired beer with sushi at one meeting). "When you're trying to get somebody who doesn't like beer to break out of the mold, it's easier to do with food," she said.

For the June meeting, Smith-Troy and Wallace were planning a tasting of brown ales from different breweries, in preparation for the Great American Beer Festival. Women can pay \$5 per meeting or purchase a one-year membership for \$50, which includes a 10-percent discount on beer and merchandise at Left Hand.

"It just blows my mind," said Smith-Troy of the success of the group so far. "We had no real idea what was going to happen. It's a blast. It's fun to find resources, work with the brewers, and educate ourselves."

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

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## >> GET THERE!

### Telluride Blues and Brews Festival

One of the most scenic music festivals in the country, the Telluride Blues & Brews Festival takes place September 12-14 in Telluride, Colo., a world-famous resort town in the heart of the Rocky Mountains. The festival is a three-day celebration of music and microbrews held in Telluride Town Park, an outdoor music venue with breathtaking mountain peaks for a backdrop.

Along with the musical festival that includes blues, rock, funk, gospel and soul, attendees can sample craft beer from more than 50 microbreweries during Saturday's Grand Tasting. Sierra Nevada is the official beer sponsor of the event. Grand tasting breweries include several Colorado and national breweries such as Deschutes, Anchor, Stone, Sweetwater and New Belgium.

For more information go to <http://tellurideblues.com>.



#### **September 5-6**

Great Canadian Beer Festival Victoria, B.C. Phone: 250-383-2332, E-mail: [gcbfoffice@pacificcoast.net](mailto:gcbfoffice@pacificcoast.net), Web: [www.gcbf.com/](http://www.gcbf.com/)

#### **September 13**

Great Lakes Brew Fest Racine, WI. Phone: 800-272-2463, E-mail: [beerlander@greatlakesbrewfest.org](mailto:beerlander@greatlakesbrewfest.org) Web: [www.greatlakesbrewfest.com/](http://www.greatlakesbrewfest.com/)

#### **September 19**

San Diego Festival of Beer San Diego, CA. Web: [www.sdbefest.org](http://www.sdbefest.org)

#### **September 20**

Great Smokies Craft Brewers Brewgrass Festival Asheville, NC. E-mail: [info@brewgrassfestival.com](mailto:info@brewgrassfestival.com); Web: [www.brewgrassfestival.com/](http://www.brewgrassfestival.com/)

#### **September 20**

WQPT 7th Annual Brew Ha Ha Davenport, IA. Phone: 309-796-2424. Web: [www.wqpt.org/brew/](http://www.wqpt.org/brew/)

#### **September 27**

Autumn Brew Review 2008 Minneapolis, MN. Web: [www.mncraftbrew.org/abr/](http://www.mncraftbrew.org/abr/)

#### **September 27**

Central Florida Beer Festival Orlando, FL. Web: [www.centralfloridabeerfestival.com](http://www.centralfloridabeerfestival.com)

#### **October 4**

11th Annual Kennett Brewfest Kennett Square, PA. Phone: 610-444-8188, E-mail: [mary@historickennettsquare.com](mailto:mary@historickennettsquare.com), Web: [www.kennettbrewfest.com/tickets.html](http://www.kennettbrewfest.com/tickets.html)

#### **October 4**

Fresh Hop Ale Festival Yakima, WA. Phone: 509-966-0930, E-mail: [info@freshhopalefestival.com](mailto:info@freshhopalefestival.com), Web: [www.freshhopalefestival.com/](http://www.freshhopalefestival.com/)



## BREW NEWS: Great American Beer Festival<sup>SM</sup>

It's almost that time again—start gearing up now for the Great American Beer Festival! Last year more than 46,000 people converged on the Colorado Convention Center in Denver, shattering the record for attendees. This year's event takes place October 9-11.

In 2007, beer lovers had 1,884 beers from 408 breweries to sample on the festival floor, with even more expected this year.

Four tasting sessions are available, including a Saturday afternoon Members Only session, open exclusively to members of the American Homebrewers Association and Brewers Association.

New this year, a Guilds Pavilion will pour collaborative beers from 10 state brewers' guilds. There are also two new categories in the GABF competition, including American-Belgo Style Ale, and Leipzig-Style Gose. The awards ceremony takes place Saturday afternoon.

In addition, the third annual GABF Pro-Am competition will take place, pairing amateur and professional brewers for collaborative beers.

Beer and food pairings, speakers' panels, book signings and a silent disco offer fun diversions if your palate needs a break during the festival. Also check out the You Be the Judge booth to sample beers with professional judges. For more information on the GABF, visit [www.GreatAmericanBeerFestival.com](http://www.GreatAmericanBeerFestival.com).



## THE LIST

# 2 New Categories at GABF

The Great American Beer Festival is introducing two new style categories for this year's competition. The awards ceremony takes place October 11 at the Colorado Convention Center in Denver.

### 1. American-Belgo Style Ale:

An exciting new category that serves as a home for numerous previously hard-to-categorize hybrid beers that reflect American brewing on the cutting edge. These beers portray the unique characters imparted by yeasts typically used in fruity and big Belgian-style ales. Notes of banana, berry, apple, sometimes coriander spice-like and/or smoky-phenolic characters should be portrayed with a balance of hops and malt character. If fermented with such yeast, American-style pale ale, hoppy strong ale, India pale ale and other styles of hoppy American ales would be classified into this category.

### 2. Leipzig-Style Gose:

A retro style currently enjoying a small renaissance in Germany. Gose is typically pale gold to pale amber in color, with negligible hop character and malt flavors and aromas. Gose typically contains malted barley and unmalted wheat; some traditional varieties may have contained oats. Lemony or other citrus-like qualities are often present in aroma and on the palate. Some versions may have the spicy character of added coriander in aroma and on the palate at low to medium levels. Salt (table salt) character is also permissible in low amounts. Horsey, leathery, earthy aroma and flavors contributed by Brettanomyces yeasts may be evident but have a very low profile, as this beer is not excessively aged.

**GREAT GADGET** WHAT'S NEW FROM STONEBRIDGE COPPER STUDIO

### Copper Six-Pack Carriers

"Your handcrafted beer should be carried in handcrafted style," proclaims Jeff Runz, a Lancaster, Pa., coppersmith and homebrewer. Runz began crafting copper six-pack carriers for homebrewers to tote their brew to a friend's house or tasting session. The copper carriers also make elegant gifts.

The carriers have low-profile sides and a round handle frame. Unlike a typical cardboard carton that hides your brew behind a billboard of marketing clutter, the style is simplistically elegant. Each carrier is hand-crafted in solid copper to carry six 12-ounce bottles. Each bottle is individually protected with a 1/8-inch rubber insert to eliminate rattling in transit. The carrier has a maker's mark in the tradition of handcrafted metal work, and is protected from tarnishing with a clear, durable acrylic finish.

All carriers are handcrafted in Runz's shop, where he focuses on high quality copper bowls, vases and wine chillers. The six-pack carriers cost \$48 plus shipping and handling and can be ordered through Runz's e-mail address, [StnbrdgCopper@aol.com](mailto:StnbrdgCopper@aol.com).



## YOU'VE GOTTA DRINK THIS

### SAXO



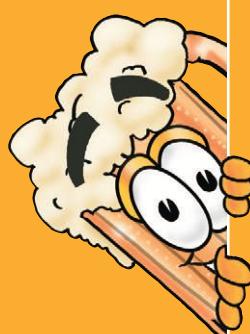
This alluring blonde ale comes from the Brasserie Caracole in the small village of Falmignoul, Belgium. The brewery still uses a wood-fired mash tun and brew kettle along with traditional brewing techniques to create their fabulous offerings. Falmignoul is just south of Dinant, the home of Adolphe Sax, inventor of the saxophone.

The pale gold and extremely effervescent nectar washes over the tongue with subtle waves of malt, hops, fruit and spice. It is in many ways champagne-like. This complex and flavorful brew should not be taken lightly though. At 7.5-percent abv, it packs a considerable punch.

Saxo is available in the U.S. in 330-milliliter (11.2-ounce) capped bottles and 750-milliliter (25.4-ounce) corked bottles. I heartily recommend this artisanal Wallonian blonde ale. Once you try the "champagne of beers," this seductive blonde will call you back again and again.

Reviewed by Joe Rabener, Indiantown, Fla.

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](mailto:jill@brewersassociation.org).





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**Budweiser**

by Ray Daniels



# Brewing Down the House

**E**aster weekend of 2007, I planned to brew beer. And even though I had yeast popped and malt and hops on hand, fate had other ideas. As I was getting organized to brew, a “household plumbing crisis” arose. Suddenly, the stuff plumbers call “black water” was bubbling up in my kids’ bedrooms, and wouldn’t stop. Not pretty.

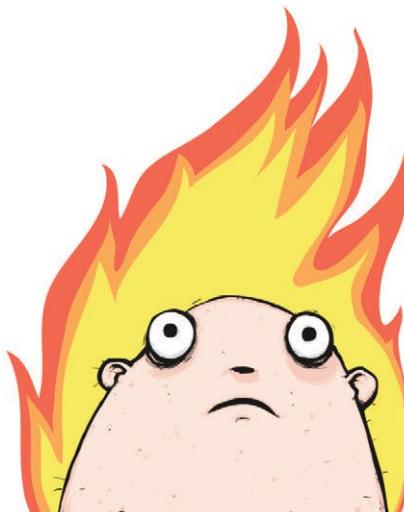
Fast-forward through nearly four months of emergency plumbing and subsequent repairs, plus numerous meetings with my condominium association board. By July my home was back to normal.

Just about the time I was thinking about brewing again, I wound up in a soft cast with strict medical instructions not to put any weight on my left leg. That pretty much killed the rest of 2007 in terms of brewing opportunities.

Thwarted for so long, I once again set out to make beer this April. The session turned out to be quite an adventure—one that nearly brought the house down. Literally!

When you don’t brew for a while, you forget a lot of important things. Like where you stashed your brew pot. I’m not kidding. In the middle of my brewing session, I spent 20 minutes checking the kitchen, basement, garage and even my storage locker two blocks away. Of course it was right where I looked to begin with. I had somehow managed to overlook it at least twice during the search. Perhaps the fact that I didn’t recognize my trusty old boil pot is a sign that I really haven’t been brewing enough. Judge for yourself.

The system I used for the partial mash reflects my “build your own” approach to homebrew equipment, and involves a



small cylindrical water cooler and, yes, a collapsible vegetable steamer. While I wouldn’t recommend this for competitive brewing, it has served me well on a few occasions in the past for a casual batch of beer, so I figured it would do. So I mashed in, found my thermometer, got the temp dialed in and all seemed well.

Until I went to run off. Of course it stuck. And good. Have I mentioned that part of my approach with this system is to use rice hulls from the beginning? So even with rice hulls—heck, with this screwy system, maybe *because* of the rice hulls—I was dead in the wort.

This next part may make you cringe, but with few other options available, I tried to, uh, eliminate the blockage through the introduction of a pressurized gas into the outlet orifice.

In other words, I blew into the runoff spout.

Yes, with my mouth.

No, it didn’t work.

Thank goodness for large wire-mesh strainers. I have a really big one and I’m here to tell you that it will hold three-and-a-half pounds of hot, wet grain.

Fortunately, I’m not as obsessed with hot-side aeration as I once was. But I’ll tell you: as I spooned and dumped that mash into the strainer and watched it drip and splash with a million splats into the boil pot in a frenzy of what was at least luke-warm-side aeration, a little part of me died.

We won’t even talk about what the sparging was like.

But dude, when all that brewing-science ugliness was over, I had wort. “On to the boil,” I decided bravely.

The boil rig is a propane-fired Cajun cooker on the back deck. Initially the aging regulator on my cooker was frozen shut and for a few minutes, I thought I was going to have to boil inside on the stove. Turns out that would have been a pretty good idea.

I did get the cooker going and put the pot on to heat. Meanwhile I was back inside collecting additional wort and cleaning up from the troubled mash.

I would check on the pot occasionally, of course. Despite this I did manage to have a boil-over. At least that didn’t surprise me. But once that happened I relaxed about the boil and focused on the inside cleanup.

Then the next time I turned toward the patio, I could tell there was something wrong. After all, when you use a Cajun cooker, the flames are supposed to stay pretty much in the region of the cooker



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Alehouse  
Concord

Firestone Walker Brewing Co.  
Paso Robles

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Gordon Biersch Brewery  
Restaurant  
Burbank, Palo Alto, Pasadena, San  
Diego, San Francisco, San Jose

Huntington Beach Beer Co.  
Huntington Beach

Iron Springs Pub & Brewery  
Fairfax

O'Brien's Pub  
San Diego

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Restaurant  
Berkeley

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Brewery  
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San Diego

Rogue Ales Public House  
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Santa Barbara Brewing Co.  
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Schooners Grille and Brewery  
Antioch

Stone Brewing Co./Stone  
Brewing World Bistro & Gardens  
Escondido

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Boulder

BJ's Restaraunt & Brewhouse  
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Denver

Breckenridge Brewery & Pub  
Denver

Boulder Beer Co.  
Boulder

Dillon Dam Brewery  
Dillon

Dry Dock Brewing Co.  
Aurora

Glenwood Canyon Brewing Co.  
Glenwood Springs

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Restaurant  
Broomfield

Great Divide Brewing Co.  
Denver

Great Northern  
Denver

Hops Grillhouse and Brewery  
Golden, Littleton, Northglenn

Left Hand Brewing Co.  
Longmont

New Belgium Brewing Co.  
Fort Collins

### DELAWARE

Odell Brewing Co.

Fort Collins

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Colorado Springs (4), Denver (3),  
Fort Collins (2), Grand Junction,  
Greeley, Lakewood, Littleton,  
Longmont, Silverthorne, Superior,  
Thornton, Westminster, Wheatridge

Oskar Blues Grill & Brewery  
Lyons

Pagosa Brewing Co.

Pagosa Springs

Palisade Brewery  
Palisade

Phantom Canyon Brewing Co.  
Colorado Springs

Pumphouse Brewery &  
Restaurant  
Longmont

Redfish New Orleans Brewhouse  
Boulder

Redstone Meadery  
Boulder

Rock Bottom Restaurant &  
Brewery  
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Englewood, Westminster

Rockyard Brewing Co.  
Castle Rock

Rosie's Brewpub  
Leadville

San Luis Valley Brewing Co.  
Alamosa

Ska Brewing  
Durango

Smugglers Brewpub & Grille  
Monrose, Telluride

Walnut Brewery  
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St. Augustine

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Works

Lake Buena Vista

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Brewery

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Rock Bottom Restaurant &

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MASSACHUSETTS

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Boston

Cambridge Brewing Co.

Cambridge

Rock Bottom Restaurant &

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Boston, Braintree

|   |  |   |   |   |
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| Arbor Brewing Co.<br>Ann Arbor  | Rosemary's Restaurant<br>Las Vegas                           | Rock Bottom Restaurant & Brewery<br>Charlotte                           | Rogue Ales Brewery & Headquarters<br>Newport  | Uinta Brewing Co.<br>Salt Lake City   |
| <b>Big Buck Brewery &amp; Steak House</b><br>Auburn Hills, Gaylord  | <b>NEW HAMPSHIRE</b><br>The Portsmouth Brewery<br>Portsmouth | <b>NORTH DAKOTA</b><br>Granite City Food and Brewery<br>Fargo           | Rogue Ales Public House<br>Newport  | <b>VERMONT</b><br>Rock Art Brewery<br>Morrisville   |
| <b>Hereford &amp; Hops Steakhouse &amp; Brewpub</b><br>Escanaba   | <b>NEW JERSEY</b><br>Ale Street News<br>Maywood              | <b>OHIO</b><br>BJ's Restaurant & Brewhouse<br>Columbus                  | Rogue Distillery and Public House<br>Portland   | <b>VIRGINIA</b><br>Gordon Biersch Brewery Restaurant<br>McLean, Virginia Beach  |
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| <b>MINNESOTA</b>  | <b>NEW MEXICO</b><br>Blue Corn Café & Brewery<br>Santa Fe    | The Brew Kettle, Taproom & Smokehouse<br>Strongsville                   | The Brewerie at Union Station<br>Erie   | <b>Rock Bottom Restaurant &amp; Brewery</b><br>Arlington  |
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| <b>MISSOURI</b>   | CH Evans Brewing Co. at the Albany Pump Station<br>Albany    | Weasel Boy Brewing Co.<br>Zanesville                                    | Triumph Brewing Co.<br>New Hope   | 75th Street Brewery<br>Kansas City  |
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and the pot and not go wandering around several feet away. Thus I was puzzled by the large ball of fire that I found on the deck.

Turns out that ball of fire was once a cardboard box that I had thrown on the deck in hopes that I'd remember to take it to the trash during an idle moment.

Have I mentioned that it was a windy day? Well, those cardboard boxes (I did mention that there were two, right?) blew up against the cooker and caught fire. Then they blew around some more. On the deck.

Fortunately, my decks are steel and not the wood found on nearly every other building in Chicago, so the story has a

happy ending. I fumbled around a bit, but eventually got things doused with little real loss to deck or equipment. And I no longer had to worry about taking those boxes out to the trash! Best of all, none of the neighbors called the fire department.

Other trials plagued that batch including lost siphons, recycled bottle caps and odd measures of corn sugar, but in the end it seems to have turned out pretty well. (Those who stopped by the Chicago-area clubs booth at the Homebrewers Conference in Cincinnati even got a chance to taste this beer.)

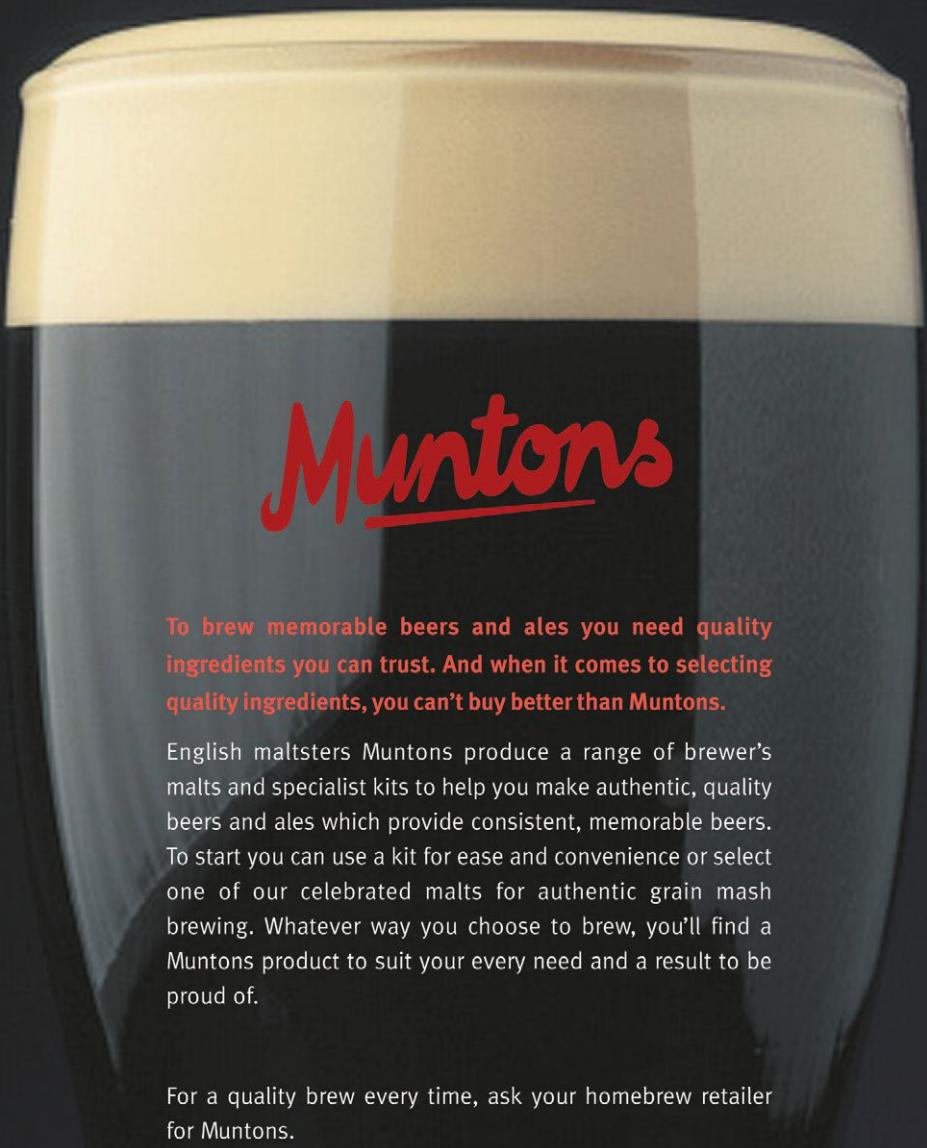
But here's the strange thing. At the very moment I saw the flames on my deck, I have to admit that I did an instant leap to

the future, to sometime when I'd again have a beer in my hand—and possibly a roof over my head—and be telling the story of what happened that day to fellow homebrewers. And even though I didn't yet have enough details to know exactly how the story was going to end, I could hear myself conclude by saying, "So that's why my condo board banned homebrewing in my building."

Fortunately, that hasn't come to pass and hopefully it won't. I'd hate to have to move.

**Ray Daniels** is the author of *Designing Great Beers* and director of Brewers Publications for the Brewers Association.

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by Our Readers

# It's a Personal Choice

Dear *Zymurgy*,

I am writing in response to the May/June 2008 Dear *Zymurgy* letter from Dick Dunn ("It's Time for Balance."). Dick obviously likes homebrews/specialty beers, so I assume he's happy we all have more choices than the standard Bud and Miller. So why does he want to limit our choices to just what he considers balanced?

I love hoppy beers. To me, they do invite a second beer.

I would never be so presumptuous to tell others what to drink. I have friends who love the Budweiser type beers, and I'm not compelled to "lament" their tastes.



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On a positive note, I love your magazine. Keep up the good work.

Bob Wood

### Correction: Goes to Eleven Pilsner

Dear *Zymurgy*,

Thank you for publishing my Pilsner recipe in *Zymurgy* (Winners Circle, July/August 2008). It is exciting to be featured in your magazine. Unfortunately, the recipe in *Zymurgy* is in error. It says I used 22 lbs of Munich malt. It should state that I used 22 lbs of German Pilsner malt. The correct recipe can be found in its entirety in the brewblog section of my club's Web site, [www.rockhoppersbrew-club.com](http://www.rockhoppersbrew-club.com). There are several versions of the "Goes to Eleven" Pilsner. The one that won BOS at the Dredhop is the one I brewed on January 5, 2008.

Thanks,  
Michael Bade  
Rockhoppers Brew Club  
Littleton, Colo.

### Correction: Residual Alkalinity

In John Palmer's Residual Alkalinity article in the July/August *Zymurgy*, a column heading in Table 6 is incorrect. "Total Alkalinity as  $\text{CaCO}_3$ " in Table 6 should actually be "Bicarbonate (ppm)" with the exception of Munich (it has already been converted to total alkalinity as  $\text{CaCO}_3$ ). There is also a typo in the Munich value for magnesium; it should be 18 instead of 181.

### Correction: Rahr & Sons Brewing Co.

The Best Beers in America feature in the July/August *Zymurgy* incorrectly listed Rahr & Sons Brewing Co. as being in Houston, Texas, rather than Fort Worth, Texas.

*Zymurgy* regrets the errors.

### Oyster Stout

Dear *Zymurgy*,

This is in response to the Brewing by Design column in July/August 2008 issue by Ray Daniels, "Pink Boots and Oyster Stout."

Frankly, I'm surprised there was so much speculation in this article when it came to Oyster Stout. It seems no one had ever tried a stout brewed with oysters. Have any of you heard of Yards microbrewing in Philly? They had been producing their Love Stout with oysters for several years (only recently stopping the addition of oysters to the brew, but continuing to produce their wonderful Love Stout). After only having tried it once at a taste-test, I immediately went out and purchased a case of the stuff! It was unlike any other stout I had ever tried, though the new recipe brewed without oysters also stands on its own as a pretty good one. The oyster flavor was not strong at all and balanced very well with the brew.

I had several friends (sans shellfish allergies) try it without telling them it was brewed with oyster and they also said it was a fine stout and that it had "something" going on that they couldn't quite put their finger on. When I told them what that "something" was, they basically reacted with that initial "ewww" type of response, but then agreed that the oyster wasn't really prominent, but rather only added to the rounding-out of the flavor. None of us could detect the oysters in the aroma.

It is also my understanding that, once a year, Yards would have an Oyster Brew day, where anyone touring the brewery that day would be treated to a sampling of cooked oysters that were used in the

brewing process and, since these were not really all that great after having been used in brewing, some fresh steamers paired with the Love Stout. I heard about this from a friend in the area who said they had gone to the event.

For a follow-up, you might wish to contact Yards and get their take on brewing stout with oysters! As an added note, their Revolutionary Ales, a collection of brews designed after those brewed by our country's founding fathers, or those drunk by them, including their Tavern Porter and Spruce Ale (yummy!), are simply wonderful and some of my favorite microbrews of all time.



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Terrific article! Keep 'em coming!  
George Val. Hart

*Ray Daniels replies: I'm sorry to say that I didn't know about the Yards oyster stout even though I've been friendly with the Yards guys for more than 10 years and have visited the brewery in the past. I'd guess there are probably other commercial examples out there that I have missed, so my apologies to all of them!*

*Zymurgy editor Jill Redding responds: The subject of Daniels' column, Grant Johnston,*

*was kind enough to share his Oyster Stout recipe. We didn't receive it in time to include it in the July/August issue, but this Dear Zymurgy letter provides the perfect opportunity to include it here.*

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

## Hog Island Oyster Stout

Recipe by Grant Johnston

### Ingredients

for 5 U.S. gallons (19 liters)

|                |  |
|----------------|--|
| <b>10.0 lb</b> | (4.5 kg) North American Pale Malt  |
| <b>2.0 lb</b>  | (0.9 kg) Briess Roasted Barley   |
| <b>2.0 lb</b>  | (0.9 kg) Wheat Malt  |
| <b>2.0 oz</b>  | (56 g) Briess Black Patent Malt  |
| <b>1.0 oz</b>  | (28 g) Chinook hop pellets – 9.3 AA (bitter)                                 |
| <b>120</b>     | White Labs WLP002 Ale yeast  |
|                | whole fresh oysters in shell, medium size (3.5 lb after shucking) (brew day) |
| <b>60</b>      | whole fresh oysters, small size (1.25 lb after shucking) (bottling day)      |
| <b>3.75 oz</b> | dextrose – priming sugar (bottles)   |
|                | Large nylon mesh bag   |

**Original Gravity:** 1.056

**Final Specific Gravity:** 1.014

**ABV:** 5.6%

### Directions

Mill all malts. Heat 14 qt. (13 liters) water to 182° F (83° C). Mash in to 156° F (68° C) and let stand. Heat sparge water to 170° F (76° C). Meanwhile, shuck brew-day oysters, place in colander and let drain. Sparge mash and collect 6.5 gallons of wort at specific gravity 1.048. Bring to full boil and add bittering hop. Boil 60 minutes. Add Irish moss and boil 10 minutes longer to O.G. 1.056. End the boil, place mesh bag in and around the top of

the kettle. Gently and briefly rinse the oysters. Add oysters to the bag, cover and let steep 30 minutes. The wort temperature should fall to about 190°F (87° C). Remove oysters—bag and all—and discard.

Crash cool wort to 68-72°F (20-22° C). Pitch yeast into primary, rack over 5.5 gallons wort and oxygenate very well. Let ferment at 68-72°F (20-22° C) for one week. Rack to secondary and let stand 1 week longer to clear.

### Bottling Process

Clean and sanitize 54 12-ounce bottles. Invert bottles in cases lined with clean paper towels. Immerse caps in sanitizer. Shuck oysters, place in colander and let drain. Add 8 cups water to large saucepan and bring to boil. Gently and briefly rinse oysters. Add oysters to boiling water, cover (!) and boil 30 minutes. Strain and reserve all liquor (about 6 cups) into another pan. Add priming sugar and boil again (covered!) for 30 minutes. Add this oyster liquor/priming solution to the finished beer and bottle. Let stand at 68-72° F (20-22° C) to carbonate for 2-3 weeks and then keep at cellar temperature. I used Hog Island "Sweetwater" oysters from Marshall, Calif. They are superb, full-flavored and very clean. Choose an oyster variety that has these characteristics. The oyster aroma and flavor in this beer should be pleasing for about three weeks after it has been carbonated. My experience has been that it will subside after that but it should still be noticeable. I suggest that you bottle rather than keg so the character can be observed as you drink it over time. It will change and it's interesting to observe the changes.



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Fortunately, his beer speaks for itself.

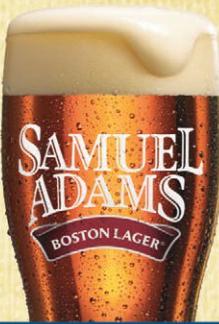
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WEIGHT

by Professor Surfeit



# Prehistoric African Ale

Dear Professor,

When I lived in Ghana, I occasionally enjoyed a millet/sorghum "beer" called Pito. I would describe it as cloudy, young (typically consumed less than 24 hours after the yeast is added), low alcohol (maybe 3 percent), very light body, slightly sour/tangy (closest to the flavor profile of a wit yeast) and still/non-carbonated. It is served in a calabash (half of a dried gourd) at ambient temperature out of a large pot.

I have included a recipe for this beer (see page 18). It should be easy enough to understand, but you will have to excuse the Ghanian English.

I have a few questions for you: How does this work? The malt is boiled and not mashed at typical conversion temperatures. What do you think the okra stem adds to the beverage? How do you think this could most closely be replicated? A friend of mine has some Pito yeast, but it was given to him several years ago. As I mentioned, I would think a wit yeast would come closest, but maybe you have a better idea.

Thanks,  
Brian Kozeliski

Dear Brian,

Wow. This is similar to sorghum beer I enjoyed while in Zimbabwe and South Africa many years ago. But this Ghana version is unique. You know they say that the earliest historical record of beer brewing comes from Mesopotamia (present day Iraq) in the form of clay recipe tablets. But I truly believe that there is a lot of unrecorded "history" in the form of African beers that predate anything ever brewed in Mesopotamia.

The process described in the document includes a malting process (guinea corn, sorghum



and/or corn), mashing, boiling, resting, boiling and fermentation. Quite unique. You are right in that there is no mashing process, but I imagine that as the liquid is brought to boiling temperature there is a partial degree of enzyme activity and mash conversion, enough to produce some sugars. Many of these indigenous African brews are a soup of both sugars and lots of starches, all of which get fermented by the yeast. Remember yeast ferment bread flour in order for it to rise.

*The addition of smashed okra stem in the early stage is interesting. I wonder if the viscous slimy stuff of okra is long chains of protein? If so, it would contribute toward clarification, serving as a fining in a manner similar to Irish moss, gelatin and isinglass, all long-chain proteins introduced into the wort.*

*From my experience the "yeast" is actually a combination of yeast and bacteria; lactobacillus to be specific. They are introduced in quantity and the beer drinker enjoys the various aspects of first- through fifth- or sixth-day fermentation—sweeter in the early stages, later developing acidity and some alcohol and later quite sour with an alcohol kick. I brewed some of these beers from kits I bought in South*

Africa. One was a "dump and stir" kit, and the other involved a sophisticated mash procedure. The simple dimple turned out very true to what I had in the village.

I would think that a bread or clean ale yeast would work well in a combination with a lactobacillus culture. Try wit yeast if you like. It can't hurt. Much of the character is coming from the fermentation of the starches and the byproducts of lacto fermentation. But like anything of this nature, it will take many test batches to zero in on the character you are trying to achieve. Sorghum malt is available through various malt companies based in the U.S. Inquire of your homebrew supply shop. Of course it won't be the same as African sorghum or millet, but it will be in the same ballpark and a jumping off point for you.

I've seen many versions of African sorghum and corn beers. They are intriguingly different from region to region. Fresh sorghum beer is not unlike Japanese amasaki, a sort of byproduct of sake making that is sweet, pleasant, healthy and can be slightly alcoholic.

I am still,  
The Professor, Hb.D.

## Putting the Flavor Back into Mild

Dear Professor,

I'm an AHA member and have your Complete Joy of Homebrewing and Microbrewed Adventures books. Like many others, I started brewing by reading The Complete Joy of Homebrewing back in 1996. Many thanks to you for founding the homebrewing movement in America in the 1970s.

I just read your recent World of Worts article in the May/June issue of *Zymurgy* (about your trip to Bali). I agree with your statement that England (and Germany)

## Pito

(recipe from Kusasi brewers in Bawku, Ghana)

### Ingredients

Use one of the following grains:  
Guinea corn (for sweet, red pito)  
Sorghum (for sweet, red pito)  
Corn (for sweet white pito)

### Directions

Soak guinea corn, sorghum or corn for 12 hours and sieve. Spread on the ground and cover with leaves (tight—allow no air to enter for three days). Water in the a.m. and p.m. It should begin to germinate after three days.

Uncover and squeeze the germinating grain. If it is guinea corn or sorghum, it will change color from green to red. Knead it and then leave it to dry.

Coarsely grind the malt. Soak the malt in a water pot 30-45 minutes. Pound two okra sticks until they become like a sponge. Place sticks inside pot and mix with the malt for one hour.

Heat a pot with water and bring to a boil. Clear okra sticks from malt and add the malt to the boiling pot. Stir while boiling. Add water if it starts getting thick. You will know when it is ready. Transfer to a different pot until the following day. Taste to see if it is sour. Clear the water from the top and leave the chaff on the bottom.

Boil the water that was skimmed from the top and the chaff from the bottom separately. Be sure not to burn it. Boil both for between 1.5 to 2 hours. Sieve the chaff pot. Do not allow large particles to pass. Rinse through the chaff and add to the liquid pot. Let sit overnight.

Soak local yeast—one handful per water pot (roughly 20 gallons)—for 20-30 minutes. Add to the pot and allow to sit overnight. You should have pito in the morning. Be sure to collect the yeast from the bottom of the pot for the next batch.

have achieved “great robust flavor in their mildly alcoholic brews,” and wanted to ask your thoughts on how those brewers do it. I have sampled many cask-conditioned ales in England and have been trying to figure out the secrets to getting so much flavor into such a low alcohol beer. Do you think there are any particular methods or tricks to the process? Or is it just a matter of practice makes perfect and striking the right balance of malt, hops, and alcohol?

Cheers,  
Benjy Edwards

Dear Benjy,

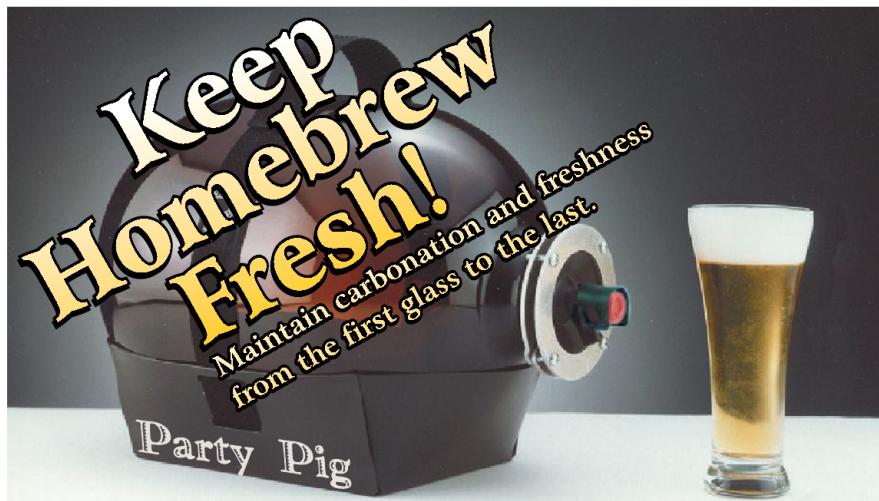
Try using a small amount of caramelized sugars such as the (Brazilian dried cane juice) rapadura, English (Lyles) golden syrup or other interesting tasting sugars. A bit of light crystal malt makes for good mouthfeel and malt character even for the lighter colored beers. For the darker ones use 10-15 percent mild malt or brown malt. I often use 4 ounces of Belgian special B malt for a toffee/currant-like flavor. Lately I've been using 1-2 pounds of English brown malt for a progressive journey in adding even more subtle roast and caramel character to my light bodied ales and lagers. Aromatic malts help too.

Don't use high alpha acid hops if you can avoid them. Goldings, Fuggles, Challenger, Northdown, Liberty, Vanguard and Mt. Hood are some that I'd suggest. So are Cascades if you like them, but everyone seems to use these and I like to journey outside the box.

Try different English ale yeasts, some of them have interesting “sulfur” related aromas and flavors that can be related to the characters you and I enjoy in British-brewed English Ales. Neutral yeast like American Ale or Pilsener yeasts are not interesting enough for mild ales and lighter alcohol beers, unless your aim is to brew a clean beer that lacks complexity. A Bavarian malty enhancing yeast would do well too.

Hope that helps,  
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 Amahl Turczyn Scheppach

# Secrets for Brewing Imperial Beers

The increasing popularity of "imperial" beers seems to have followed naturally from an increased emphasis on creativity in both the craft and homebrewing sectors. While Imperial Stout dates back as far as the 17th century when it was brewed for export to the Russian Imperial Court, brewers today often use the term "imperial" to refer to other extra-strong styles. Barleywines and doppelbocks are of course strong versions of pale ale and bock, respectively, and Scotch ale can be considered an extra-strong Scottish. But imperial beers, also sometimes called "double" beers, now refer to just about any standard-strength style that gets brewed to an increased (though not always double) strength. Imperial Pilsners, browns, reds, ambers, porters, IPAs and even white ales have cropped up in the craft beer market, and "imperialized" homebrew styles are even more prevalent.

It would seem that imagination and extra ingredients are all it takes to make an imperial beer, but there are a few things

you'll want to take into consideration before diving into that next high-octane recipe. High-gravity brewing can present unexpected challenges. And ultimately, you still want to end up with a balanced, drinkable beer, so the following considerations may help you achieve that.

**1. Malt.** Adding extra malt to make a big beer is easy enough, but keep in mind that your wort will behave differently in the kettle if you are used to doing normal strength beers. Boiling double-strength wort can lead to a greater degree of caramelization in the kettle. If you are

## Russian Imperial Stout

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

|                   |   |
|-------------------|---|
| <b>3 cans</b>     | Coopers Light Malt Extract<br>(13.2 lb, 6.0 kg)   |
| <b>1.0 lb</b>     | (0.45 kg) Special B Malt<br>(120° L)  |
| <b>1.0 lb</b>     | (0.45 kg) Roasted Barley<br>(450° L)  |
| <b>0.5 lb</b>     | (0.23 kg) Chocolate Malt<br>(350° L)  |
| <b>0.5 lb</b>     | (0.23 kg) Crystal Malt<br>(120° L)  |
| <b>2.0 oz</b>     | (57 g) Northern Brewer hops,<br>9% alpha acid (60 min)  |
| <b>1.5 oz</b>     | (43 g) Northern Brewer hops,<br>9% alpha acid (30 min)  |
| <b>1.0 oz</b>     | (28 g) Mt. Hood hops, 6.5%<br>alpha acid (15 min)   |
| <b>1.0 oz</b>     | (28 g) Mt. Hood hops, 6.5%<br>alpha acid (3 min)  |
| <b>2.0 oz</b>     | (57 g) Mt. Hood hops, 6.5%<br>alpha acid (dry)  |
| <b>4 packages</b> | Wyeast 1056 American Ale<br>Yeast or White Labs WLP01<br>California Ale Yeast<br>Coopers Brewery<br>Carbonation Drops for<br>bottling |

**Original Specific Gravity:** 1.091

**Final Specific Gravity:** 1.022

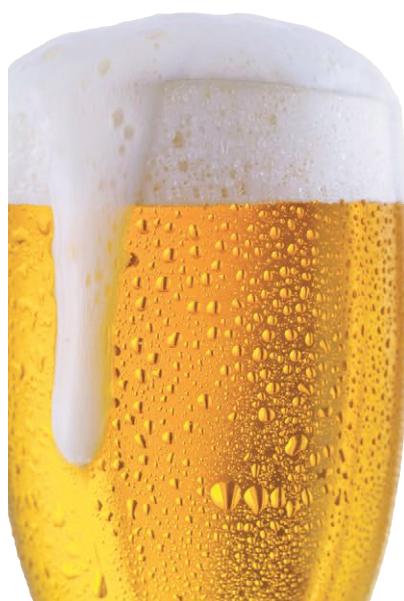
**IBUs:** 80

**ABV:** 9.3%



### Directions

Steep grains in 2.5 gallons (9.5 L) of 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 the first hops and boil. After 30 minutes, add the second hops and continue to boil. After another 15 minutes add the third hop addition. Add the last hop addition with 3 minutes remaining in the 60-minute boil. Chill the wort if possible, or pour into fermenter with enough cold water to make 5.5 gallons (21 L). Aerate well and pitch yeast (use four packages of liquid yeast or a yeast starter) when temperature drops to 70° F (21° C). Ferment at 70° F (21° C) for two weeks or until fermentation is complete. Prime with Coopers Brewery carbonation drops at bottling. Allow to carbonate at 70° F (21° C) for 1-2 months, then store at 40° F (4° C). This beer can improve with age for several years.



doing all-grain batches, one limiting factor may be your mash tun—make sure you have the space for all that extra grain, or consider borrowing another tun from a fellow brewer and double mashing. It's not a bad idea for doubled all-grain recipes to instead use a main mash with extract added—the extra cost for a little extract can save you some big headaches.

**2. Sugar.** Also remember that adding extra malt affects the viscosity of the finished beer. Even with good attenuation, the higher gravity is going to leave you with a lot more malt sweetness and mouthfeel. This is fine for a doppelbock, as it is part of that beer's profile, but what about an imperial nut brown? Part of brown ale's appeal is its smooth, light, session ale drinkability. One solution is to substitute other fermentables that won't leave you with as heavy a beer as an all-malt grain bill might. Tommyknocker craft brewery makes an excellent Imperial Nut Brown with maple syrup. This effectively boosts the gravity of the beer, but produces enough alcohol (without the malt dextrins) to give the beer a decep-

tively light finish. It's a fine balance, but using brewing sugars can be a convenient, cost-effective shortcut to making imperial ales.

**3. Hops.** Bitterness levels can be tricky to calculate for higher gravity beers, because as the strength of the wort increases, hops have a harder time getting into the beer. Use a formula (or good brewing software) to make your calculations. That said, with many highly hopped imperial strength beers, late and dry hops tend to "age out" and mellow over the time it takes to settle the malt/alcohol character. With imperial IPAs, for example, one is often tempted to drink them young, so as to appreciate the fresh hop nuances of late and dry hopping. It's all part of the balancing act that comes with brewing strong ales, but it's also a lot of fun sampling them over time to see how they change.

**4. Yeast.** Many ale and lager yeast strains normally used for regular-strength beers, say, up to about 16° Plato (1.065), will ferment higher gravity beers without difficulty, provided you take the following

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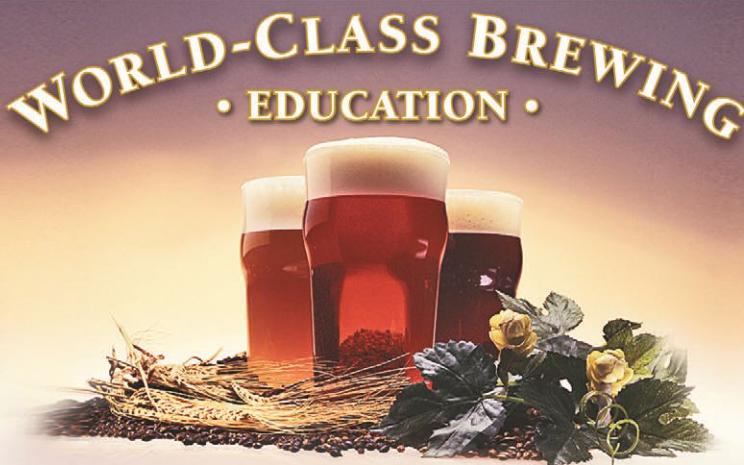
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precautions. It has to be fresh—don't try fermenting a high-gravity ale with a yeast starter that's been sitting in your fridge for several weeks. You will need more yeast than normal, so doubling or even tripling your normal starter size isn't overkill for high-gravity beers. Or, if you've had a clean, successful, well-attenuated normal-strength beer and are confident about your sanitation procedures, use the slurry from that beer for your imperial. Yeast nutrient is not absolutely necessary, but may be a consideration, just for insurance. Oxygen is necessary, in most cases—for big beers, oxygenate or aerate much longer than you normally would. Finally, there are specialized high-gravity yeast strains, in both the lager and ale varieties, that can take the extra alcohol you'll be throwing at them.

**5. Temperature.** If you've got a good quantity of healthy, happy yeast, it's going to take off like a shot, and with many strains, that means you can get a sizable jump in temperature after high krausen. Don't let your fermentation get too hot too fast. Pitch on the cool side for the yeast's range, and watch things closely. High tem-



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peratures can lead to increased ester/phenolic/higher alcohol production, harsh or "hot" flavors, and possibly an increased risk of hangovers. They can also lead to quite a mess if your Imperial Cherry Wheat decides to blow off and you aren't ready. Of course, too cold a fermentation can contribute to a stuck fermentation or underattenuation, but for most yeast strains, it's better to start cool and end warm, than the opposite.

**6. Volume.** Keeping your yeast happy in the hostile environment of a high gravity wort is very important to the success of your imperial beer. As mentioned previously, having a very large pitching rate can help, but another trick is adding wort gradually rather than pitching into the full wort volume. As with a hefeweizen's bottling krausen or speise, you can easily remove full-strength wort straight from the boiling kettle using self-sealing canning jars. Once the lids seal, you can store the wort in a cool place, and add it to your fermenters gradually during fermentation. Beginning fermentation with a third of the total wort volume and increasing it by a quart or two every other day, for example, can allow fermentation to remain strong and healthy with high gravity worts, giving your yeast a much better chance to attenuate fully. Check pure culture yeast lab Web sites for exact quantities and addition schedules.

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



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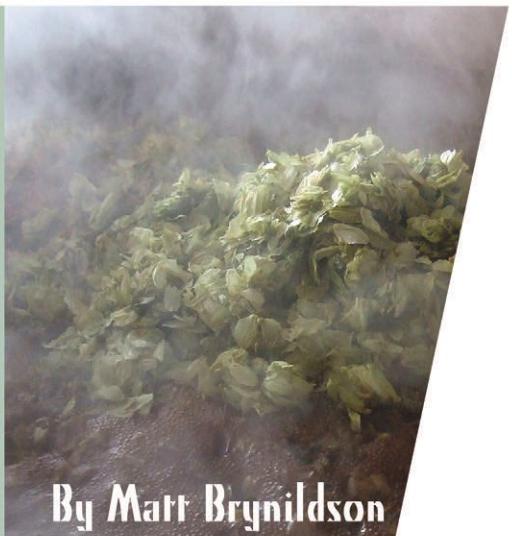
# Hop Crisis?



# What Hop Crisis?



A Craft Brewer's Thoughts on Surviving the Raw Materials Crunch



By Matt Brynildson

**In case you've been vacationing off-planet and haven't heard about or experienced it, there is a very tight supply of hops worldwide. In the case of some varieties, there is no supply at all. Prices are astronomically high.**

**A**s much as I have tried to turn in my good karma credits, utilize connections with suppliers, and trade my current hop stash for desired varieties, our brewery is still being affected. I have had more than a few restless nights and have scrambled to shore up our supplies for future brewing. To complicate things, Firestone Walker Brewing Co. chose 2008 to launch our new Union Jack IPA. Anticipation for this release was high and we knew we would have the opportunity to make a lot of this very hoppy beer. We spent a year testing and tinkering with the recipe. We wanted blossoming, citrusy, juicy fruit hop aroma and a powerfully assertive yet clean hop flavor at 70 IBUs. The brewing team had settled on a monstrous hop bill of 4 pounds per barrel (15g/L) compared to our 1 pound per barrel (3.8g/L) flagship Double Barrel Ale. The intricate blend of hops included nearly every esoteric variety grown on the planet.

Needless to say, our timing couldn't have been worse. We don't have the hops to complete all of the orders in hand. We will have to be satisfied that demand will outweigh supply for the time being. On the positive side, this situation has sparked some very creative thinking. With a little ingenuity, we have figured out how to make more of this brew than our hop supply originally appeared to allow...and it tastes even better, while still meeting our flavor profile parameters.

The current hop crisis can in fact be a great learning opportunity. A true test of any good brewer is the ability to adapt and make highly drinkable and consistent beer in good times and bad. We are forced to look critically at our processes and materials. In the case of hop shortages, we must evaluate new hop varieties and hopping methods.

This is also a great time to be a homebrewer, given the ability to make any style and alter recipes at will. In these times, homebrewers can simply focus on non-hoppy styles. However, if hoppy beer is what you planned on brewing this year, there is still hope. Before you give up on hops and start brewing gruit, let's review a few things brewers can do to conserve, stretch and maximize hops throughout the process.

### **Selection and Storage**

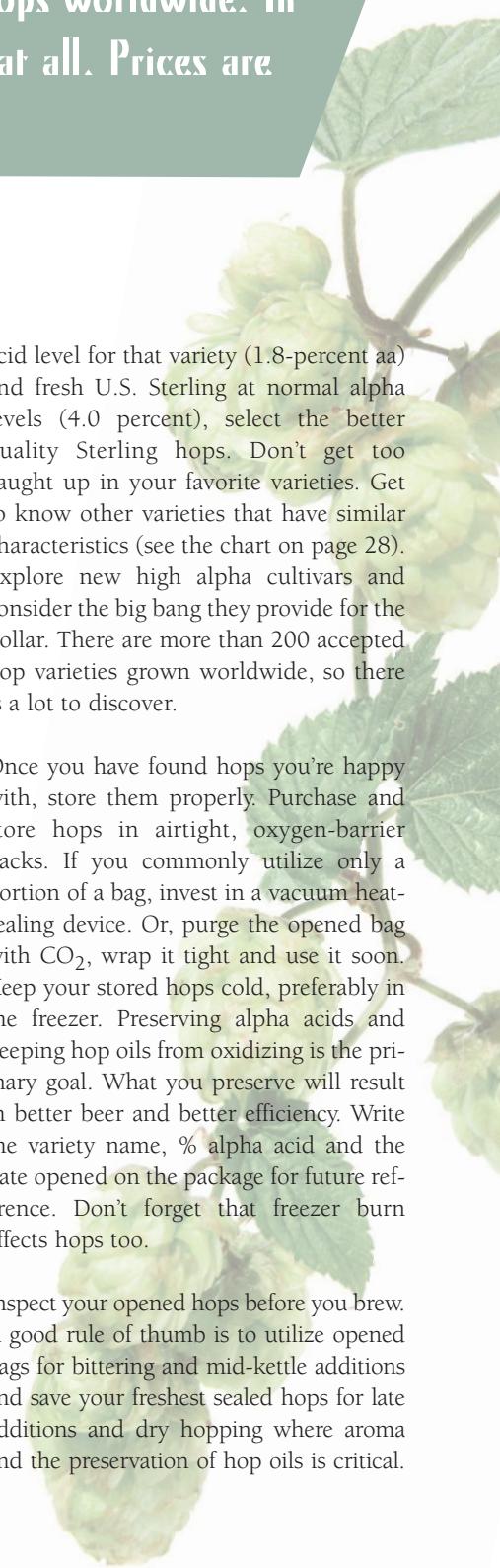
We don't always have the opportunity to physically inspect our hops before purchase (mail order for instance), but when given the chance, we should. Visual inspection is very intuitive. Avoid excess browning, case hardening or other discoloring. Being able to rub and smell hops is the best way to assess quality. If it doesn't smell good to you as a raw hop, it will not be magically transformed in the kettle.

For example, if given the choice between old Czech Saaz at an extremely low alpha

acid level for that variety (1.8-percent aa) and fresh U.S. Sterling at normal alpha levels (4.0 percent), select the better quality Sterling hops. Don't get too caught up in your favorite varieties. Get to know other varieties that have similar characteristics (see the chart on page 28). Explore new high alpha cultivars and consider the big bang they provide for the dollar. There are more than 200 accepted hop varieties grown worldwide, so there is a lot to discover.

Once you have found hops you're happy with, store them properly. Purchase and store hops in airtight, oxygen-barrier packs. If you commonly utilize only a portion of a bag, invest in a vacuum heat-sealing device. Or, purge the opened bag with CO<sub>2</sub>, wrap it tight and use it soon. Keep your stored hops cold, preferably in the freezer. Preserving alpha acids and keeping hop oils from oxidizing is the primary goal. What you preserve will result in better beer and better efficiency. Write the variety name, % alpha acid and the date opened on the package for future reference. Don't forget that freezer burn affects hops too.

Inspect your opened hops before you brew. A good rule of thumb is to utilize opened bags for bittering and mid-kettle additions and save your freshest sealed hops for late additions and dry hopping where aroma and the preservation of hop oils is critical.



Again, your nose can tell you a lot about which hops will work best for late additions independent of variety and alpha acid content. This certainly has been true for Union Jack IPA. Prior to dry hopping our initial batch, we realized that we were not going to be able to get new-crop-year Columbus (CTZ) hops, a component of the dry hop blend. We had received some vacuum bags of a previous crop year, but the vacuum seal had been broken. After inspection, we found these hops to have an inferior aroma—slightly cheesy, catty and diesel-like. We substituted a blend of Simcoe, Amarillo and Cascade. This seemed to be a big deviation at the time, but the resulting beer was wonderful. The new plan has stuck ever since.

### **More is Not Always Better**

As the popularity of American Pale Ale, IPA and Double IPAs has increased, brewers have tended to use what historically would be considered an extremely heavy-handed—bordering on wastefully extravagant—amount of hops. Brewers produce these beers by pushing the envelope, packing in as much hop character as possible utilizing late hopping and dry hopping techniques.

These methods are very effective, but are not efficient in extracting everything the hop has to offer. With the price of hops so high, some very clever hopping methods have surfaced (in most cases resurfaced)

to better utilize the whole hop. Coupled with this, many brewers are simply realizing that more does not necessarily mean better. “More” often results in poor efficiency and muddled flavors. This is true throughout the process with both malt and hops in mind.

Brewing a bright, hop-forward American Pale Ale is a great example. By lightening the original gravity, mashing at a lower temperature (145° F; 63° C) and removing excess crystal/dextrin malt, a drier and more attenuative base beer can be created. A clean fermentation is equally important in creating a proper canvas for hop character. In a clean, lighter beer, a lesser amount of hop is needed to make a big impact. Hop bitterness is better perceived and hop aroma will stand out, not having to compete with other heavy flavors or aromas. Added to this, the solubility of hop components is increased in lighter worts.

### **Hop Backs and Reusing Hops**

The hop back is a late hopping implement utilized predominantly by ale brewers. Typically whole leaf aroma quality hops are selected for use in this application. The device immobilizes the hop flowers and allows the hot wort from the brew-house to be passed through the hops just before heading into the wort cooler and then off to the fermenting vessel. Immobilizing the hops and passing the wort through provides excellent wort-to-



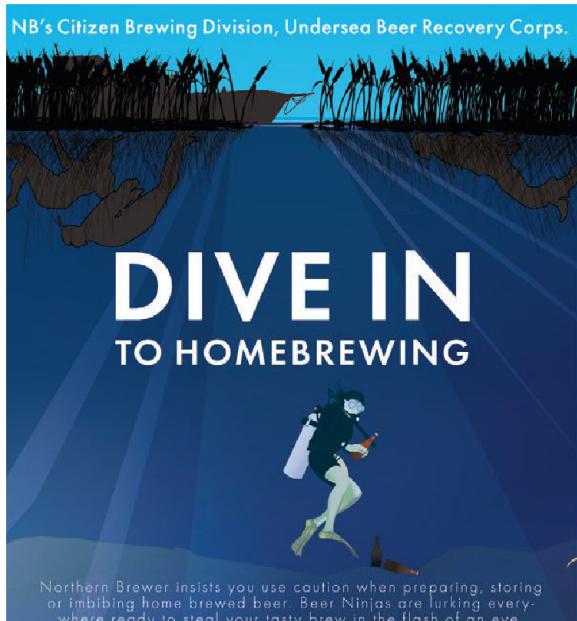
**Hop Back**

hop contact and works to solubilize hop oils and move them forward quickly, resulting in good hop aroma and flavor in the finished beer. Because the contact time is short, hop oils that might otherwise be flashed off are captured in the wort and survive through the cooling step.

This can be accomplished at the home-brew level by running post-boiled, hot finished wort through the lauter tun (if it is heat resistant) or a stainless colander with a charge of whole leaf hops placed in it just before cooling it down for fermentation. There are also some clever designs for hop backs that can be found online. (Always practice safety first and wear protective gloves and clothing while working with hot wort.) This is not a process that results in high utilization of bittering acids (isomerization of alpha acids.) It is actually a low yielding process by this measure and not a great way to conserve hops by itself.

Historically in many breweries, these hops were reused in the boiling kettle in subsequent brews. After some experimentation, brewers were able to figure out the expected (reduced) utilization numbers for this reused material and were able to maximize precious hops in this manner. This method can be effectively applied to a parti-gyle brew, where a big beer like a barleywine can be produced along with a small beer like a bitter<sup>1</sup>. The strong beer, made from the first runnings, can receive

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# The current hop crisis can in fact be a great learning opportunity. A true test of any good brewer is the ability to adapt and make highly drinkable and consistent beer in good times and bad.

the hop back treatment. These hops can then be saved and immediately used to bitter the small beer. Essentially a second beer is made with hops that would otherwise be thrown out.

## More From Dry Hopping

This same concept has also been applied to spent dry hops and is even more relevant to craft brewing methods today. Hops utilized in this process are not exposed to the heat required for isomerization. Non-isomerized alpha acids are insoluble in aqueous solution at end-fermented beer pHs. Thus, the utilization of alpha is virtually nil and there is no analytically measurable bitterness contributed to the beer<sup>2</sup>. Dry hopping is used exclusively for imparting fresh aroma and flavor to the beer; therefore, there is a significant amount of bitterness

potential left in this material. These hops can be utilized once again in the kettle where their bittering potential and remaining flavor components can be reclaimed.

Experimentation on your own particular system will ultimately lead you to the amount of this material to use. Obviously utilizing these hops as soon as they are recovered from beer is essential to their microbiological stability. Dry hops that are suspended in finished beer in a mesh bag can also be easily collected and utilized on the hot side of the process. It may be possible to freeze this material if you are not able to utilize it immediately. Again, your nose will be your guide.

Another note on dry hopping: getting more out of your hops has a lot to do with

surface area and contact time. If you are dry hopping with whole leaf and getting unsatisfactory results, try chopping up the leaf material before adding it to the brew. Breaking open the lupulin gland and creating more surface area will go a long way toward getting the desired results. If you are utilizing pellets and observing that the pellets are sitting on the bottom of the vessel and not breaking up, these too can be crumbled prior to use. Again, if they don't smell wonderful before you use them, they likely will not give you the hop aroma you are looking for.

Dry hopping with conventional means—by simply adding hops to the top of a vessel after the primary fermentation and allowing the hops to settle through the beer—is in essence an inefficient process.

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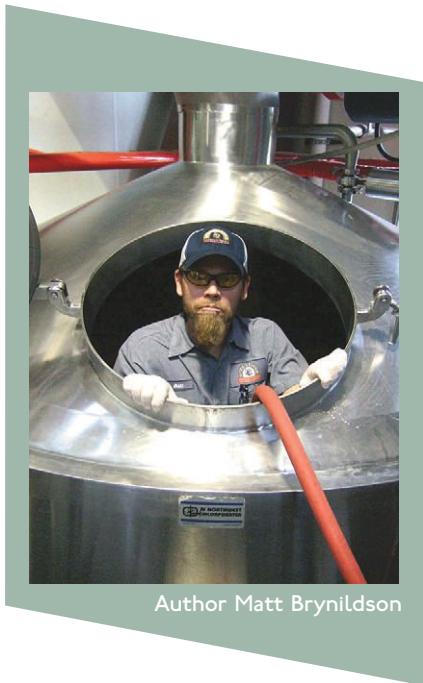
If you have ever dumped dry hops away from a brew or racked a beer away from the hops and smelled what is left behind, you have witnessed this fact. A reduced amount of hop can be effectively utilized in the same process when rousing (active re-suspension) of these hops is employed. Excess rousing can be counterproductive, scrubbing hop aroma away from the beer or creating excessive vegetative flavors. Gently bubbling CO<sub>2</sub> through the beer to move the hops back up into suspension is all it takes. Fermentation hopping, or adding a small amount of pellets to a fermenting beer and allowing the fermentation to mix and keep hops in suspension, is another method successfully utilized by some craft brewers.

Cold tea or slurry methods have also been used successfully to get more out of pellet dry hopping. With this method, hop pellets are mixed with de-aerated water or beer in a purged vessel to create pea-green hop slurry that is then added to the receiving beer. This works well to maximize surface area and get the most out of a smaller amount of hop material. Adding this cold hop slurry to a brew toward the

end of primary fermentation can add some beautiful hoppy notes. Making the addition when there is still some yeast activity will help mop up the inevitable dissolved oxygen this kind of procedure tends to carry with it.

Some brewers utilize their dry hops twice, either saving the hops to be carefully added to a second brew, or racking a new brew onto the hops left in the vessel from a previous beer<sup>3</sup>. There are some obvious issues to be concerned with when undertaking such procedures. Sanitary technique is critical to success in any beer transfer or other related activity. Again, excluding contact with air, thus avoiding dissolved oxygen pickup, is equally as important. Nothing is more beautiful than a pristine fresh hops aroma. Nothing is more off-putting than spoiled beer and oxidized hop aroma. Advanced methods require advanced technique and adherence to proper brewing methods.

An advanced dry hopping technique utilized by some craft brewers today works like a hop back but is applied to the cold side of the process. It requires a closed



Author Matt Brynildson

implement that can immobilize hops while beer is run through them. This is a method similar to the hop back, but is applied to beer after primary fermentation. Rather than adding hops to the fermenter or holding vessel, the beer is taken to the hops. This can be a one-time transfer or a recirculation technique. The key is doing this without exposing the beer to oxygen; therefore, the procedure must be accomplished in a closed and purged system. The beer is moved through the hops, picking up the hop oil and other flavor active compounds. This can be repeated as required until the hop aroma is satisfactory.

A device like the Randall (the Enamel Animal) would be perfect for this operation. Running beer through the device en route to the bottle is another option to try. Bottle conditioning would work to again mop up any lingering dissolved oxygen. After applying this method and achieving the dry hop character desired, these hops could be easily utilized in the kettle of a subsequent brew, better utilizing the total hop for a more holistic approach. Keep in mind that with any of these second-use techniques, hop oil aroma and flavor preparations can be purchased and used to add back a little of the hop zing that might be missing.

## Keep the Faith

Times are tough, but the current hop supply issues will be resolved. Total U.S.

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hop acreage in 2008 has been reported to be up 23 percent over last year<sup>4</sup>. In the meantime, networking and making friends with your brewing supply store and local brewery should help to keep you in hops. You might not find the exact varieties you want, but great beer can still be made.

We should not let a shortage of hops slow down our passion for brewing hoppy beers. We simply need to get more creative, and explore new options...and maybe grow some hops as well.

### Resources

1. Mosher, Randy. *Radical Brewing*. Boulder: Brewers Publications, 2004.
2. Ockert, K. and L. Sidor. *MBAA Practical Handbook for the Specialty Brewer*, Volume 3.
3. Brian Hunt, Moonlight Brewing Co.
4. S.S. Steiner 2008 Crop and Market Report, June 10.

**Matt Brynildson began his brewing career with KALSEC (Kalamazoo Spice Extraction Company) as a hop chemist.**

**After attending the Siebel Institute of Brewing Technology, he joined the Goose Island Beer Company in 1996 where he was head brewer of their Chicago production facility. In 2001 he joined the Firestone Walker Brewing Company as brewmaster. Matt has**

**been named "Brewer of the Year" three times at the GABF<sup>SM</sup> and has twice won "Champion Brewmaster" for Mid-Sized breweries at the World Beer Cup<sup>®</sup>. In 2007 he was the recipient of the Brewers Association's Russell Schehrer Award for Innovation in Brewing.** ☘

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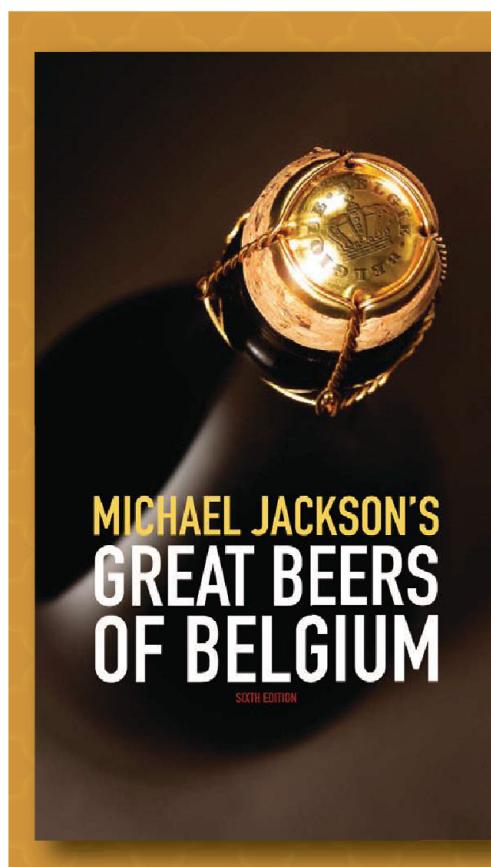
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# HOP Varieties and Substitutions

| Variety                   | Type      | Average Alpha Acid Percent | Origin         | Possible Substitutions                                      |
|---------------------------|-----------|----------------------------|----------------|---|
| Admiral (RH 40)           | Bittering | 11.5-14.5                  | England        | Target, Challenger  |
| Ahtanum                   | Aroma     | 5.7-6.3                    | U.S.           | Cascade, Amarillo   |
| Amarillo                  | Aroma     | 6-8                        | U.S.           | Cascade, Centennial, Chinook, Ahtanum                       |
| Bramling Cross            | Dual      | 5-7                        | England        | Progress, Golding   |
| Brewer's Gold             | Dual      | 5.5-8.5                    | Germany, China | Bullion   |
| Bullion                   | Bittering | 6-9                        | England        | Brewer's Gold   |
| Cascade                   | Dual      | 4-7                        | U.S.           | Centennial, Amarillo, Columbus                              |
| Centennial                | Dual      | 8-11.5                     | U.S.           | Cascade/Columbus 70/30 blend, Chinook                       |
| Challenger                | Dual      | 6.5-8.5                    | England        | Perle, Northern Brewer                                      |
| Chinook                   | Dual      | 11-14                      | U.S.           | Nugget, Columbus, Northern Brewer, Target                   |
| Cluster                   | Dual      | 5.5-8.5                    | U.S.           | Nugget, Columbus, Northern Brewer, Target                   |
| Columbus                  | Bittering | 14-16                      | U.S.           | Nugget, Chinook, UK Target, Northern Brewer, Tomahawk, Zeus |
| Crystal                   | Aroma     | 2.4-5                      | U.S.           | Mt. Hood, Hersbrucker, Hallertauer, Liberty                 |
| Eroica                    | Bittering | 9-13                       | U.S.           | Galena, Nugget, Chinook                                     |
| First Gold                | Dual      | 6.5-8.5                    | England        | Kent Golding, Crystal                                       |
| Fuggle                    | Dual      | 3.5-5.5                    | U.S., England  | Willamette, Styrian Golding, U.S. Tettnanger                |
| Galena                    | Bittering | 10-14                      | U.S.           | Nugget, Chinook, Pride of Ringwood                          |
| Golding                   | Aroma     | 4-6                        | U.S., Canada   | Other Golding, UK Progress, Fuggle                          |
| Green Bullet              | Dual      | 8-14                       | New Zealand    | Liberty, Ultra, Mt. Hood, Tradition, Crystal                |
| Hallertauer Magnum        | Bittering | 10-12.5                    | Germany        | Columbus, Nugget  |
| Hallertauer Mittelfruh    | Aroma     | 3.5-5.5                    | Germany        | Liberty, Tradition, Ultra                                   |
| Hallertauer Tradition     | Aroma     | 4-7                        | Germany        | Crystal, Liberty  |
| Hersbrucker               | Aroma     | 2.5-5.5                    | Germany, U.S.  | Mt. Hood, Strisselspalt                                     |
| Horizon                   | Dual      | 11-14                      | U.S.           | Magnum  |
| Kent Golding              | Aroma     | 4-6.5                      | England        | Other Golding, UK Progress                                  |
| Liberty                   | Aroma     | 3.5-5                      | U.S.           | Hallertauer, Tradition, Mt. Hood                            |
| Lublin/Lubelski           | Aroma     | 3-5                        | Poland         | Saaz, Sterling  |
| Mount Hood                | Aroma     | 3-8                        | U.S.           | Crystal, Hersbrucker, Strisselspalt                         |
| Northern Brewer           | Dual      | 7-10                       | U.S., Germany  | Nugget, Chinook   |
| Nugget                    | Bittering | 9-14                       | U.S., Germany  | Columbus, Chinook, Target, Galena                           |
| Olympic                   | Dual      | 11-13                      | U.S.           | Chinook   |
| Perle                     | Dual      | 5-9.5                      | U.S., Germany  | Northern Brewer, Galena, Cluster, Chinook                   |
| Phoenix                   | Dual      | 8.5-11.5                   | England        | Northdown, Kent Golding, Challenger                         |
| Pioneer                   | Dual      | 8-10                       | England        | Kent Golding  |
| Pride of Ringwood         | Dual      | 7.5-11                     | New Zealand    | Galena, Cluster   |
| Progress                  | Dual      | 5-7.5                      | England        | Kent Golding, Fuggle  |
| Saaz                      | Aroma     | 3.5-5                      | Czech Republic | Lublin  |
| Santium                   | Aroma     | 5-7.9                      | U.S.           | Tettnanger, Spalter, Spalter Select                         |
| Spalter                   | Aroma     | 3-6                        | Germany        | Tettnanger, Spalter Select, Santium                         |
| Spalter Select            | Aroma     | 3.5-6                      | Germany        | Tettnanger, Spalter, Santium                                |
| Sterling                  | Aroma     | 6                          | U.S.           | Saaz, Lublin  |
| Strisselspalt             | Aroma     | 3-4                        | France         | Mt. Hood, Crystal, Hersbrucker                              |
| Styrian Golding           | Aroma     | 4.5-6                      | Slovenia       | Fuggle, Willamette  |
| Target                    | Bittering | 9.5-13                     | England        | Fuggle, Willamette  |
| Tettnanger                | Aroma     | 3.5-5.5                    | Germany, U.S.  | Spalter, Spalter Select, Saaz                               |
| Tomahawk                  | Bittering | 15-17                      | U.S.           | Columbus, Zeus  |
| Ultra                     | Aroma     | 2.3-5                      | U.S.           | Liberty, Tradition, Saaz                                    |
| Vanguard                  | Aroma     | 4-5                        | U.S.           | Saaz, Mittelfruh  |
| Whitbread Golding Variety | Dual      | 5-7.5                      | England        | Golding, UK Progress  |
| Willamette                | Dual      | 4-6                        | U.S.           | Fuggle, Tettnanger, Styrian Golding                         |
| Zeus                      | Bittering | 13-17                      | U.S.           | Columbus, Tomahawk  |

Source: Michael Ferguson, BJ's Restaurant and Brewery

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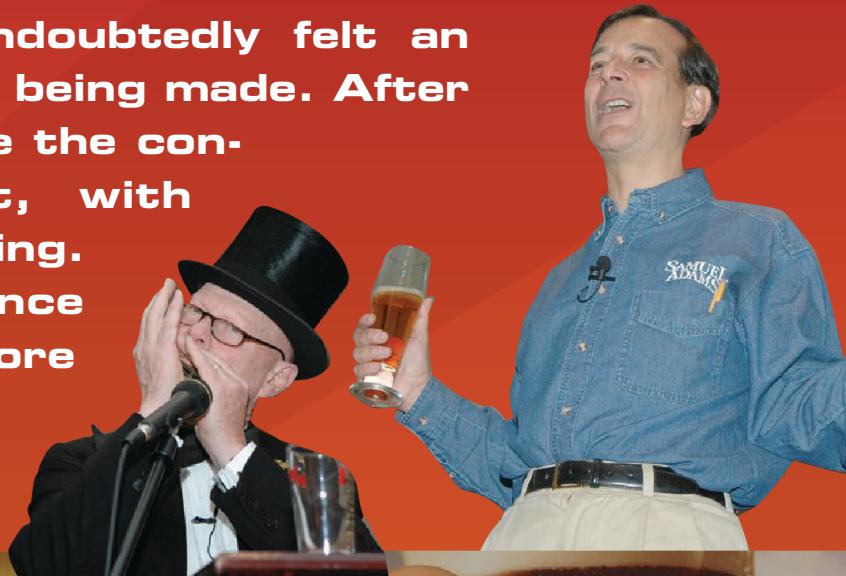
AHA National Homebrewers  
Conference 2008

By Jill Redding

Photos by Ed Bronson



**Those who attended the 30th annual AHA National Homebrewers Conference June 19-21 in Cincinnati undoubtedly felt an undercurrent of history being made. After all, it was the first time the conference has sold out, with more than 950 attending. And the full conference packages sold out before the early bird deadline even came around.**





But more than that, as keynote speaker Jim Koch of Boston Beer Co. proclaimed, this is an historic time in the homebrewing movement.

"One hundred years from now, homebrewers and craft brewers will look back and wish they had been brewing here and now," said Koch, who still homebrews. "The creativity is completely unprecedented."

And the talent and competitive spirit of homebrewers is unprecedented as well. The Ninkasi Award, given annually to the brewer scoring the most points in the second round of the National Homebrew Competition, ended in a dramatic five-way tie for first place. Competition director Janis Gross had to go back into the first-round results to calculate the winner via tiebreaker: Gordon Strong of Beavercreek, Ohio.

"The five-way tie was very exciting," said Strong, who took two gold medals at the awards ceremony along with the Ninkasi Award. "I was trying to help my club—the idea of competing for Ninkasi was really something I hadn't considered until I saw how wide-open the results were."

A record 5,644 entries from 1,308 homebrewers poured into the competition, making it the largest beer competition in the world.

The organizing committee for the conference, which included local homebrew clubs Bloatarian Brewing League (Cincinnati); the Cincinnati Malt Infusers; the Dayton Regional Amateur Fermentation Technologists (DRAFT); the Scioto, Olentangy and Darby Zymurgists (SODZ, Columbus, Ohio); the Louisville Area Grain and Extract Research Society (LAGERS); the Fermenters of Special Southern Indiana Libations (FOSSILS, New Albany, Ind.); the Brewers of Central Kentucky (BOCK); and the Greater Huntington Homebrewers Association (Huntington, W. Va.) put together an action-packed four days of homebrewing activities including seminars, pre-conference events, Pro Brewers Night, a record-setting Club Night, and the judging and awards banquet for the NHC competition.

The local committee had been working hard for the last two years to plan the event. Conference chairman Rob Westendorf of the Bloatarian Brewing League said he was asked many times during the conference if he would do it again. "In a heartbeat," he said. "I'll catch up on sleep later. This was one of the most rewarding experiences of my life."

Pre-conference events started on Tuesday evening with a gourmet beer dinner at the JeanRo Bistro. On Wednesday, two differ-



ent tours took place, including a Bourbon Trail Tour and a Historic Zinzinnati Breweries and Bars Tour, followed by an evening Pub Crawl.

The conference officially kicked off on Wednesday with an opening toast from former Cincinnati city councilman Jim Tarbell, who owned Arnold's, the oldest tavern in Cincinnati. Tarbell, dressed in a tuxedo and top hat, got things rolling by playing a few tunes on a harmonica. "This is the only gig I've ever had where you get ready by having a beer," said the colorful Tarbell, who predicted that, "Homebrewing will be the institution that makes it mark in the 21st century."

The seminars began after the opening toast, including a highly attended session on "Hop Substitution: How Do We Make the Beers We Want in This Crazy Hop Market" by Michael Ferguson of B.J.'s Restaurant and Brewery.

"Homebrewers—you poor bastards," said Ferguson with a laugh. "You're at the very end of the supply chain." Ferguson offered several valuable ideas for obtaining and storing hops, and tweaks that can be made to the brewing process to stretch the effect of hops.

"Don't be afraid to experiment and play," said Ferguson, who said that some craft brewers are often willing to help homebrewers with hop supplies. His talk was repeated later in the conference for those who couldn't attend the first session.

As usual, the seminars covered a broad range of topics geared for both beginner and veteran homebrewers. Antony Hayes offered his perspective on homebrewing and beer styles in England, and there were also seminars on mead, high gravity fermentations, club events, draught beer,



Belgium, Germany, barrel-aged beers and many other topics.

On Thursday evening, attendees gathered for Pro Brewers Night, themed "Oktoberfest in June," with breweries such as Left Hand, Bell's Brewery, Jolly Pumpkin, Goose Island and Great Lakes pouring their most popular beers.

On Friday, Koch delivered his entertaining, down-to-earth keynote address. "This is a very cool experience for me," said Koch, who first attended an AHA conference in 1983. Koch first brewed Samuel Adams Boston Lager at home using a recipe from his great-great grandfather. "I'm very proud to have been a part of the movement that led us to this moment today."

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Between talks, and into the wee hours, the hospitality suite offered a rotating collection of beers from several clubs and a chance to see the wares of the conference sponsors. On Friday night, the clubs were

in the spotlight for the famous Club Night, where homebrew clubs from across the country set up themed booths, dress in costumes and serve up their latest beers and homemade food. This year, a record 613 kegs from 41 clubs were delivered to the Club Night room, where libations such as Raspberry Coconut Mead and Kahlua Porter were on tap. The best booth design honors went to LAGERS for their horse-paddock theme, and the FBI (Foam Blowers of Indiana) won the popular vote for the best beer. Several clubs from Georgia pooled their efforts for an elaborate M\*A\*S\*H\* themed tent as well.

Finally, it was time for the Grand Banquet on Saturday night and the long-awaited announcement of the winners of the prestigious National Homebrew Competition, with 650 people in attendance for the banquet. Aside from Strong's Ninkasi award, the Homebrewer of the Year title went to David Anderson from Northglenn, Colo. and the Hop Barley and the Alers Club, for his Best of Show beer, a cream ale. Steve Piatz of Eagan, Minn. (Saint Paul Homebrewers Club) won the Meadmaker of the Year award, and the Cidermaker of the Year title went to Jeff Carlson of Grand Rapids, Mich. (Prime Time Brewers). The Saint Paul Homebrewers Club of Saint Paul, Minn., won its second straight Homebrew Club of the Year title. Gold, silver and bronze medal winners were announced in 28 categories. For a complete list of award winners and gold medal recipes, see page 36.

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For more information about the AHA Membership Rallies contact Kathryn Porter at +1.303.447.0816 x123 or [kathryn@brewersassociation.org](mailto:kathryn@brewersassociation.org)

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The awards ceremony included the triumphant return of The Chicken, who was kidnapped during Club Night by a rival club. The Chicken is the well-traveled mascot of the Chicken City Ale Raisers homebrew club in Georgia, and relieved caretaker Phil Farrell happily retrieved his faithful traveling companion.

Next year's conference is scheduled for Oakland, Calif., June 18-20 with a Sippin' on the Dock of the Bay theme. It's sure to be another AHA conference you won't want to miss. See [www.AHAconference.org](http://www.AHAconference.org) for details.

Jill Redding is editor-in-chief of Zymurgy.

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# 2008 AHA WINNERS CIRCLE

## National Homebrew Competition Winners



### HOMEBREWER OF THE YEAR—DAVID ANDERSON

NORTHGLENN, COLO., HOP BARLEY AND THE ALERS

Homebrewer of the Year goes to the brewer of the Best of Show beer from the 23 beer categories.



David Anderson was equally shocked and honored to be selected as this year's American Homebrewers Association Homebrewer of the Year. His cream ale, a favorite among friends and family, took first place in the Light Hybrid Ale category at the National Homebrewers Competition, and moved on to win Best of Show out of more than 5,000 beers. Anderson started homebrewing as a hobby about four years ago when his golden retriever pup introduced himself to a family of avid homebrewers in a nearby park. He knew this was the hobby for him when they opened up a chest freezer packed with kegs of delicious homebrew that tasted as good as the beer he had been buying commercially. He purchased a homebrew kit and the basics, set up in his backyard and has been hooked ever since! After brewing four beers in four weeks, he decided to make the jump to all-grain brewing.

What Anderson loves most about homebrewing is the flexibility to change and alter recipes, and the challenge to be creative and to constantly improve. He also enjoys finding new gadgets to streamline the brew day and sharing ideas and tips with other brewers.

The most important factor to his brewing success has been incorporating the vast knowledge and suggestions of other homebrewers. By consolidating recipes and techniques from numerous successful homebrewers and craft breweries, Anderson has come up with a methodology that works best for him. He's gained insight and inspiration from several sources, including the hosts and guests on the Brewing Network, like the Sunday Session and the Jamil Show; Rich Keen and Faith Faw who introduced him to homebrewing; *Zymurgy* magazine, and members of his homebrew club, Hop Barley and the Alers. "Most importantly," Anderson adds, "I have to thank my wife, Kari, for her patience and support with my newfound passion. Without her understanding I could not have embraced and enjoyed these last four years."

When not brewing, Anderson enjoys spending time with his wife and chasing after their two young daughters, Taylor (2) and Avery (1). Then there is the "other job"—he runs an insurance agency with his father in Lakewood, Colo., and brewing is a nice distraction from that.

### MEADMAKER OF THE YEAR—STEVE PIATZ

EAGAN, MINN., SAINT PAUL HOMEBREWERS CLUB

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



Steve Piatz, a regular medal winner at the NHC, began making meads after the 1994 National Homebrewers Conference in Denver. His inspiration came from attending a mead sampling and talk from Ken Schramm and Dan McConnell. "I was hooked, though I didn't make more than about one batch a year until Ken's book came out around the time of the Chicago NHC," said Piatz.

Piatz has some favorite honey varieties for making mead, along with a couple that he avoids. "Orange blossom is the all-around best base honey and works for straight meads, pyments and melomels. Cotton Blossom is also very nice. I've tried a few that I don't like including cranberry blossom—too earthy; pumpkin blossom—too earthy; and sunflower blossom—little character, just like the blossoms."

While his mead making equipment is conventional, Piatz relies on some specific techniques to turn out a quality product. "I start all my meads in plastic 6-gallon buckets. It makes it easy to do the staggered nutrient additions and to stir. The stirring gets some oxygen in and knocks the dissolved CO<sub>2</sub> out." He does caution that the plastic bucket should only be used for primary because of its permeability to oxygen. "If using a bucket for primary, don't leave the mead in the bucket more than three to four weeks. Sherry and/or nutty notes aren't really pleasant in most meads." Racking to glass should be done within three weeks, he cautions.

Another technique Piatz follows closely pertains to adding yeast nutrient, courtesy of Schramm. The idea is that gradual additions of specific nutrients over several days sets up the mead yeast for a clean and thorough fermentation. "The total nutrients are about two teaspoons of yeast energizer (e.g. Fermaid K) and one teaspoon of diammonium phosphate for 5 gallons. I add about 0.75 teaspoons of the blend as soon as I pitch the yeast. Then I add another 0.75 teaspoon every day for the next three days. At each addition I also stir the must with a sanitized spoon." This method works well for melomels and metherglins too. "If the mead has whole fruit, the stirring also helps get the cap back into the must to help extract flavors. For my ginger mead, that meant pushing the floating mesh bag back under the must."

And why the name "Not Mary Ann" for his gold-medal mead? Piatz answers, "Gilligan's Island: It isn't the cute farm girl, it's the spicy show girl."

Homebrewer of the Year  
award sponsored by



Meadmaker of the Year  
award sponsored by

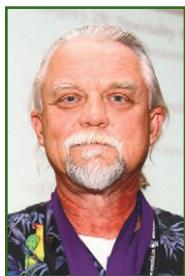


## CIDERMAKER OF THE YEAR—JEFF CARLSON

GRAND RAPIDS, MICH., PRIME TIME BREWERS

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

Cidermaker Award  
sponsored by



Jeff Carlson has made 400 5-gallon batches of homebrew since he began making beer in 1992. He still uses a Rubbermaid cooler, and boils in his garage. He started making cider in 1997, and has 115 batches under his belt. Carlson has had some amazing success with his ciders in competitions. The first cider he entered went to the 2000 National Homebrew Competition, won a gold medal and made him Cidermaker of the Year. The same thing happened the following year. He's been hooked ever since.

Hailing from Michigan, Carlson is lucky to have access to a wide variety of apples and fresh juice. He gets his juice from two local orchards, Hill Brothers and Engelsma, who do special pressings for a lot of ciders. While apples are in season, Carlson takes full advantage of the local bounty—this past year he made 15 batches from September to February. His 2008 NHC gold-medal winning cider recipe used juice from Hill Brothers Orchard and the juice from some crab apples Carlson found growing behind his parents' house. He uses one of two yeast strains for all his ciders: Cote des Blancs (Epernay) or Premier Cuvee (Prise de Mousse). Over the years he's tried other wine yeasts, beer yeasts and natural yeasts, but these two have delivered the best and most consistent results.

As for technique, Carlson keeps things simple. He ferments the must as cool as possible, using no nutrients; the slower, longer fermentation helps to make a great cider. After racking, he lets most of his ciders age as long as possible. He says they usually clear in a month, but he lets them go four or five months. After aging, he kegs and force carbonates his ciders. At this point, he is able to fine tune them to his liking, adding acid, tannin, back sweetening (stabilizing with sorbate), or blending them with other ciders.

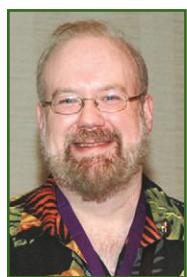
Carlson was pleased to see NHC rules this year that allowed people to enter ciders at the regional level. "I know it brought in a lot more entries and gave people exposure closer to home," he said. "I hope to see the cider entries continue to grow."

## NINKASI AWARD WINNER—GORDON STRONG

BEAVERCREEK, OHIO, SAINT PAUL HOMEBREWERS CLUB

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

Ninkasi Award  
sponsored by



Gordon Strong is a BJCP Grand Master IV Judge and president of the BJCP Board, a member of the DRAFT homebrew club and president of the Saint Paul Homebrewers Club, and a regular contributor to Zymurgy. He's been brewing since 1996 (all-grain since 1998) and judging since 1997.

"I'm still fanatical about both after all these years, much to my wife's chagrin," said Strong. His brewing setup reflects his passion for the hobby. "I've been using a three-vessel, half-barrel system from pico-Brewing Systems since 1999. It's a great setup, very reliable and flexible, and it's held up well over the years." He also uses a Super Chiller counterflow chiller from Heart's Homebrewing and an original Listermann PhilMill, motorized and modified with a 5-gallon hopper.

Of his entries in the 2008 NHC, Strong was proudest of his Colonial Stock Ale, an historical recipe based on Tony Simmons' "Poor Richard's Ale." "It's not the same recipe, though," he clarifies. "I read his original research and then tried to faithfully recreate the beer he described. I made it as part of a Big Brew, so I was lucky enough to have fresh Colorado Blue Spruce tips in my backyard. I remembered Pete Devaris giving a great talk on using spruce at the Las Vegas NHC, so I asked him for suggestions. When the beer was a year old, I drove the keg 1,200 miles to the Denver NHC and served it at Club Night. This really is a beer that owes its success to all that I've gotten from being an AHA member."

Strong has some advice for homebrewers looking to win medals at the NHC, but cautions that it is not easy. "You have to make a technically sound beer that fits the style, time it so that it's at peak flavor, package it well, and then hope you get good judges." Forcing yourself to evaluate your own beer objectively can also improve your chances. "Taste your beers before you enter them, and don't send ones that have flaws or don't fit a style well. Understand when your different styles are at peak flavor."

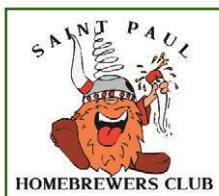
It also helps to have friends or fellow club members who can share their experience entering (and hopefully winning) at the NHC. "I keg my beer, and Joe Formanek (two-time Ninkasi winner) gave me a great suggestion. Rather than simply counter-pressure bottling my kegged beers, I now take them through the intermediate step of a 2-liter pop bottle with a carbonator cap. This allows me to taste the beer and give it any final tweaks prior to bottling."

## HOMEBREW CLUB OF THE YEAR—THE SAINT PAUL HOMEBREWERS CLUB

SAINT PAUL, MINN.

*Homebrew Club of the Year goes to the winningest club in the National Homebrew Competition and the six AHA Club-Only Competitions.*

Club Award  
sponsored by



Is this the beginning of a new dynasty? Not content to topple QUAFF as the top AHA Homebrew Club in 2007, the Saint Paul Homebrewers Club did it again in 2008.

The competition for Homebrew Club of the Year was fierce in 2008, with brewers from 143 clubs winning awards in the first round of the NHC, and 37 clubs medaling in the finals. Saint Paul had 10 different brewers medal in the second round (including an impressive nine gold medals), and earned the highest point total ever recorded for a club.

Saint Paul amassed 356 points for the Homebrew Club of the Year title, while QUAFF, based in Carlsbad, Calif., finished second with 210 and the Diablo Order of Zymiracle Enthusiasts (DOZE) of Concord, Calif. was third with 194.

Two Saint Paul club members won prestigious honors along with their gold medals in the competition. Gordon Strong, who lives in Beavercreek, Ohio, but is a member of the Saint Paul Homebrewers Club as he frequently travels there for business (and was recently even elected president of the club), won the Ninkasi award as the highest point-scorer in the competition. Strong finished in a five-way tie for first for the Ninkasi award that also included Saint Paul members Curt and Kathy Stock. Strong earned two gold medals in Category 22 and 23. His first-round results were strong enough for him to earn the title in a tie-breaker.

Club member Steve Piatz of Eagan, Minn. won the Meadmaker of the Year title with his gold-medal winning ginger metheglin.

# 2008 NHC Gold Medal Recipes

by Amahl Turczyn Scheppach

**T**here were a lot of surprises at the 2008 National Homebrew Competition, not the least of which was NHC competition director Janis Gross breaking her arm just prior to the second round. BJCP Grand Master IV judge Gordon Strong, as the site director for the second round of the competition, was able to step in as organizer and it turned out to be a great fit. And while it came as no surprise to those familiar with Strong's brewing and judging ability, many (including Strong himself) were shocked to see him walk away with the Ninkasi Award. So with his intimate involvement on all fronts, he seemed the perfect candidate to interview for the NHC edition of Zymurgy's Winners Circle.

**Zymurgy:** Sounds like there was some tough competition for the Ninkasi award this year, given to the entrant with the most points in all categories. At the second round, there was a five-way tie with Jeff Carlson and Joe Formanek from the Great Lakes region, Curt and Kathy Stock from the Midwest, John Watson from the Northeast, and you from the East. According to competition tie-breaking rules, you triumphed based on your greater first-round point total. Has something like this happened before in the

**NHC's history, and what do you think it means?**

**Gordon Strong:** I'm still stunned that I won the Ninkasi. I think there have been ties before, but never with more than two brewers. I think it's been several years since someone winning two medals won the Ninkasi. I think it means that the competition really is wide open, and that anyone can win. There were a lot of new names called this year. I know Jeff, Joe, Curt and Kathy personally, all of whom have won many medals and awards in the past; to be included with that group is a great honor indeed.

**Zymurgy:** How did judging go this year? Janis said you made some pretty impressive innovations to help the competition achieve new heights in that area.

**GS:** Judging went like clockwork. Our plan called for starting at 9 a.m. and finishing by 5:30 p.m. We started at 9:03 and finished at 5:40. I'll take that.

Yes, we made several changes this year. We planned to have all the judging done in one day, including the three Best of Show panels. So every choice I made during the competition was designed to increase throughput while not wasting the time of the judges.

We pre-sorted all the categories for the judges, and provided each judge with a flight pull list. We used a queued judging system, where the three flights in a category all worked from the same pull list. This was a major improvement, since all three flights finished at the same time. We had pre-printed labels for the judges and

the entries. We skipped the calibration beer. And we had an amazing turnout of well-qualified judges. We had three judges on every flight, most of them with high BJCP rankings.

We were fortunate to have the refrigerated truck right next door to the judging room, so we could pull beer one case at a time as needed. The cellar master and his crew were superb. The hotel staff was also amazing. Finally, I had the world's best head steward, Luann Fitzpatrick, run our operations on competition day.

**Zymurgy:** As second-round organizer, what were the highlights for you?

**GS:** Getting it all done in one day for the first time ever, not having one entry lost or mishandled once arrived, and getting great feedback from the judges. I wanted to run the kind of competition at which I would want to judge, and I think I did. The fact that I won some medals in the process was just icing on the cake.

Judges put in so much effort supporting the second-round competition, I wanted to make sure they had a great conference experience. We had a judge reception with training the night before judging, we repeated any technical talks given during the competition, and we tried to get the judging done with as little overlap with other conference events as possible. I think the judges have appreciated these changes, and the great turnout of judges confirmed it.

**Zymurgy:** How was the number of entries this year compared to previous years, and what do you think contributed to the change?

**GS:** The total number of entries in the competition went from 5,052 to 5,644, and the number of entries in the second round went from 627 to 759. The increase in the second-round entries was due to adding an additional first-round site. I think the growth in the first-round entries reflects the growing interest in homebrewing, and in homebrewers that want to compete. The number of different brewers involved went from 1,172 to 1,308, so the growth rate in brewers and entries was about the same. It's a great time to be a homebrewer.

**Zymurgy:** How was the competition for clubs this year? Seems like there were more clubs vying for the Club of the Year award this year.

**GS:** The competition was fierce. Brewers from 143 clubs took awards in the competition; brewers from 37 clubs medaled in the finals. Several clubs had 10 or more individuals medal. Two of the top-scoring clubs had more than 20 different brewers medal.

The Saint Paul Homebrewers Club had an amazing 10 different brewers medal in the second round, and earned the highest point total ever recorded for a club.

**Zymurgy:** Has the online registration process continued to improve, and do entrants seem appreciative of it?

**GS:** Entrants have said the online registration system is very easy to use, and it greatly simplifies the work of organizers. It's here to stay. There's no way we could manage a competition this size without increasing the use of automated tools.

**Zymurgy:** How did the awards ceremony go, and were there any improvements or innovations there this year?

**GS:** The awards ceremony also ran very smoothly. We added a few new tweaks to speed it up and to broaden the audience. The winners for a category were all announced at once, which made handing out the medals go faster. Quite a few winners were in attendance, and it's always a thrill to have Charlie hang the medal around your neck in front of your friends. For those who couldn't be



### 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 160° F (71° 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 (19L) 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.

there in person, we added a live podcast of the event, courtesy of The Brewing Network. I understand quite a few winners heard their names called live, and got to share in the moment. Now if we could only figure out how to do Virtual Club Night, we'd really be able to increase our attendance.

**Zymurgy:** Are there any further innovations planned for next year's event?

**GS:** The AHA Governing Committee's Competition Subcommittee is still reviewing the lessons learned from this year and will be kicking off discussions about next year shortly. I think we're going to try to go all-electronic with the payment system, but most of the other aspects used this year will be left alone. It all seemed to work very well, so I think most changes will be minor. The focus is likely to be on documenting the new process, and making sure it is repeatable. But there are several very experienced competition organizers, judges and entrants on the subcommittee, so you never know what other good ideas might be suggested. We aren't afraid to make changes, as long as the changes will lead to a better competition. Stay tuned.

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

### Category 1: Light Lager

170 Entries



Gold Medal

Sponsored by Five Star Products & Services, LLC

**Graham Cox, Meridian, MS, Lite American Lager, Chicken City Ale Raisers "Billy Bob Mississippi Lager" Light Lager/Lite American Lager**

### Ingredients for 5.5 U.S. gallons (20.82 liters)

|                 |   |
|-----------------|---|
| <b>6.0 lb</b>   | (2.72 kg) US 6-row malt                                   |
| <b>3.0 lb</b>   | (1.36 kg) rice syrup solids, in kettle                    |
| <b>0.3 oz</b>   | (8.5 g) Hallertauer pellet hops, 4% alpha acid (1st wort) |
| <b>0.3 oz</b>   | (8.5 g) Hallertauer pellet hops, 4% alpha acid (60 min)   |
|                 | Wyeast No. 2007 Pilsen lager yeast (4L starter)           |
|                 | Forced CO <sub>2</sub> to carbonate (2.8 vol)             |
| <b>2.75 g</b>   | calcium chloride (water treatment)                        |
| <b>1 tablet</b> | Whirlfloc   |

**Original Specific Gravity:** 1.045

**Final Specific Gravity:** 1.007 (diluted to 1.005)

**Boiling Time:** 90 minutes

**Primary Fermentation:** 21 days at 50° F (10° C) in glass

**Secondary Fermentation:** 21 days at 35° F (2° C) in glass

### Directions

Mash at 149°F (65° C) for 60 minutes. Dilute lager after fermentation with 2L distilled water.

### Judges' Comments

"Good balance between malt and bitterness; big malt for category."

"Very good beer, nice malt flavor. Maltiness may be too robust for style—definitely on the high end."

"Nice malt aroma, but a bit big for style."

### Runners-Up

**Silver:** Michael Habrat, San Diego, CA, Dortmunder Export

**Bronze:** Ted Hausotter, Baker City, OR, Dortmunder Export, Strange Brew Homebrew Club

## Category 2: Pilsner



155 Entries

**Gold Medal**

Sponsored by Beer &amp; Wine Makers Warehouse

**John Watson, Southbury, CT, Bohemian Pilsner, Underground Brewers Club of Connecticut**  
**2008 Ninkasi Award Finalist**  
**"Liquid Sunshine"**  
**Pilsner/Bohemian Pilsner**

### Ingredients

for 10 U.S. gallons (37.85 liters)

|                |  |
|----------------|--|
| <b>21.0 lb</b> | (9.53 kg) Durst Pils malt  |
| <b>2.0 oz</b>  | (28 g) Saaz whole hops,<br>3.5% alpha acid (70 min)  |
| <b>2.0 oz</b>  | (28 g) Hallertau whole hops,<br>3.0% alpha acid (70 min)   |
| <b>2.0 oz</b>  | (28 g) Spalt pellet hops,<br>3.5% alpha acid (70 min)  |
|                | Wyeast Bohemian Pils lager yeast (500 mL starter)<br>Forced CO <sub>2</sub> to carbonate (3 vol) |

**Original Specific Gravity:** 1.040**Final Specific Gravity:** 1.010**Boiling Time:** 70 minutes**Primary Fermentation:** 14 days at 45° F (7° C) in glass**Secondary Fermentation:** 30 days at 45° F (7° C) in glass**Tertiary Fermentation:** 30 days at 33° F (1° C) in steel

### Directions

Mash grains at 150° F (66° C) for 70 minutes.

### Judges' Comments

"A clean-drinking, hop/malt balanced, refreshing beer."

"A good effort with no major flaws; nicely balanced beer."

"Very nice job at balancing the hops and malt!"

### Runners-Up

**Silver:** Joseph Formanek, Bolingbrook, IL, Classic American Pilsner, Urban Knaves of Grain

**Bronze:** Curt and Kathy Stock, St. Paul, MN, Classic American Pilsner, Saint Paul Homebrewers Club

## Category 3: European Amber Lager



105 Entries

**Gold Medal**

Sponsored by How to Brew by John Palmer

**Jim Maurer, Aurora, CO, Vienna Lager**  
**Untitled**  
**Vienna Lager**

### Ingredients for 3 U.S. gallons (11.36 liters)

|                   |  |
|-------------------|--|
| <b>4.5 lb</b>     | (2.04 kg) Vienna malt                                    |
| <b>0.5 lb</b>     | (113 g) melanoidin malt                                  |
| <b>2.0 oz</b>     | (57 g) debittered black malt                             |
| <b>0.25 oz</b>    | (7 g) Premiant pellet hops,<br>8% alpha acid (90 min.)   |
| <b>0.25 oz</b>    | (7 g) Hallertauer whole hops,<br>4% alpha acid (40 min.) |
|                   | White Labs WLP 830 German lager yeast (600 mL starter)   |
| <b>1.5 oz</b>     | (45 g) dextrose to carbonate                             |
| <b>1.0 tablet</b> | Whirlfloc  |
| <b>2.5 g</b>      | gypsum (water treatment)                                 |
| <b>0.5 g</b>      | chalk (water treatment)                                  |

**Original Specific Gravity:** 1.046**Final Specific Gravity:** 1.012**Boiling Time:** 90 minutes**Primary Fermentation:** 14 days at 48° F (9° C) in glass**Secondary Fermentation:** 14 days at 42° F (6° C) in glass**Tertiary Fermentation:** 42 days at 34° F (1° C) in glass

### Directions

Mash grains at 149° F (65° C) for 75 minutes. Add black malt during sparge.

### Judges' Comments

"Nice beer."

"Excellent balance. Malt predominates, but finish is not sweet. I could drink this all afternoon."

### Runners-Up

**Silver:** Darryl Kochaniec, Goldenrod, FL, Oktoberfest/Märzen, Tampa Bay BEERS

**Bronze:** Lee Theuriet, Lodi, CA, Oktoberfest/Märzen

## Category 4: Dark Lager



158 Entries

**Gold Medal**

Sponsored by Briess Malt &amp; Ingredients Co.

**Eric Anderson, Saint Paul, MN, Munich Dunkel, Saint Paul Homebrewers Club**  
**"Munich Dunkel"**  
**Munich Dunkel**

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

|               |   |
|---------------|---|
| <b>9.0 lb</b> | (4.08 kg) Munich I malt                                     |
| <b>0.5 lb</b> | (227 g) caramel-Munich malt                                 |
| <b>1.0 oz</b> | (28 g) Tettnanger pellet hops,<br>4.4% alpha acid (60 min.) |
|               | Wyeast No. 2206 German lager yeast starter (1L starter)     |
|               | Forced CO <sub>2</sub> to carbonate                         |

**Original Specific Gravity:** 1.053**Final Specific Gravity:** 1.010**Boiling Time:** 60 minutes**Primary Fermentation:** 12 days at 53° F (12° C) in glass**Secondary Fermentation:** 31 days at 34° F (1° C) in glass

### Directions

Mash grains at 150° F (66° C) for 60 minutes.

### Judges' Comments

"Very sweet—would balance better with more attenuation."

"Finished clean—no technical flaws, a little undercarbonated."

"Melanoidins! Getting into bock range."

### Runners-Up

**Silver:** Steve Pierce, Juneau, AK, Schwarzbier (Black Beer)

**Bronze:** Randy Scorby, Baker City, OR, Schwarzbier (Black Beer), Good Libations

## Category 5: Bock



177 Entries

### Gold Medal

Sponsored by  
Washington  
Hop  
Commission

Dave Corbett, Tom Miklinevich, Milford,  
CT, Maibock/Helles Bock, Underground  
Brewers Club of Connecticut  
Untitled  
Helles Bock

### Ingredients

for 11 U.S. gallons (41.64 liters)

|         |  |
|---------|--|
| 19.0 lb | (8.62 kg) Pilsner malt                                 |
| 9.25 lb | (4.2 kg) Munich malt                                   |
| 2.0 oz  | (57 g) Perle whole hops,<br>6% alpha acid (60 min.)    |
| 0.5 oz  | (4.9 g) Spalt whole hops,<br>4.9% alpha acid (45 min.) |
|         | Wyeast No. 2206 Bavarian<br>lager yeast                |

**Original Specific Gravity:** 1.072**Final Specific Gravity:** 1.016**Boiling Time:** 90 minutes**Primary Fermentation:** 4 weeks at 48° F  
(9° C) in glass**Secondary Fermentation:** 6 weeks at  
32° F (0° C) in steel

### Judges' Comments

"Very drinkable Maibock."

"I would pay money for this beer."

### Runners-Up

**Silver:** Tom Whitehead, Chicago, IL, Traditional  
Bock

**Bronze:** Jeffrey Swarenengin, Tulsa, OK,  
Doppelbock, Fellowship of Oklahoma Ale  
Makers (FOAM)

## Category 6: Light Hybrid Beer



248 Entries

### Gold Medal

Sponsored by Cargill World  
Select clo Cargill Malt

**David Anderson, Northglenn, CO, Cream  
Ale, Hop Barley & the Alers**  
**2008 Homebrewer of the Year**  
**"Kari's Cream Ale"**  
**Cream Ale**

### Ingredients

for 11 U.S. gallons (41.64 liters)

|        |   |
|--------|---|
| 8.0 lb | (3.63 kg) Pilsner malt                                    |
| 8.0 lb | (3.63 kg) American 2-row<br>pale malt                     |
| 1.0 lb | (0.45 kg) flaked corn                                     |
| 1.0 lb | (0.45 kg) cane sugar                                      |
| 2.0 oz | (56 g) Hallertau whole hops,<br>3.6% alpha acid (60 min.) |
| 1.0 oz | (28 g) Hallertau whole hops,<br>3.6% alpha acid (1 min.)  |
|        | White Labs WLP001 California<br>ale yeast                 |
|        | White Labs Servomyces yeast                               |
|        | nutrient (2 capsules)                                     |
|        | Forced CO <sub>2</sub> to carbonate                       |

**Original Specific Gravity:** 1.051**Final Specific Gravity:** 1.008**Boiling Time:** 70 min.**Primary Fermentation:** 12 days at 64° F  
(18° C) in glass.**Plate filtered**

### Directions

Mash grains at 149° (64° C) for 60 minutes.

### Judges' Comments

"No flaws. Carbonation dries out finish.  
Nice beer!"

"Light, rapid finish. Some alcohol warming."

### Runners-Up

**Silver:** Curt and Kathy Stock, St. Paul, MN,  
Cream Ale, Saint Paul Homebrewers Club  
**Bronze:** Virg Redman, Vacaville, CA, Blonde  
Ale, Diablo Order of Zymiracle Enthusiasts  
(DOZE)

## Category 7: Amber Hybrid Beer



150 Entries

### Gold Medal

Sponsored by The Grape &  
Granary

**Thomas Wallbank, Indianapolis, IN,  
Düsseldorf Altbier, Foam Blowers of  
Indiana**  
**"SummersALT"**  
**Düsseldorf Altbier**

### Ingredients

for 8 U.S. gallons (30.28 liters)

|         |   |
|---------|---|
| 9.0 lb  | (4.08 kg) Pilsner malt                                    |
| 4.5 lb  | (2.04 kg) light Munich malt                               |
| 0.5 lb  | (227 g) caramel-red malt                                  |
| 0.25 lb | (113 g) caramel-aroma malt                                |
| 0.75 lb | (340 g) caramel-Munich malt                               |
| 2.4 oz  | (68 g) chocolate wheat malt                               |
| 2.25 oz | (64 g) Spalt whole hops,<br>4.9% alpha acid (60 min.)     |
| 0.75 oz | (21 g) Magnum whole hops,<br>13% alpha acid (60 min.)     |
| 0.75 oz | (21 g) Hallertau whole hops,<br>5.5% alpha acid (10 min.) |
| 0.75 oz | (21 g) Saaz whole hops,<br>2.2% alpha acid (2 min.)       |
|         | Wyeast No. 1056 American ale<br>yeast (2L starter)        |
| 3.0 g   | calcium chloride (mash)                                   |
| 3.0 g   | gypsum (mash)   |
|         | Forced CO <sub>2</sub> to carbonate                       |

**Original Specific Gravity:** 1.054**Final Specific Gravity:** 1.013**Boiling Time:** 90 minutes**Primary Fermentation:** 9 days at 60° F  
(16° C) in steel**Secondary Fermentation:** 9 days at 60°  
F (16° C) in steel

### Directions

Mash grains at 134° F (57° C) for 20 minutes.  
Raise mash temperature to 158° F (70° C) and mash for 60 minutes.

### Judges' Comments

"Nice, drinkable beer. Needs a bit more  
attenuation, and more aroma."

"I would pay money for this beer."

## Runners-Up

Silver: Jim Smith, Summerfield, NC, California Common Beer, Battleground Brewers Guild  
Bronze: Keith Mycek, Scottsdale, AZ, Düsseldorf AltBier, The Brewing Network

## Category 8: English Pale Ale



222 Entries

Gold Medal

Sponsored by St. Louis Wine & Beer Making

Kevin Kroll, Lincoln, NE,  
Standard/Ordinary Bitter  
Untitled  
Standard/Ordinary Bitter

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

|         |  |
|---------|--|
| 8.0 lb  | (3.6 kg) English Gold pale malt                            |
| 0.5 lb  | (227 g) English crystal malt                               |
| 0.25 lb | (113 g) Belgian pale malt                                  |
| 0.77 oz | (22 g) Fuggles whole hops, 6% alpha acid (60 min.)         |
| 0.46 oz | (13 g) Kent Goldings whole hops, 5.2% alpha acid (60 min.) |
| 0.49 oz | (14 g) Kent Goldings whole hops, 5.2% alpha acid (15 min.) |
| 0.49 oz | (14 g) Kent Goldings whole hops, 5.2% alpha acid (5 min.)  |
|         | Wyeast No. 1318 London ale III yeast                       |
| 0.5 cup | corn sugar to prime  |

**Original Specific Gravity:** 1.046

**Final Specific Gravity:** 1.006

**Boiling Time:** 60 minutes

**Primary Fermentation:** 8 days at 68° F (20° C) in glass

**Secondary Fermentation:** 14 days at 68° F (20° C) in glass

### Directions

Mash grains at 151° F (66° C) for 60 minutes.

### Judges' Comments

"Crisp, medium-light body, hop astringency evident but not overt. Nice brew! Enjoyable."

"Pushing the envelope for style—closer to Best."

## Runners-Up

Silver: Von Bair, Bethany, CT, Extra Special/Strong Bitter (English Pale Ale), Underground Brewers Club of Connecticut  
Bronze: Steven Daniel, John Steils, Santa Fe, TX, Extra Special/Strong Bitter (English Pale Ale), Foam Rangers Homebrew Club

## Category 9: Scottish and Irish Ale



234 Entries

Gold Medal

Sponsored by Homebrew Depot

Phil Farrell, Cumming, GA, Strong Scotch Ale, Chicken City Ale Raisers  
"If It Ain't Scottish, It's Crap!"  
Scotch Ale

### Ingredients for 11 U.S. gallons (41.64 liters)

|         |   |
|---------|---|
| 24.0 lb | (2.72 kg) Golden Promise pale malt                              |
| 4.0 lb  | (1.81 kg) 60° L crystal malt                                    |
| 4.0 lb  | (1.81 kg) Munich malt   |
| 2.0 lb  | (0.9 kg) wheat malt   |
| 1.5 lb  | (0.68 kg) 120° L crystal malt                                   |
| 6.0 oz  | (170 g) roast barley  |
| 3.0 oz  | (85 g) East Kent Goldings pellet hops, 5% alpha acid (mash hop) |
| 0.5 oz  | (14 g) East Kent Goldings pellet hops, 5% alpha acid (30 min.)  |
|         | White Labs WLP028 Edinburgh ale yeast (0.5 gallon starter)      |
|         | Forced CO <sub>2</sub> to carbonate (2.3 vol.)                  |
| 2       | Whirlfloc tablets (15 min.)                                     |

**Original Specific Gravity:** 1.096

**Final Specific Gravity:** 1.018

**Boiling Time:** 90 minutes

**Primary Fermentation:** 27 days at 67° F (19° C) in glass

**Secondary Fermentation:** 30 days at 67° F (19° C) in glass

### Directions

Mash grains at 153° F (67° C) for 60 minutes. Split batch with first runnings at 1.080 pre-boil.

## Judges' Comments

"Almost cloying—tone down sweetness a notch. Otherwise great!"

"Very enjoyable."

## Runners-Up

Silver: Joseph Formanek, Bolingbrook, IL, Strong Scotch Ale, Urban Knaves of Grain  
Bronze: Jeffrey Oberlin, Friendswood, TX, Scottish Export 80/-, Bay Area Mashtronauts

## Category 10: American Ale



430 Entries

Gold Medal

Sponsored by Bj's Restaurant & Brewery

Richard McLain, Highlands Ranch, CO,  
American Pale Ale  
"Lara Pale Ale"  
American Pale Ale

### Ingredients for 11.5 U.S. gallons (43.53 liters)

|        |   |
|--------|---|
| 20 lb  | (9.07 kg) Gambrinus pale malt                           |
| 1.0 lb | (0.45 kg) 40° L crystal malt                            |
| 1.0 lb | (0.45 kg) 65° L crystal malt                            |
| 1.0 oz | (28 g) Goldings whole hops, 4.3% alpha acid (60 min.)   |
| 1.0 oz | (28 g) Willamette whole hops, 4.7% alpha acid (30 min.) |
| 1.0 oz | (28 g) Cascade whole hops, 6% alpha acid (10 min.)      |
| 1.0 oz | (28 g) Cascade whole hops, 6% alpha acid (1 min.)       |
| 1.0 oz | (28 g) Willamette whole hops, 4.7% alpha acid (1 min.)  |
|        | White Labs English ale yeast, 380 mL starter            |
|        | Forced CO <sub>2</sub> to carbonate                     |

**Original Specific Gravity:** 1.051

**Final Specific Gravity:** 1.012

**Boiling Time:** 70 min.

**Primary Fermentation:** 7 days at 68° F (20° C) in glass

**Secondary Fermentation:** 21 days at 67° F (19°C) in glass

### Directions

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

### Judges' Comments

"Very nice malt, hop balance—good dry/sweet balance. Very good pale ale."

### Runners-Up

Silver: Mike Johnson, Salt Lake City, UT, American Amber Ale, Zion Zymurgist Homebrew Operative Society (ZZ HOPS)  
Bronze: Greg Wondra, Edmonton, AB, Canada, American Brown Ale, Edmonton Homebrewers Guild

### Category 11: English Brown Ale



163 Entries

Gold Medal

Sponsored by Alternative Beverage

**Von Bair, Bethany, CT, Northern English Brown Ale, Underground Brewers Club of Connecticut**  
"Nutty Professor Ale"  
Northern English Brown Ale

### Ingredients

for 4.8 U.S. gallons (18.17 liters)

|          |   |
|----------|---|
| 7.5 lb   | (3.4 kg) Maris Otter pale malt                              |
| 0.75 lb  | (340 g) 40° L crystal malt                                  |
| 0.5 lb   | (227 g) roasted two-row malt                                |
| 0.16 lb  | (72 g) 60° L crystal malt                                   |
| 0.13 lb  | (59 g) Special B malt                                       |
| 0.13 lb  | (59 g) chocolate malt                                       |
| 0.5 oz   | (14 g) Northern Brewer whole hops, 8% alpha acid, (60 min.) |
| 0.25 oz  | (7 g) Goldings whole hops, 5.2% alpha acid, (30 min.)       |
| 0.25 oz  | (7 g) Goldings whole hops, 5.2% alpha acid, (15 min.)       |
| 0.25 oz  | (7 g) Goldings whole hops, 5.2% alpha acid, (1 min.)        |
|          | Wyeast No. 1098 British ale yeast (1.75 pint starter)       |
| 4.0 oz   | (113 g) dextrose to prime                                   |
| 1.5 tsp  | (7.4 mL) gypsum   |
| 0.33 tsp | (1.6 mL) Epsom salts  |
| 1.0 tsp  | (4.9 mL) Irish Moss   |

**Original Specific Gravity:** 1.047

**Final Specific Gravity:** 1.016

**Boiling Time:** 60 minutes

**Primary Fermentation:** 9 days at 68° F  
(20° C) in glass

### Directions

Mash grain at 154° F (67° C) for 90 minutes.

### Judges' Comments

"Good job. Nice/great interpretation of style."

"Maybe a touch more hop flavor, but still very good. Nice finish, well balanced."

### Runners-Up

Silver: Dan George, Westerville, OH, Mild Ale, Scioto, Olentangy & Darby Zymurgists (SODZ)

Bronze: Rodney Kibzey, Lombard, IL, Mild Ale, Urban Knights of Grain

### Category 12: Porter



270 Entries

Gold Medal

Sponsored by Deschutes Brewery

**Paul Gagnon, San Diego, CA, Robust Porter, QUAFF**  
"Robust Porter"  
Robust Porter

### Ingredients

for 12 U.S. gallons (45.42 liters)

|          |   |
|----------|---|
| 24.75 lb | (11.23 kg) pale malt                                  |
| 3.21 lb  | (1.46 kg) Vienna malt                                 |
| 3.21 lb  | (1.46 kg) 40° L crystal malt                          |
| 1.83 lb  | (0.83 kg) 350°L chocolate malt                        |
| 0.92 lb  | (0.42 kg) black patent malt                           |
| 1.25 oz  | (35 g) Magnum pellet hops, 12.9% alpha acid (60 min.) |
| 1.5 oz   | (42 g) Crystal pellet hops, 3.25% alpha acid (0 min.) |
|          | White Labs WLP001 California ale yeast (2L starter)   |
|          | Forced CO <sub>2</sub> to carbonate (2.5 vol)         |
|          | Fermaid K yeast nutrient (1 pinch)                    |

**Original Specific Gravity:** 1.064

**Final Specific Gravity:** 1.012

**Boiling Time:** 60 min.

**Primary Fermentation:** 14 days at 68° F  
(20° C) in glass

### Directions

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

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### Judges' Comments

"Slight saltiness, low head. Otherwise great!"

"I like the coffee flavors but they are not appropriate for a robust porter."

"Chocolate notes with a little roastiness."

### Runners-Up

Silver: Michael Adams, Bill Adams, Visalia, CA, Brown Porter, TCHOPS (Tulare County Homebrewers for Perfect Suds)

Bronze: Paul Zocco, Andover, CT, Baltic Porter, District 8 Brewing Company

## Category 13: Stout



418 Entries

Gold Medal

Sponsored by  
Brew & Grow

**Mike Feiertag, Jim Foster, Cincinnati, OH,  
American Stout, Bloatarian Brewing  
League**  
“Fostag Stout”  
American Stout

### Ingredients for 10 U.S. gallons (37.85 liters)

|         |   |
|---------|---|
| 19.0 lb | (8.62 kg) Maris Otter pale malt   |
| 2.0 lb  | (0.9 kg) chocolate malt   |
| 2.0 lb  | (0.9 kg) English roast barley   |
| 2.0 lb  | (0.9 kg) 120° L crystal malt  |
| 1.5 lb  | (0.68 kg) flaked oats   |
| 6.0 oz  | (170 g) Cascade whole hops,<br>7% alpha acid (60 min.)  |
| 2.0 oz  | (57 g) Cascade whole hops,<br>7% alpha acid (10 min.)<br>White Labs WLP001 California<br>ale yeast<br>Dextrose to prime |

**Original Specific Gravity:** 1.060**Final Specific Gravity:** 1.014**Boiling Time:** 90 minutes**Primary Fermentation:** 7 days at 68° F  
(20° C) in glass**Secondary Fermentation:** 3 days at 65° F (18°C) in glass

### Directions

Mash grains at 154° F (68° C) for 90 minutes.

### Judges' Comments

“Chocolate, toasty malt, medium hop bitterness. Very drinkable. Could use more hop flavor and aroma.”

“Very good beer. Good balance between malt and hops.”

### Runners-Up

**Silver:** Joseph Formanek, Bolingbrook, IL,  
Russian Imperial Stout, Urban Knaves of  
Grain

**Bronze:** Chris Bible, Knoxville, TN, Foreign  
Extra Stout

## Category 14: India Pale Ale (IPA)



332 Entries

Gold Medal

Sponsored by Anderson  
Valley Brewing Co.

**Jay Schrade, Crossville, TN, Imperial IPA,  
Tennessee Valley Homebrewers/  
Hillbilly Hoppers**  
“Pliny the Elder Clone”  
Imperial IPA

### Ingredients for 24 U.S. gallons (90.85 liters)

|          |   |
|----------|---|
| 23.0 lb  | (10.43 kg) Maris Otter pale malt  |
| 26.46 lb | (12 kg) pale malt   |
| 4.26 lb  | (1.93 kg) dextrose (in boil)  |
| 3.5 lb   | (1.59 kg) dextrin malt  |
| 1.2 lb   | (0.54 kg) 45° L crystal malt  |
| 6.21 oz  | (176 g) Chinook whole hops,<br>9.46% alpha acid (mash hop)  |
| 6.21 oz  | (176 g) Columbus whole hops,<br>14.1% alpha acid (90 min.)  |
| 3.25 oz  | (92 g) Chinook whole hops,<br>31% alpha acid (90 min.)  |
| 3.17 oz  | (90 g) Warrior whole hops,<br>15.6% alpha acid (90 min.)  |
| 2.13 oz  | (60 g) Simcoe whole hops,<br>12% alpha acid (45 min.)   |
| 1.54 oz  | (44 g) Simcoe whole hops,<br>13.6% alpha acid (45 min.)   |
| 3.87 oz  | (110 g) Columbus whole hops,<br>15.9% alpha acid (30 min.)  |
| 8.71 oz  | (247 g) Centennial whole hops,<br>9.1% alpha acid (0 min.)  |
| 3.87 oz  | (110 g) Simcoe whole hops,<br>12% alpha acid (0 min.)   |
| 7.9 oz   | (224 g) Columbus whole hops,<br>14.3% alpha acid (dry)  |
| 4.23 oz  | (120 g) Centennial whole hops,<br>9.1% alpha acid (dry)   |
| 4.76 oz  | (135 g) Simcoe whole hops,<br>13.6% alpha acid (dry)<br>Safale VS-05 dry ale yeast<br>(1 packet per carboy) |
| 9.48 oz  | (269 g) corn sugar per 12.3<br>gallon carboy to prime   |
| 12 Tbs   | (177 mL) gypsum in mash   |
| 4        | Whirlfloc tablets (15 min.)   |

**Original Specific Gravity:** 1.070**Final Specific Gravity:** 1.012**Boiling Time:** 90 minutes**Primary Fermentation:** 12 days at 64° F  
(18° C) in glass**Secondary Fermentation:** 7 days at 64° F  
(18° C) in glass

### Directions

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

### Judges' Comments

“Malt is clean and sweet. Hops are strong and dominant. Very nice!”

“Good beer—a bit more finishing hops would be better.”

### Runners-Up

**Silver:** Robert Heinlein, Crown Point, IN,  
English IPA, Brewers of South Suburbia  
(BOSS)

**Bronze:** Mike McDole, Clayton, CA, American  
IPA, Diablo Order of Zymiracle Enthusiasts



### AHA SPECIAL EVENTS

For Information on 2008 AHA Rallies, please see [www.AHArally.org](http://www.AHArally.org)

#### August 23

**AHA Rally—Anchor Brewing Co.** San Francisco, CA. Contact: Kathryn Porter, E-mail: Kathryn@brewersassociation.org Web: [www.AHArally.org](http://www.AHArally.org)

#### August 23

**AHA Rally—Big Time Brewery & Alehouse** Seattle, WA. Contact: Kathryn Porter, E-mail: Kathryn@brewersassociation.org Web: [www.AHArally.org](http://www.AHArally.org)

#### September 27

**AHA Rally—Bell's Brewing Co.** Galesburg, MI. Contact: Kathryn Porter, E-mail: Kathryn@brewersassociation.org Web: [www.AHArally.org](http://www.AHArally.org)

#### October 9-11

**Great American Beer Festival™** Denver, CO. Phone: 888-822-6273, Web: [www.GreatAmericanBeerFestival.com](http://www.GreatAmericanBeerFestival.com)

#### November 1

**AHA Teach a Friend to Homebrew Day** Contact: Janis Gross, Phone: 888-822-6273 x 134, E-mail: Janis@brewersassociation.org Web: [www.beertown.org/events/teach/index.html](http://www.beertown.org/events/teach/index.html)

#### November 1

**AHA Rally—Hops Grillhouse and Brewery** Northglenn, CO. Contact: Kathryn Porter, E-mail: Kathryn@brewersassociation.org Web: [www.AHArally.org](http://www.AHArally.org)

## Category 15: German Wheat and Rye Beer



179 Entries

Gold Medal

Sponsored by Widmer Brothers Brewing Co.

**Todd Murley, Orono, MN,  
Weizen/Weissbier, Saint Paul  
Homebrewers  
“England-Weizen”  
Weizen**

### Ingredients for 5.5 U.S. gallons (20.82 liters)

|                |  |
|----------------|--|
| <b>6.0 lb</b>  | (2.72 kg) wheat malt   |
| <b>4.5 lb</b>  | (2.04 kg) pils malt  |
| <b>0.52 oz</b> | (15 g) Hallertau pellet hops,<br>4.4% alpha acid, (60 min.)<br>White Labs WLP380 |
|                | Hefeweizen IV ale yeast, 1 L<br>starter  |
|                | Forced CO <sub>2</sub> to carbonate<br>(3.3 vol.)                                |

**Original Specific Gravity:** 1.053

**Final Specific Gravity:** 1.014

**Boiling Time:** 60 minutes

**Primary Fermentation:** 10 days at 68° F  
(20° C) in glass

### Directions

Use a double decoction mash schedule with rests at 122° F (50° C), 142° F (61° C) and 158° C (70° C). Raise to 168° F (76° C) for mash out.

### Judges' Comments

“Could use a little more carbonation for style.”

“A very good beer dominated by clove. A bit more banana might make this even stronger.”

### Runners-Up

**Silver:** Fred Kline, Coatesville, PA,  
Weizen/Weissbier

**Bronze:** Dan Sherman, Lafayette, CA,  
Rogganbier (German Rye Beer), Diablo  
Order of Zymiracle Enthusiasts (DOZE)

## Category 16: Belgian and French Ale



317 Entries

Gold Medal

Sponsored by S.A. Bieres  
de Chimay c/o Manneken-  
Brussel Imports

**Kevin Cosentino, Raleigh, NC, Belgian  
Specialty Ale  
“100% Brettanomyces”  
Belgian Specialty Ale**

### Ingredients for 6 U.S. gallons (22.71 liters)

|                 |  |
|-----------------|--|
| <b>11.5 lb</b>  | (5.22 kg) Weyermann Pilsner<br>malt  |
| <b>1.0 lb</b>   | (0.45 kg) Weyermann Vienna<br>malt   |
| <b>1.0 lb</b>   | (0.45 kg) Weyermann acidulat-<br>ed malt   |
| <b>0.5 lb</b>   | (227 g) Weyermann malted<br>wheat  |
| <b>2.0 oz</b>   | (57 g) Hersbrucker pellet hops<br>(60 min.)  |
| <b>0.25 oz</b>  | (7 g) Styrian Goldings pellet<br>hops (2 min.)<br>Wyeast B. bruxellensis<br>(3 qt starter) |
|                 | Wyeast B. lambicus<br>(1 qt starter)   |
| <b>1tsp</b>     | diammonium phosphate for<br>yeast nutrient (4.9 mL)  |
| <b>0.75 cup</b> | corn sugar per 5 gallons<br>to prime   |
| <b>1 tablet</b> | Whirlfloc  |

**Original Specific Gravity:** 1.055

**Final Specific Gravity:** 1.003

**Boiling Time:** 90 min

**Primary Fermentation:** 45 days at 65° F  
(18° C) in glass

### Directions

Mash in at 148° F (64° C) for 60-90 minutes. Mash out at 168° F (76°C) for 15 minutes.

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### Judges' Comments

“Bready malt with barnyard Brett character. Finishes bone dry with some lingering bitterness. A really nice Brett beer. Nice barnyard with hints of pineapple.”

“Nice balance, classic Brett character, grainy malt backbone, spicy hops complement. All that is good about Brett, with no negatives to mar it.”

“Musty, tangy, very interesting. Orval-like hoppiness. I love the aroma.”

### Runners-Up

**Silver:** Julian Shrago, Garden Grove, CA,  
Belgian Specialty Ale, Long Beach  
Homebrewers

**Bronze:** John Allin, Bethlehem, NH, Belgian  
Specialty Ale, Brew Free or Die

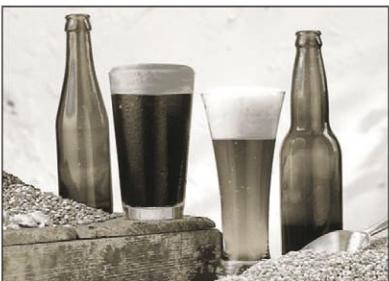


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## Category 17: Sour Ale



141 Entries

### Gold Medal

Sponsored by Captain  
Lawrence Brewing  
Company

**Kristen and Orsolya England, St Paul, MN,**  
**Berliner Weisse, Saint Paul Homebrewers Club**

### Ingredients for 5.0 U.S. gallons (20 liters)

|                |  |
|----------------|--|
| <b>6.2 lb</b>  | (2.8kg) Alföldi fehér nyári buza malt (Hungary)          |
| <b>3.17 oz</b> | (90 g) Pustaföldvári hazikomlo hops - mash hop (Hungary) |
| <b>0.35 oz</b> | (10 g) Pannonhalma-Sokoróalja vad szolo yeast (Hungary)  |

**Original Gravity:** 1.033

**IBUs:** 10

**ABV:** ~3%

### Directions

Single decoction mash. No boil. Ferment at 86° F (30° C) for three days in primary. Bottle direct with 294 g sucrose and 15 g Prise de Mousse yeast. No lactic acid added. The longer in the bottle, the more acidic it will get.

### Judges' Comments

"Nice beer—just expected a sharper finish."

"Wonderfully acidic—sour with wheat malt undertones."

### Runners-Up

**Silver:** Jason Roeper, Amelia, OH, Straight (Unblended) Lambic, Blootarian Brewing League

**Bronze:** Bob Kunz, Burbank, CA, Flanders Red Ale, Maltose Falcons

## Category 18: Belgian Strong Ale



345 Entries

### Gold Medal

Sponsored by Dingemans  
c/o Cargill Malt

**Robert Ginn, Poulsbo, WA, Belgian Tripel,  
West Sound Brewers**  
"Have a Nice Tripel"  
Belgian Tripel

### Ingredients for 11 U.S. gallons (41.64 liters)

|                |   |
|----------------|---|
| <b>27.0 lb</b> | (12.25 kg) Castle pale malt                                   |
| <b>3.75 lb</b> | (1.7 kg) corn sugar malt in boil                              |
| <b>3.25 oz</b> | (92 g) Styrian Goldings whole hops, 4.7% alpha acid (90 min.) |
| <b>2.0 oz</b>  | (57 g) Saaz whole hops, 3.5% alpha acid (30 min.)             |
| <b>2.0 oz</b>  | (57 g) Saaz whole hops, 3.5% alpha acid (2 min.)              |
| <b>5.6 oz</b>  | Wyeast No. 1214 Belgian ale yeast (2 L starter)               |
| <b>1.0 tsp</b> | (159 g) table sugar to prime                                  |

**Original Specific Gravity:** 1.076

**Final Specific Gravity:** 1.009

**Boiling Time:** 90 min.

**Primary Fermentation:** 9 days at 66-72°F (19-22°C) in glass

**Secondary Fermentation:** 19 days at 70-72°F (21- 22 °C) in glass

### Directions

Conduct a protein rest at 122° F (50° C) for 30 minutes, then raise temperature to 147° F (64° C) and hold for 90 minutes. Mash out at 160° F (71° C) for 15 minutes.

### Judges' Comments

"Nice complexity, good flavor balance and intensity. Crisp and refreshing. Full and rich, yet relatively dry and clean. Very enjoyable beer—well made."

### Runners-Up

**Silver:** Scott Lothamer, Moraga, CA, Belgian Strong Dark Ale, Diablo Order of Zymiracle Enthusiasts (DOZE)

**Bronze:** Bob Thompson, Murrieta, CA, Belgian Dubbel, Temecula Valley Homebrewers Association

## Category 19: Strong Ale



232 Entries

### Gold Medal

Sponsored by Northern Brewer

**Alex Buerckholtz, Asheville, NC, American Barleywine, Mountain Ale and Lager Tasters "Cheap Leather Jacket Barley Wine" American Barleywine**

### Ingredients

for 5 U.S. gallons (19 liters)

|           |   |
|-----------|---|
| 12.0 lb   | (5.44 kg) Maris Otter pale malt                             |
| 6.0 lb    | (2.72 kg) Munich malt                                       |
| 3.0 lb    | (1.36 kg) Northwestern Gold dry malt extract (10 min.)      |
| 2.0 lb    | (1.36 kg) Vienna malt                                       |
| 1.0 lb    | (0.9 kg) 40° F crystal malt                                 |
| 2.0 oz    | (57 g) chocolate malt                                       |
| 2.0 oz    | (57 g) Warrior plug hops, 18% alpha acid, (4 hrs)           |
| 2.0 oz    | (57 g) Chinook plug hops, 14% alpha acid, (90 min.)         |
| 2.0 oz    | (57 g) Amarillo plug hops, 10% alpha acid, (45 min.)        |
| 2.0 oz    | (57 g) Simcoe plug hops, 15.7% alpha acid, (20 min.)        |
| 2.0 oz    | (57 g) Cascade plug hops, 7.2% alpha acid, (10 min.)        |
| 2.0 oz    | (57 g) Centennial plug hops, 5.6% alpha acid, (2 min.)      |
| 2.0 oz    | (57 g) Amarillo plug hops, 10% alpha acid, (dry, 10 days)   |
| 2.0 oz    | (57 g) Centennial plug hops, 10% alpha acid, (dry, 10 days) |
|           | Pisgah Brewery ale yeast slurry                             |
| 1.25 cups | dry malt extract (0.3 liters)                               |
| 1 tablet  | White Labs Servomyces yeast nutrient                        |

**Original Specific Gravity:** 1.112**Final Specific Gravity:** 1.022**Boiling Time:** 4 hours, 30 minutes**Primary Fermentation:** 10 days at 70° F (21° C) in glass**Secondary Fermentation:** 30 days at 70° F (21° C) in glass

### Directions

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

### Judges' Comments

"Great hops. A little more malt complexity would help."

"Great American 'grapefruit' hops, complex malts (toffee and caramel), hugely balanced. Big beer, well crafted!"

### Runners-Up

Silver: Tom Gardner, Denver, CO, Old Ale, Foam on the Range

Bronze: John Donaldson, Mark Gerding, Houston, TX, English Barleywine, The Houston United Group of Zymurgists (THUGZ)

## Category 20: Fruit Beer



114 Entries

### Gold Medal

Sponsored by Paradise Brewing Supplies

**John Watson, Southbury, CT, Fruit Beer, Underground Brewers Club of Connecticut**

**2008 Ninkasi Award Finalist**  
**"It's All Mine So Keep Back"**  
 **Berliner Weisse with Sour Cherries**



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#### AHA/BJCP Sanctioned Competition Program

##### January 2008

Meadlennium 2008, 112 entries—Dennis Pierson, Tampa, FL

##### April 2008

Black & Tan, 21 entries—Shaun Ryan, Burlington, IA

Big & Huge Homebrew Competition, 50 entries—Rusty Kunz, Munster, IN

Hurricane Blowoff, 268 entries—Andrew Kelly, Palm Beach Gardens, FL

##### May 2008

Green Mountain Homebrew Competition, 191 entries—Mickey Brown, Middlebury, CT

Silver Dollar Fair Homebrew Competiton, 75 entries—Virg Redman, Vacaville, CA

AHA Club-Only Competition Extract Beers, 58 entries—Ric Vesely, Longmont, CO

Bloatarian Open, 173 entries—Scott LaFollette, Cincinnati, OH

San Diego County Fair Craft Brewers Competition, 500 entries—Green Flash Brewing, San Diego, CA

18th Annual Carolina Brewmasters US Open, 333 entries—Bill Dubas, Raleigh, NC

Goblets of Gold—2008, 38 entries—Keith Howard, Ft. Meyers, FL

Broken Hydrometer V, 14 entries—Anthony Correia, Sunnyvale, CA

Amber Waves of Grain, 374 entries—Tim Collins, Grand Island, NY

Enchanted Brewing Challenge, 94 entries—John Madore, San Jose, NM

26th Annual Oregon Homebrew Festival, 255 entries—Ted Hausotter, Baker City, OR

2008 Wisconsin State Fair Homebrewers Show, 260 entries—Edward Mathis, Beecher, WI

Brewmasters' Open, 363 entries—Mark Forrester, Nashville, TN

Hogtown Brew-Off, 230 entries—Michael Payne, Ponte Vedra, FL

13th Annual Big Batch Brew Bash, 66 entries—Kerry Martin, Austin, TX

The Liquid Poets' 1st Annual Liquid Poetry Slam, 266 entries—Alex Grote, Fort Collins, CO

16th Annual Great Alaska Craftbeer and Homebrew Festival, 76 entries—Rod Savoie, Whitehorse, YT, Canada

Great Canadian Homebrew Competition 2008, 58 entries—Kurt Seelenmayer, Waterdown, ON, Canada

2008 California State Fair Homebrew Competition, 209 entries—Virg Redman, Vacaville CA

2008 California State Fair Commercial Craft Brewing Competition, 365 entries—Drakes Brewing, San Leandro, CA

The Celtic Brewoff, 150 entries—Anthony Perea, Dallas, TX

2008 Longshot Western Regional, 339 entries—Alex Drobshoff, Livermore, CA

Upland Brewing Company UpCup, 37 entries—Kenneth Smith, Plainfield, IN

Puget Sound Pro-Am Competition, 182 entries—James Golovich, Richland, WA

St. Louis Microfest Homebrew Competition, 85 entries—Michael Sweeney, Saint Louis, MO

##### June 2008

Sasquatch Brew Fest Homebrew Competition, 36 entries—Kelley Hook, Eugene, OR

2008 Longshot American Homebrew Contest Chicago Regional, 505 entries—Aaron Schenk, Asheville, NC

2008 BUZZ Off, 401 entries—Ted Johnston, Phoenixville, PA

Alameda County Fair Homebrew Competition (BABO), 133 entries—Nathan Smith, Oakland, CA

Cascade Brewers Cup, 169 entries—James Brischke, Lake Stevens, WA

Second Annual ABC Brews Crews Homebrew Competition, 113 entries—David Curtis, Kalamazoo, MI

New York State Fair Homebrewers Competition, 215 entries—Vince Cassano, Rochester, NY

OC Fair Homemade Beer Competition, 226 entries—Mike Yasuma, Orange, CA

## Ingredients for 10 U.S. gallons (38 liters)

|                |  |
|----------------|--|
| <b>9.0 lb</b>  | (4.5 kg) Weyermann wheat malt                                    |
| <b>11.0 lb</b> | (4.99 kg) Durst pils malt  |
| <b>5.0 lb</b>  | (2.27 kg) sour cherries  |
| <b>1.0 oz</b>  | (28 g) Hallertau whole hops, 3% alpha acid (30 min.)             |
|                | Wyeast No. 3191 Berliner Weisse ale yeast blend (500 mL starter) |
|                | Forced CO <sub>2</sub> to carbonate (3 vol.)                     |

**Original Specific Gravity:** 1.034

**Final Specific Gravity:** 1.010

**Boiling Time:** 30 min

**Primary Fermentation:** 15 days at 70° F (20° C) in glass

**Secondary Fermentation:** 10 days at 70° F (20°C) in glass

**Tertiary Fermentation:** 30 days on fruit at 70° F (20°C) in glass

## Directions

Mash in at 150° F (60° C) and hold for 60 minutes. Rack fermented beer on to cherries.

## Judges' Comments

"Great job!"

"Nice Berliner Weisse. Crisp, clean, light, well complemented with fruit. Maybe could use a little more fruit, but still very good beer."

"Tart, delicate malt/hop balance. Cherries work well in this beer."

## Runners-Up

Silver: Dave Howes, Danville, CA, Fruit Beer  
Bronze: Steve Piatz, Eagan, MN, Fruit Beer, Saint Paul Homebrewers Club

## Category 21:

### Spice/Herb/Vegetable Beer

185 Entries



**Gold Medal**

Sponsored by High Gravity Homebrewing & Winemaking Supplies

**Paul Dienhart, Minnetonka, MN, Spice, Herb, or Vegetable Beer, Saint Paul Homebrewers Club**

**Untitled**

**American Wheat Ale with Lemon Verbena**

## Ingredients

### for 6 U.S. gallons (19 liters)

|               |   |
|---------------|---|
| <b>4.0 lb</b> | (1.8 kg) Cargill Pilsner malt   |
| <b>6.0 lb</b> | (2.72 kg) white wheat malt  |
| <b>1.0 oz</b> | (28 g) Hersbrucker pellet hops, 3% alpha acid (60 min.)   |
| <b>0.5 oz</b> | (14 g) Tettnanger pellet hops, 2.8% alpha acid, (15 min.) Lemon verbena leaves (see directions) |
|               | Wyeast No. 1010 American Wheat ale yeast (1.5 qt starter)                                       |
|               | Forced CO <sub>2</sub> to carbonate (2 vol.)  |
|               | Wyeast yeast nutrient (0.5 tsp in starter)  |
|               | 80% reverse osmosis water, 20% filtered tap water   |

**Original Specific Gravity:** 1.048

**Final Specific Gravity:** unknown

**Boiling Time:** 75 minutes

**Primary Fermentation:** 8 days at 66° F (19° C) in glass

**Secondary Fermentation:** 4 days at 66° F (19° C) in glass

**Tertiary Fermentation:** 11 days at 66° F (19° C) in steel

## Directions

Mash grains using a step mash schedule with 15 minute rests at 125° F (52° C), 144° F (62°C), 154° F (68° C) and 168° F (76° C). For the lemon verbena flavoring, dry the herb thoroughly. Strip 30-40 leaves off the stems and add them to the boil 15 minutes before flame-out. Note that there is an herb lemon verbena and a flower lemon verbena. You want the herb version.

## Hobby Beverage Equipment

"You can't buy what you can brew"

### Special retail store program (E-mail for details)

#### Mash Lauter Tun

Holds 35 lbs grain - flat false bottom Will not float Designed from start as mash lauter tun with RIMs & thermometer threads plus sight glass



#### Fermenters

6.5 - 100 gal  
No secondary transfers  
Move dead yeast not beer  
Heavy wall construction  
Costs less than stainless steel



EVERYTHING INCLUDED READY TO BREW

951-676-2337 - [www.minibrew.com](http://www.minibrew.com) - john@minibrew.com

### Judges' Comments

"Nice beer! Sweet for base style. Lemon is nice touch."

"Overall this is a well done beer."

"Light, refreshing—the verbena leaves are a nice touch."

### Runners-Up

Silver: Mark Martonchik, Northfield, OH,

Spice, Herb, or Vegetable Beer, Society of

Akron Area Zymurgists (SAAZ)

Bronze: Dean Malte, Auburn, WA, Spice, Herb,

or Vegetable Beer

### Category 22: Smoke-Flavored and Wood-Aged Beer



165 Entries

Gold Medal

Sponsored by Alaskan Brewing Co

**Gordon Strong, Beavercreek, OH, Other Smoked Beer, Saint Paul Homebrewers Club**

**2008 Ninkasi Award Winner**

"Burnin' Down the House"

Smoked Weizenbock

### Ingredients

for 6 gallons (22.71 liters)

|         |  |
|---------|--|
| 8.0 lb  | (3.63 kg) Durst wheat malt   |
| 6.0 lb  | (2.72 kg) Weyermann Rauchmalz  |
| 1.5 lb  | (0.68 kg) Weyermann caramel wheat malt   |
| 0.25 lb | (113 g) Weyermann chocolate wheat malt   |
| 1.5 lb  | (0.68 kg) Dingeman aromatic malt   |
| 2.0 lb  | (0.9 kg) Weyermann dark wheat malt   |
| 1 .0 oz | (28 g) Saaz whole hops,<br>4% alpha acid (60 min.)<br>White Labs WLP380<br>Hefeweizen IV ale yeast<br>Reverse osmosis water<br>calcium chloride, in mash |
| 1tsp    |  |

**Original Specific Gravity:** 1.086

**Final Specific Gravity:** 1.022

**Boiling Time:** unknown

**Primary Fermentation:** 64° F (18°C)

### Directions

Use a single decoction mash schedule. Mash in at 127° F (53°C) and hold for 10 minutes. Heat to 146° F (63°C) and hold for 40 minutes. Pull a thick decoction, heat to 162° F (72° C) and hold for 10 minutes, then boil for five minutes. Hold main mash at 158° F (70° C) for 10 minutes. Mash out at 168° F (76°C) for 10 min.

### Judges' Comments

"Chewy! Quite bitter and dry in finish. Too big to drink much of."

"Interesting combo of weizen aroma and wood fire notes. Alcohol evident. A nice effort with good subtle smoke characteristics."

"Very complex with balance of smoke and malt. Spicy clove-like phenols come through."

### Runners-Up

Silver: Steve Fletty, Falcon Heights, MN, Wood-Aged Beer, Saint Paul Homebrewers Club

Bronze: Darryl Kochaniec, Goldenrod, FL, Other Smoked Beer, Tampa Bay BEERS

### Category 23: Specialty Beer



186 Entries

Gold Medal

Sponsored by The Beverage People

**Gordon Strong, Beavercreek, OH, Specialty Beer, Saint Paul Homebrewers Club**

**2008 Ninkasi Award Winner**

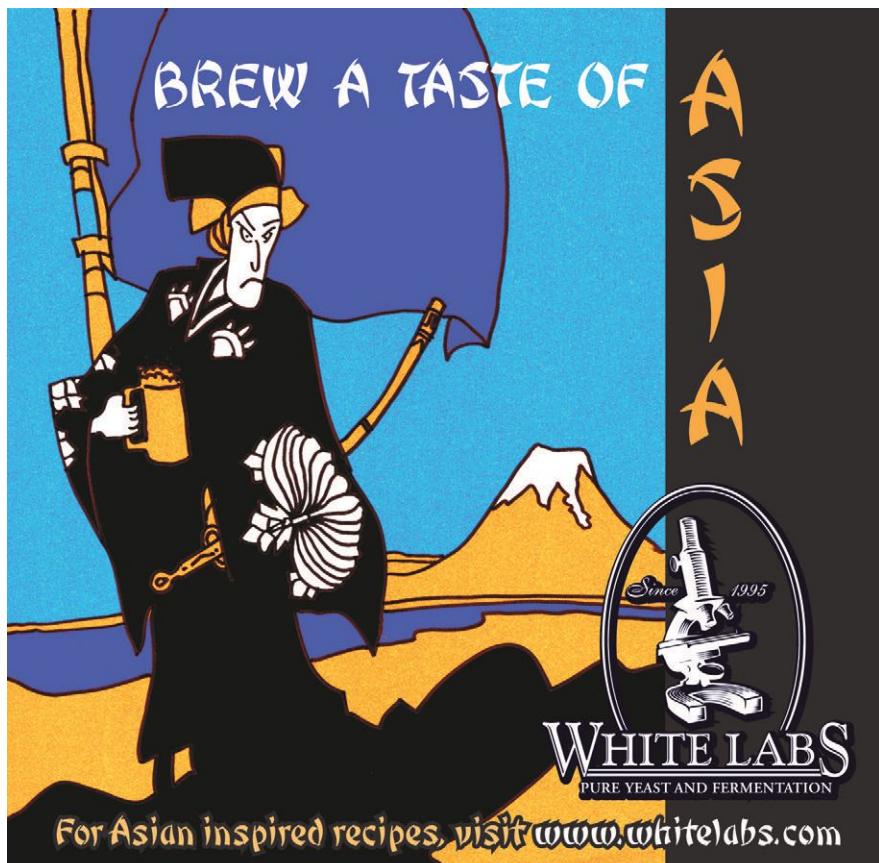
"Ben Franklin's Ale"

Colonial Stock Ale with Molasses and Spruce Tips

### Ingredients

for 6 U.S. gallons (22.71 liters)

|         |   |
|---------|---|
| 10.0 lb | (4.54 kg) Munton & Fison Maris Otter malt |
| 3.0 lb  | (1.36 kg) flaked maize                    |
| 1.0 lb  | (0.45 kg) Durst Vienna malt               |
| 1.0 lb  | (0.45 kg) Dingeman Caramel Vienna malt    |
| 1.0 lb  | (0.45 kg) Weyermann Rauchmalz             |
| 1.5 lb  | (0.68 kg) biscuit malt                    |



|           |  |
|-----------|--|
| 2.0 oz    | (57 g) Crisp chocolate malt                        |
| 2.0 oz    | (57 g) Special B malt                              |
| 1.0 quart | (0.95 L) fresh Colorado blue spruce tips 60 min.   |
| 4.0 oz    | (113 g) light (normal) molasses 15 min.            |
| 1.0 Tbsp  | (15 g) blackstrap molasses 15 min.                 |
| 0.5 oz    | (14 g) Simcoe whole hops, 12% alpha acid 60 min.   |
| 0.5 oz    | (14 g) Amarillo pellet hops, 7% alpha acid 10 min. |
| 0.5 oz    | (14 g) Simcoe whole hops, 12% alpha acid (5 min.   |
| 0.5 oz    | (14 g) Amarillo pellet hops, 7% alpha acid 0 min.  |
|           | White Labs WLP002 English ale yeast                |

**Original Specific Gravity:** 1.070

**Final Specific Gravity:** 1.010

**Boiling Time:** 90 minutes

**Primary Fermentation:** 72° F (22°C)

Aged for 2 years before it was entered.

## Directions

Mash grains at 154° F (68° C) until converted.

## Judges' Comments

"Very nice balance of malt, hops and spruce tip flavors. Deeply fruity. Very clean finish. Nicely put together!"

"Has a nice, sweet flavor, yet finishes dry. Flavors blend. This is pretty well done—the spruce shows itself without dominating."

"Spruce adds a strong fruity complexity. Very strong bitterness. I really enjoyed this beer."

## Runners-Up

Silver: Jeffrey Reilly, Houston, TX, Specialty Beer, The Houston United Group of Zymurgists (THUGZ)

Bronze: Jeff Carlson, Grand Rapids, MI, Specialty Beer, Prime Time Brewers

## Category 24: Traditional Mead

124 Entries



### Gold Medal

Sponsored by Redstone Meadery

**Brian Cooper, Pleasanton, CA, Semi-sweet Mead, Mad Zymurgists**  
"Brewer Brian's Orange Blossom Mead"  
aka "Batch #93½"  
Semi-Sweet Mead

## Ingredients for 7 U.S. gallons (26.5 liters)

|         |  |
|---------|--|
| 15.0 lb | (6.8 kg) orange blossom honey                              |
| 0.25 oz | (7 g) Wyeast yeast nutrient                                |
| 1.0 tsp | Irish Moss (4.9 mL)<br>Wyeast No 2206 Bavarian lager yeast |

**Original Specific Gravity:** 1.077

**Final Specific Gravity:** 1.021

**Boiling Time:** n/a

**Primary Fermentation:** 46 days at 72° F (22°C) in glass

**Secondary Fermentation:** 36 days at 72° F (22°C) in glass

## Directions

Bring water to boil, turn off heat, add honey and mix well. Skim foam that forms, add Irish moss and heat gently until second foam forms, then remove from heat. Chill, transfer and proceed with fermentation.

## Judges' Comments

"Excellent balance of carbonation, strength and sweetness. Very drinkable."

"A very nice mead—great carbonation level. The lower alcohol content is nice and makes this a very enjoyable mead."

"Very nice hydromel. Nice orange blossom honey flavor—very refreshing in a heavy category. If anything, I would add a small amount of grape tannin to help balance the sweetness and acids. Great job!"

## Runners-Up

Silver: Michael White, League City, TX, Sweet Mead, The Houston United Group of Zymurgists (THUGZ)

Bronze: Phil Farrell, Cumming, GA, Sweet Mead, Chicken City Ale Raisers

## Category 25: Melomel (Fruit Mead)

148 Entries



### Gold Medal

Sponsored by Bacchus & Barleycorn LTD

**Thomas Eibner, St Paul, MN, Other Fruit Melomel, Saint Paul Homebrewers Club**  
"Two Cherry Tupelo"  
Still Sweet Melomel with Two Cherry Varieties and Tupelo Honey

## Ingredients for 5.5 U.S. gallons (20.82 liters)

|         |  |
|---------|--|
| 24.0 lb | (10.89 kg) Tupelo honey  |
| 10.0 lb | (4.54 kg) unpitted Montmorency sour cherries                   |
| 10.0 lb | (4.54 kg) unpitted dark sour cherries                          |
| 1.0 tsp | (4.9 mL) pectic enzyme<br>Filtered St. Paul water up to volume |
| 2       | packets Lalvin 71B yeast<br>Curt Stock nutrient additions      |

**Original Specific Gravity:** unknown

**Final Specific Gravity:** unknown

**Boiling Time:** n/a

**Primary Fermentation:** 1 month on cherries in glass

**Secondary Fermentation:** 2 months in glass

**Tertiary Fermentation:** 1.5 years in steel

## Directions

Mix honey with cold water and pour on top of cherries. Ferment, filter and keg.

## Judges' Comments

"Beautiful mead. Definitely a slow sipper. I salute you for using Tupelo honey. I think sweet is accurate, but verges on semi-sweet. I would cut down on the cherry slightly to bring out the Tupelo."

"This is a wonderfully seductive beverage. I really enjoy melomels and meads, and this is one of the better ones I've judged."

## Runners-Up

Silver: Curt and Kathy Stock, St. Paul, MN, Other Fruit Melomel, Saint Paul Homebrewers Club

Bronze: Jason Ditsworth, Anchorage, AK, Other Fruit Melomel, Great Northern Brewers Club

**Category 26: Other Mead**

107 Entries

**Gold Medal**

Sponsored by Main Squeeze

**Steve Piatz, Eagan, MN, Metheglin, Saint Paul Homebrewers Club**  
**2008 Meadmaker of the Year**  
**"Not Mary Ann"**  
**Petillant Sweet Metheglin with Ginger**

**Ingredients**  
for 5.5 gallons (20.82 L)

|                |                                     |
|----------------|-------------------------------------|
|                | Wildflower honey (quantity unknown) |
| <b>3.75 lb</b> | (1.7 kg) fresh ginger               |
|                | 71B1122 dry wine yeast              |
|                | Forced CO <sub>2</sub> to carbonate |

**Original Specific Gravity:** 1.120**Final Specific Gravity:** unknown**Boiling Time:** n/a**Directions**

Original batch had too hot of a ginger character, so it was blended with a second, plain batch of similar strength.

**Judges' Comments**

"Alcohol is a little high for the style. Also, it was petillant, not sparkling. The ginger is nicely balanced with the flavor of honey. A little less ginger would make the balance better. Overall, a nice mead."

"I really liked the raw ginger aroma and flavor. This could probably use more carbonation to balance sweetness and probably less ginger to allow the honey to come out more."

"A pleasant experience overall. Good enough that I might want a second glass."

**Runners-Up**

Silver: Jason Ditsworth, Anchorage, AK, Open Category Mead, Great Northern Brewers Club

Bronze: Curt and Kathy Stock, St. Paul, MN, Open Category Mead, Saint Paul Homebrewers Club

**Category 27: Standard Cider and Perry**

93 Entries

**Gold Medal**

Sponsored by Woodchuck Draft Cider

**Jeff Carlson, Grand Rapids, MI, Common Cider, Prime Time Brewers**  
**2008 Cidermaker of the Year**  
**"Westside Cider"**  
**Medium Sparkling Cider**

**Ingredients**  
for 5.5 gallons (20.82 liters)

|                |  |
|----------------|--|
| <b>5.5 gal</b> | (20.82 L) Hills Brothers Orchard Fresh Pressed Cider |
| <b>3.0 lb</b>  | (1.36 kg) crabapples, pressed and added to fermenter |
| <b>1</b>       | XL pack Wyeast No. 4166 Cider yeast                  |

Forced CO<sub>2</sub> to carbonate

**Original Specific Gravity:** 1.058**Final Specific Gravity:** 1.004**Boiling Time:** n/a

**Primary Fermentation:** 21 days at 60° F (16° C) in glass

**Secondary Fermentation:** 4 months at >50° F (>10° C) in glass

**Judges' Comments**

"A nice, refreshing cider. Very good fermented apple character. A bit more sweetness or less acidity would make this perfect."

"An excellent cider! I really enjoyed how the brilliant acidity leads into the well-defined apple in the middle. The aroma was low, but I can't say that's necessarily a negative (I just wish there was more). Great job, I could drink this all day."

"Overall a wonderful example for this style of cider."

**Runners-Up**

Silver: Stephen Northcutt, Vallejo, CA, Common Cider, Diablo Order of Zymiracle Enthusiasts (DOZE)

Bronze: Jamil Zainasheff, Elk Grove, CA, Common Perry, QUAFF

**Category 28: Specialty Cider and Perry**

76 Entries

**Gold Medal**

Sponsored by Woodchuck Draft Cider

**Jesse Stremcha, Sarah Stremcha, Saint Paul, MN, Fruit Cider, Saint Paul Homebrewers Club**  
**"Cheater's Cherries"**  
**Sparkling Medium Cider with Cherries**

**Ingredients**

(Batch size and ingredient amounts not specified)

Greening Apple Cider  
McIntosh Apple Cider  
Winesap Apple Cider  
Cortland Apple Cider  
Crabapple Cider  
Cherry Concentrate  
Lalvin 71B Narbonne wine yeast

**Judges' Comments**

"After the cherry candy aroma vented, the cider had apples to balance. Pie cherries also came through in the flavor but did not dominate the apples. Nicely done, a pleasure to judge."

"A fairly delicate balance between cherries and apples. A touch less acidity or more sweetness would really center the balance."

**Runners-Up**

Silver: Jeff Carlson, Grand Rapids, MI, Applewine, Prime Time Brewers

Bronze: Richard Tomory, Campbell, OH, Applewine, Brewers of Ohios Zymurgists Enclave (BOOZE)



## 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](http://www.bjcp.org/phpBB2/index.php).

To register a new competition, please go to [www.bjcp.org/apps/comp\\_reg/comp\\_reg.html](http://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](http://www.beertown.org/homebrewing/scp/judge.html) for information.



### September 6

**Santa Cruz County Fair Homebrew Competition** Watsonville, CA. Contact: Mia Bossie, Phone: 831-336-4569, E-mail: [bossies@cruzio.com](mailto:bossies@cruzio.com) Web: [www.santacruzcounty-fair.com](http://www.santacruzcounty-fair.com)

### September 6

**Malt Madness** Allentown, PA. Contact: Al Hazan, Phone: 570-421-1479, E-mail: [hazan@ptd.net](mailto:hazan@ptd.net) Web: [www.lehighvalleyhomebrewers.org](http://www.lehighvalleyhomebrewers.org)

### September 6

**Topsfield Fair Home Brew Competition** Topsfield, MA. Contact: Kathleen Duggan, Phone: 978-762-4789, E-mail: [katieduggan@comcast.net](mailto:katieduggan@comcast.net)

### September 7

**Tulare County Fair Homebrew Competition** Tulare, CA. Contact: Bert McNutt, Phone: 559-592-8175, E-mail: [bertmc42@earthlink.net](mailto:bertmc42@earthlink.net) Web: [www.tchops.org](http://www.tchops.org)

### September 7

**Great Frederick Fair** Frederick, MD. Contact: Mike Lamb, Phone: 301-676-2053, E-mail: [fredfairbrew@yahoo.com](mailto:fredfairbrew@yahoo.com) Web: [www.fredfairbrew.com](http://www.fredfairbrew.com)

### September 13

**The Schooner Homebrew Championship** Racine, WI. Contact: Rick McNabb, Phone: 262-880-6926, E-mail: [schoonerhomebrew@yahoo.com](mailto:schoonerhomebrew@yahoo.com) Web: [www.theschooner.org](http://www.theschooner.org)

### September 13

**Seafood, Jazz & Brew Festival Homebrew Competition** Hilton Head Island, SC. Contact: Mike Tripka, Phone: 843-540-9022, E-mail: [mtripka@hargray.com](mailto:mtripka@hargray.com) Web: [www.hiltonheadhospitalityassociation.com](http://www.hiltonheadhospitalityassociation.com)

### September 20

**Queensland Amateur Brewing Championship** Brisbane, Queensland, AU. Contact: Jye Smith, Phone: +61 7 31651051, E-mail: [jye.smith@gmail.com](mailto:jye.smith@gmail.com) Web: [www.qabc.org.au](http://www.qabc.org.au)

### September 20

**Pacific Brewers Cup** Los Angeles, CA. Contact: Kevin Koenig, Phone: 310-254-7095, E-mail: [kevink@earthlink.net](mailto:kevink@earthlink.net) Web: [www.PacificGravity.com](http://www.PacificGravity.com)

### September 20

**The Beer Baron Brewing Brawl** Waterford, MI. Contact: Daniel Frechette, Phone: 248-628-0934, E-mail: [brewfestorg@gmail.com](mailto:brewfestorg@gmail.com)

### September 24

**Brew Bubbas Big Brew Brew-Off: September 2008** Warren, MI. Contact: Craig Belanger, Phone: 586-945-8629, E-mail: [craig@brewbubbas.com](mailto:craig@brewbubbas.com) Web: [www.brewbubbas.com](http://www.brewbubbas.com)

### September 26

**FOAM Cup** Tulsa, OK. Contact: Desiree Knott, Phone: 918-645-5509, E-mail: [desiree@highgravitybrew.com](mailto:desiree@highgravitybrew.com) Web: [www.highgravitybrew.com/foamcup/](http://www.highgravitybrew.com/foamcup/)

### September 27

**14th Annual Commander SAAZ Interplanetary Homebrew Blastoff** Cocoa Beach, FL. Contact: Stephen Mitchell, Phone: 321-537-9517, E-mail: [samitchell@cfl.rr.com](mailto:samitchell@cfl.rr.com) Web: [www.saaz.org](http://www.saaz.org)

### September 27

**Mid South Fair** Memphis, TN. Contact: John Moranville, Phone: 901-682-5042, E-mail: [moranvillejb@bellsouth.net](mailto:moranvillejb@bellsouth.net) Web: [www.Memphisbrews.com](http://www.Memphisbrews.com)

### September 27

**13th Annual Music City Brew Off** Nashville, TN. Contact: Tom Vista, Phone: 615-207-2952, E-mail: [hoptyrant@gmail.com](mailto:hoptyrant@gmail.com) Web: [www.MusicCityBrewers.com](http://www.MusicCityBrewers.com)

### September 27

**The Big Fresno Fair Homebrew Competition** Fresno, CA. Contact: Dave Morford, Phone: 559-970-2482, E-mail: [fshrdave@qnis.net](mailto:fshrdave@qnis.net) Web: [www.sjwortsogs.org](http://www.sjwortsogs.org)

### September 27

**Maryland Microbrewery Festival 2008 Homebrew Competition** Westminster, MD. Contact: Neil Mezebish, Phone: 410-596-4473, E-mail: [neil.mezebish@lightindustries.com](mailto:neil.mezebish@lightindustries.com) Web: [www.unionmills.org](http://www.unionmills.org)

### September 28

**Muse Cup Mead Only Competition** Fort Collins, CO. Contact: Pamela McAlpin, Phone: 970-224-2767, E-mail: [pamelam2008@gmail.com](mailto:pamelam2008@gmail.com)

### October 4

**2nd Annual KROC World Brewers Forum Homebrew Competition** Westminster, CO. Contact: Ryan Thomas, Phone: 720-339-1524, E-mail: [ryanthomasai@gmail.com](mailto:ryanthomasai@gmail.com) Web: [www.kroc.org](http://www.kroc.org)

### October 4

**New Brunswick OktoBrewFest** New Brunswick, NJ. Contact: Pamela Stefanek, Phone: 732-545-4849, E-mail: [Pstefanek@newbrunswick.com](mailto:Pstefanek@newbrunswick.com) Web: [www.NewBrunswick.com](http://www.NewBrunswick.com)

### October 4

**Arizona Society of Homebrewers Oktoberfest** Mesa, AZ. Contact: Barry Weeg, Phone: 480-516-6874, E-mail: [bweeg@yahoo.com](mailto:bweeg@yahoo.com) Web: [www.azhomebrewers.org](http://www.azhomebrewers.org)

### October 4

**VicBrew Victorian Amateur Brewing Championship** Melbourne, Victoria, AU. Contact: Mark Hibberd, Phone: 03-9580 0372, E-mail: [mhibberd@melbpc.org.au](mailto:mhibberd@melbpc.org.au) Web: [www.vicbrew.org](http://www.vicbrew.org)

### October 12

**Australian National Amateur Wine and Beer Show** Adelaide, South Australia, AU. Contact: Russell Taylor, Phone: 0408 085601, E-mail: [anawbs@anawbs.org.au](mailto:anawbs@anawbs.org.au) Web: [www.anawbs.org.au](http://www.anawbs.org.au)

### October 17

**Homebrew Competition Sponsored by Central Arkansas Fermenters and Little Rock, AR.** Contact: Ken Haycock, Phone: 501-223-0030, E-mail: [k.haycock@sbcglobal.net](mailto:k.haycock@sbcglobal.net) Web: [www.centralkansasfermenters.com/](http://www.centralkansasfermenters.com/)

### October 18

**AHA Club-Only Competition: Imperial Anything** Macomb Township, MI. Contact: Fred Bonjour, Phone: 248-872-0403, E-mail: [homebrew@wideopenwest.com](mailto:homebrew@wideopenwest.com) Web: [www.beer-town.org/homebrewing/club.html](http://www.beer-town.org/homebrewing/club.html)

### October 18

**Oktoberfest** Newport, KY. Contact: Conan Crofoot, Phone: 513-608-0888, E-mail: [corvid@cincl\\_rr.com](mailto:corvid@cincl_rr.com) Web: [www.maltinfusers.org](http://www.maltinfusers.org)

### October 18

**Atlanta Strong Beer Competition** Atlanta, GA. Contact: Bob Sandage, Phone: 678-523-5214, E-mail: [bobsandage@yahoo.com](mailto:bobsandage@yahoo.com) Web: [www.groups.yahoo.com/group/FinalGravity](http://www.groups.yahoo.com/group/FinalGravity)

### October 19

**2008 National Organic Homebrew Challenge** Santa Cruz, CA. Contact: Amelia Slayton, Phone: 831-454-9665, E-mail: [7bridges@breworganic.com](mailto:7bridges@breworganic.com) Web: [www.breworganic.com/Competition/index.html](http://www.breworganic.com/Competition/index.html)

### October 23

**AABC 2008: Australian Amateur Brewing Championship** Melbourne, Victoria, AU. Contact: Mark Hibberd, Phone: 03-9580 0372, E-mail: [mhibberd@melbpc.org.au](mailto:mhibberd@melbpc.org.au) Web: [www.aabc.org.au](http://www.aabc.org.au)

### October 25

**Queen of Beer Women's HBC** Placerville, CA. Contact: Madeline Franke, E-mail: [mfranke@ebay.com](mailto:mfranke@ebay.com) Web: [www.hazeclub.org](http://www.hazeclub.org)

### October 25

**Hoppy Halloween Challenge** Fargo, ND. Contact: Susan Ruud, Phone: 701-371-3690, E-mail: [susan.ruud@ndsu.edu](mailto:susan.ruud@ndsu.edu) Web: [www.prairiehomebrewers.org/](http://www.prairiehomebrewers.org/)

### October 29

**Brew Bubbas Big Brew Brew-Off: October 2008** Warren, MI. Contact: Craig Belanger, Phone: 586-945-8629, E-mail: [craig@brewbubbas.com](mailto:craig@brewbubbas.com) Web: [www.brewbubbas.com](http://www.brewbubbas.com)

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# There's a Maggot in My Beer



(How I Learned to Relax  
and Have a Homebrew)

By Jamil Zainasheff

Illustration by Mike Moran

I popped open the keg lid and the stench of death arose to meet me. “Wow, what beer was this?” I said to myself as I tried to avoid breathing the fetid air. I had accumulated a sizable pile of kegs waiting to be cleaned and it was impossible to figure out what beer this keg once contained. Letting kegs sit until I had several of them to clean was all part of my new, easy-going brew process where I had more fun and didn’t worry so much. I removed the lid and took a peek inside. Oh my, I nearly lost my lunch. Maggots here, maggots there, maggots everywhere. How did they get inside a sealed keg?

Those who know my brewing process know that today I am very particular about how some brewing tasks are done and on some others I’m quite flexible. My beer tends to be very good, but there was a time, not long ago, when I was standing in my garage looking inside a maggoty keg.

When I first started brewing, my knowledge was limited and there were only a few variables I could control. When the instructions on a can of extract said to add water, I turned on the faucet. Sure, I measured the amount of water with precision, but

I had no idea that chlorine compounds in the water could be an issue or that there could be bacteria present. Of course, my beer didn’t turn out so great, so I began to study everything about brewing and I quickly learned that there is a nearly infinite number of variables that affects beer.

As is my nature, I began trying to control all of these new variables with excessive precision. It was no longer OK to use about a half-ounce of sanitizer; I switched to measuring it in milliliters. I no longer weighed hops in tenths of ounces; it had to

be tenths of grams. I worked harder at brewing, my beer became better, but brewing was no longer fun. In fact, brewing became the equivalent of brain surgery, with many hours of prep and post-op care for each beer.

It was about this time that I met Dave Sapsis, a renowned beer judge and brewer. Dave kindly invited me over to brew one day and I anticipated learning some secrets from a great brewer.

The first thing I noticed was that his equipment looked like it was assembled by someone who had watched a lot of "MacGyver." His mash tun was something many lambic breweries would consider

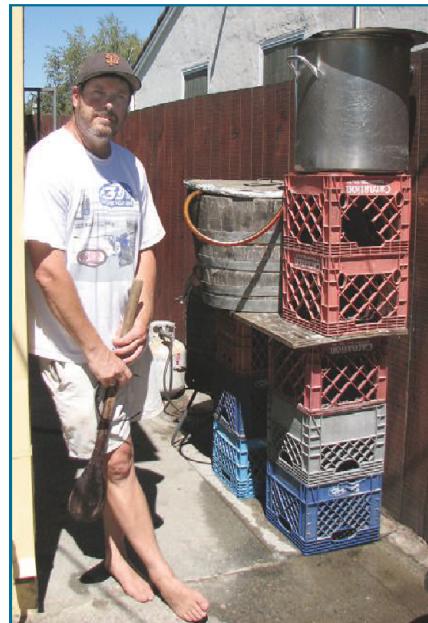
outdated. It was half of an old barrel with a piece of window screen held down by a rock. A piece of tubing and a large binder clip (like you'd use to hold together a stack of paper) took the place of a valve to control the runoff. His wort chiller looked as if it was scrap copper that fell off a truck during rush hour traffic.

Then I discovered Dave had a much more relaxed approach to brewing as well. "Close enough" was a phrase he used frequently during our brew day. Clearly, Dave didn't worry nearly as much as I did when it came to brewing, but he was making beer as good as or better than mine. It didn't take me long to realize that I had been worrying too much. Perhaps

the brewing process was much more forgiving than I had realized? Maybe I should relax and have a homebrew? After enjoying a few more of Dave's fine beers, I decided to loosen up during my next brewing session. I was going to relax with a passion!

The next several times I brewed, I didn't worry nearly so much. I sort of watched the clock. I weighed things, but not with much precision. Sanitizer? Yeah, that color looks right. I relaxed. I drank more than one homebrew. I had fun during the brew day. It was easy to knock out batch after batch of beer. At first the beer was still good, but it didn't take long before I had one so-so batch, and then another.

**I relaxed. I drank more than one homebrew. I had fun during the brew day. It was easy to knock out batch after batch of beer.**



Dave Sapsis poses with his MacGyver-like setup.



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Oops, maybe I relaxed a bit too much?

I mentioned my results to Dave. He had a very interesting take on my results. He thought that while my former obsessive control of the brewing process was a bit much, mixed in there were some important elements that did benefit from a bit of precision and care. He suggested that somewhere in-between was the perfect balance between obsessive and careless, between having too much fun and ruining a hobby with worry.

I knew Dave was right. I began the process of learning what things were important to brewing great beer and what things were not so critical. I learned which aspects of brewing require precision and which aspects have more relaxed needs. I learned that base grain measurements don't need much precision at all. Specialty grains require more precision and hops require more still. Yeast and fermentation temperature are big factors in the quality and character of a beer and sanitation should be a religion. Yet mash technique or all-grain brewing versus extract brewing is not such a big deal. Selecting fresh ingredients is a must, but there are lots of great products on the market to choose from. I learned that some aspects of brewing are relaxing and some are improved by being picky and paying more attention to detail.

I still find myself obsessing over some aspects of brewing, but in general I've learned to take it easy on the less important elements and to enjoy the hobby more. In the end, I learned that Charlie Papazian was right and that it is more important to relax and enjoy yourself while you brew than it is to stress about hitting every number. If you brew and have fun, that is more important than making the perfect beer and having no fun at all. If brewing becomes a chore, then you've lost sight of the true value of this grand hobby.

Jamil Zainasheff is co-author of the book *Brewing Classic Styles*, which contains more than 80 of his award-winning recipes (in both extract and all-grain versions) covering every BJCP recognized style.

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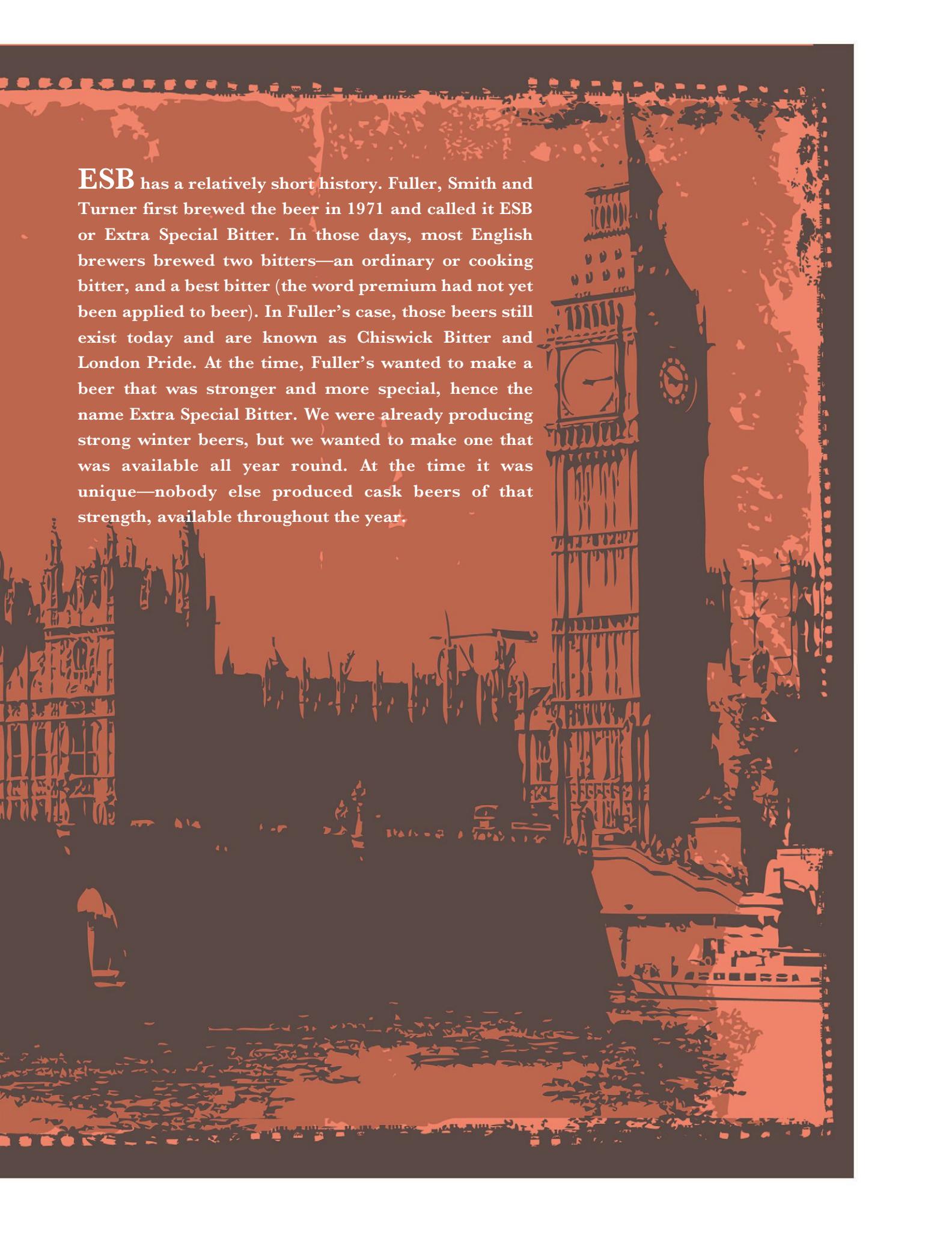
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# Extra Special Bitter



By John Keeling



**ESB** has a relatively short history. Fuller, Smith and Turner first brewed the beer in 1971 and called it ESB or Extra Special Bitter. In those days, most English brewers brewed two bitters—an ordinary or cooking bitter, and a best bitter (the word premium had not yet been applied to beer). In Fuller's case, those beers still exist today and are known as Chiswick Bitter and London Pride. At the time, Fuller's wanted to make a beer that was stronger and more special, hence the name Extra Special Bitter. We were already producing strong winter beers, but we wanted to make one that was available all year round. At the time it was unique—nobody else produced cask beers of that strength, available throughout the year.

When Fuller's began to export beer to the U.S. in the 1980s, American brewers drank this beer, liked it and assumed it was a style. Next, they copied it and tried to make it bigger and better, which was immensely flattering for everyone at Fuller's. In the UK Fuller's ESB is still regarded as a very strong session ale, although in the U.S. it is not thought of as particularly strong. In fact some American brewers do not regard Fuller's ESB as typical of the style (perhaps too malty!).

If you look at the BJCP style guides, ESB appears in section 8C as Extra Special/Strong Bitter (English Pale Ale). There are many people who think that ESB is not a style, but merely an extension of the Bitter/Pale Ale style. While this is technically true, its history and influence on American craft brewing means that it probably can be regarded as a style.

Here is a brief explanation of the way Fuller's makes beer.

## Water

At Fuller's, we Burtonize our water for all

beers except Porter. It is essential to the taste of any bitter to use Burtonized water and this has been known for centuries.

## Malt

We use pale ale specification malt for ESB (and London Pride), which forms 95 percent of the grist, the other 5 percent being crystal malt. We add a little chocolate malt for coloring. We buy our malt from seven different maltsters and usually blend three together for any one brew. We do that for a very good reason—namely I get seven bottles of whiskey every Christmas. I try to keep that a secret from our purchasing department.

## Hops

For hops we use Target at the beginning of the boil, late copper hop with Northdown and Challenger. In addition, we add Goldings and Target to the fermenter, Goldings in maturation and Goldings in cask (dry hopping).

## Mashing

We brew all our bitter style beers as a parti-gyle—that is, we brew Golden Pride, ESB, London Pride, Pale Ale and Chiswick

## ESB Recipe

### Ingredients

|     |   |
|-----|---|
| 95% | Pale Ale Malt                                   |
| 5%  | Crystal malt, plus Chocolate malt for coloring  |
|     | Target, Northdown, Challenger and Goldings hops |
|     | English Ale yeast                               |

from one mash. This is the traditional way to use a mash tun.

We mash our two tuns one after each other. We then let them stand for 60 minutes before running them both into the first copper. When that copper is full we continue running into the second copper. The first copper typically has a gravity of 1.080, the second has a gravity of 1.020. We add 75 percent of the hops to the first copper and the remainder to the second, and then we boil for one hour.

## Fermenting

Next, the coppers are blended into the fermenting vessels. The stronger beers get more first copper and a little second copper, and reverse for the weaker beers.

Fermentation takes about three to four days active fermentation and three days settling. We use our own Fuller's yeast, although any English ale yeast would be suitable. The beer is matured for three weeks in Goldings in the tank.

Obviously, the beer should be stronger in malt and hoppy flavors than either ordinary or best bitter. I would say that the balance of the beer has to be to the hop and, in particular, to the English hop character. There should be a strong floral hop aroma and the best hop to achieve this is Goldings. We are famous for our orange citrus type flavors and I think that some fruitiness should always be apparent.

## Examples of the Style

In England, Adnams Broadside, Greene King Abbot and (continued on page 66)

| Typical ESB Analysis   |                     | SPECIFICATION |
|------------------------|---------------------|---------------|
| % Alcohol .....        | (v/v) .....         | 5.4 – 6.5     |
| Original Gravity ..... | (deg. sacch.) ..... | 1.055 – 1.063 |
| Final Gravity .....    | (deg. sacch.) ..... | 1.010 – 1.013 |
| Color .....            | (EBC 430nm) .....   | 26 – 35       |
| pH .....               | .....               | 3.8 – 4.4     |
| Bitterness .....       | (BU) .....          | 31–39         |





# 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 Grand Master judges in the Beer Judge Certification Program. Each issue they score two widely available commercial beers (or meads or ciders) using the BJCP scoresheet. We invite you to download your own scoresheets at [www.bjcp.org](http://www.bjcp.org), pick up a bottle of each of the beverages and judge along with them in our Commercial Calibration.**



For this month's Commercial Calibration, we shifted gears to offer up two ciders, made in the traditional way from true cider apples. Cider making is enjoying a renaissance of sorts in the United States.

First up was Farnum Hill Extra Dry Cider. Farnum Hill, based in Lebanon, N.H., produces highly acclaimed ciders that are dry and complex, using cider apples of English, French and American origin. Proprietors Steve Wood and Louisa Spencer bucked tradition by shifting the main focus of their Poverty Lane Orchards from dessert apples to cider and antique varieties.

**ON THE WEB**  
**BJCP Style Guidelines**  
[www.bjcp.org](http://www.bjcp.org)  
**Farnum Hill Ciders**  
[www.farnumhillciders.com](http://www.farnumhillciders.com)  
**West County Cider**  
[www.westcountycider.com](http://www.westcountycider.com)

Farnum Hill Extra Dry Cider is pale gold, bubbly and seriously dry. It is richly aromatic, suggesting myriad fruits of the earth and the earth itself, with a complex, palate-cleansing balance of fruit, astringency, and acid. The alcohol content is 7.5 percent by volume. It is refreshing and palate-cleansing with fish or seafood, spicy foods, Indian, Thai or Szechuan.

In 1984, West County Cider in Colrain, Mass. became the first U.S. winery to specialize in hard cider. Our judges sampled Reine de Pomme, the “fullest, boldest cider” that West County has ever produced.

The Reine de Pomme variety, or “Queen of the Apples,” gives tannic complexity and rich, dark fruit to this cider. It is blended with the North American bittersweet apple Redfield—full of bright fruit—and the tannic Dabinett, an English bittersweet apple, for a full-bodied, fruity cider.

“Reine de Pomme is an old French bittersweet cider apple variety (no longer grown there),” explains Terry Maloney of West County Cider. “We collected the scion wood [twigs clipped from cider apple trees] from the Reference Orchard at the New York State Agricultural Experiment Station in Geneva, N.Y. in 1982 and have grown it in our orchard since then.”

Reine de Pomme is fermented in stainless tanks using fresh-pressed juice. “We try to preserve and express the flavors of the fruit in our ciders,” said Maloney.



*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 and principal author of the 2004 BJCP Style Guidelines and president of the BJCP board who lives in Beavercreek, Ohio.*

# THE SCORES



Farnum Hill Extra Dry Cider—Farnum Hill Ciders, Lebanon, N.H.  
BJCP Category: 27B English Cider

## THE JUDGES' SCORES FOR FARNUM HILL EXTRA DRY CIDER



DAVE HOUSEMAN



BETH ZANGARI



SCOTT BICKHAM



GORDON STRONG

**Aroma:** Fruity esters without being overtly apple-like. Earthy, farmyard aroma adds to complexity. Light acidity—lactic, not acetic. Low alcohol aroma. Very pleasant overall presentation. (8/10)

**Appearance:** Brilliant clarity. Rich, gold color. Sparkling carbonation rapidly dissipates. (6/6)

**Flavor:** Fruity with apple notes. Complex farmyard flavor is more prominent as the cider warms. Dry. Slight lingering astringency but not puckering. Full bodied. Initial carbonation subsided to a light tingle in mouthfeel. Well balanced combination of sweetness, acidity and astringency. Alcohol warming but it's not harsh or assertive. (22/24)

**Overall Impression:** Very drinkable and enjoyable. More fruity and complex than a similar dry, white wine. Excellent with foods similar to those that go with white wine such as seafood and spicy foods. I can imagine this going with a rich shrimp Alfredo fettuccini. Certainly a great alternative to white wines. (9/10)

**Total Score: (45/50)**

**Aroma:** Some subdued sweet apple fruit with a distinct farmyard aroma that dissipates as the cider sits. Slight smoky bacon note, along with a hint of sherry. Tropical fruit aromas suggested in the guidelines are barely detectable. (6/10)

**Appearance:** Golden, very clear. Mousse forms, then dissipates to a string of bubbles that consistently rises from the bottom of the glass. Lovely. (6/6)

**Flavor:** Sweet apple fruit up front, of a green-skinned, tarter perfumey type with a farmyard flavor and balance toward acidity; reminiscent of a lovely gueuze. Dry crisp finish with a hint of lingering sweetness, but with the tropical fruit barely detectable. (20/24)

**Overall Impression:** I had to consider the fact that most of the ciders available in this area are more of a common variety, or not fermented. The single example I encountered during a trip to the UK was sweet, therefore not really comparable in this case (though quite delicious and memorable). This was quite an enjoyable sip, though missing some of the nuances described in the guidelines, particularly the tropical fruit aromas and flavor that might provide a bit more balance and complexity. The farmyard character is a bit stronger than I expect, not as gentle as the malolactic ferment in many of the white varietal wines available in the Gold County of California. The crisp dry finish begs for a spicy dish (tikka masala!) as an accompaniment. Refreshing! (7/10)

**Total Score: (39/50)**

**Aroma:** Complex aroma but no components are dominant. There are some earthy and barnyard notes, and the tropical fruit character is more reminiscent of fresh pears rather than apples. I have noted this dichotomy in my tasting notes for other French and English ciders. There is some acidity in the background. (8/10)

**Appearance:** Some carbonation, and the thin stream of bubbles suggests that it is petillant. The color is very light straw to gold, and the clarity is brilliant. (6/6)

**Flavor:** Starts with rounded apple notes, but is attenuated fairly quickly into a dry, moderately acidic finish. There is a nice transition in flavors as the cider travels from the front of the tongue to the back, with a complex array of tropical fruit esters and subtle barnyard notes. The lactic acid is a little sharp in the finish—reminds me of a young Italian white wine, but the finish may mellow with some aging. The finish also has a slight astringency from fruit tannins that enhances the balance, and a slight warmth on the palate belies the alcohol strength. (19/24)

**Overall Impression:** Thanks for sharing a very nice example of an English cider. The aroma and flavors are complex, although my preference is for a slightly softer finish with a little less acidity. The dryness in the finish is very well done and suggests that this cider would be an excellent aperitif, especially if paired with a flavorful cheese. (8/10)

**Total Score: (41/50)**

**Aroma:** Woody, clean apple complexity, suggestive of tannin and oak. Cleanly fermented apple character. Nothing off. Light acid and alcohol sharpness. (9/10)

**Appearance:** Poured with an effervescence of pure white bubbles, settling quickly. Tiny bubbles continue to float up from the bottom of the glass throughout the tasting. Perfectly clear. Pale golden color. Quite attractive. (6/6)

**Flavor:** Sparkling, bracing dryness, crisp finish. Moderate tannins and acidity—the acidity is higher than most traditional English ciders. Very clean and complex fresh apple character. Medium-full body, suggestive of alcohol but not hot. Fairly long, lingering finish with apple flavor and malic acidity. Faint bitterness. (21/24)

**Overall Impression:** Unusual acidity for an English cider, but I can see how it stands in for the normally higher tannin levels. Amazingly well-constructed cider. The apple varieties are complex, tasty and interesting. With the acidity and tannin about equal, this has a hybrid US-UK feel to it but without a doubt this is a world-class artisanal cider. More bubbles than advertised but I actually think it works better in a cider of this dryness and acidity. A wonderful aperitif on a hot summer day. (9/10)

**Total Score: (45/50)**



## THE JUDGES' SCORES FOR WEST COUNTY REINE DE POMME



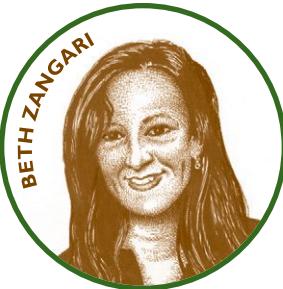
**Aroma:** Buttery aroma up front is a bit assertive. Light fruitiness; not particularly apple-like esters. Little apparent alcohol. No apparent acidity. No farmyard character. (7/10)

**Appearance:** Brilliant clarity with rich amber color. Color from the apples used. Sparkling carbonation dissipates rapidly. Very pretty. (6/6)

**Flavor:** Caramel, buttery notes up front. Chardonnay-like. Sweetness balanced by lingering astringency that gives a somewhat dry finish rather than balanced by acidity. Honey-like notes reminiscent of dry mead with dense, fruity esters. Good balance of astringency, acidity and fruitiness. (19/24)

**Overall Impression:** Smooth acidity from malolactic fermentation results in full-bodied, balanced, buttery notes to aroma and flavor. While some sweetness remains, the astringency keeps this cider from being cloying and makes this a more drinkable cider. The buttery notes would make this an excellent cider to have with excellent French cheeses, such as Brie and Camembert. (8/10)

**Total Score: (40/50)**



**Aroma:** Lots of golden apple fruit, with slight vinegar aroma and hint of bacon in the background, suggestive of wood. (8/10)

**Appearance:** Deep golden, with orange highlights in a brilliantly clear liquid. A stream of bubbles rises from the bottom of the glass. Not gassy or fizzy. (6/6)

**Flavor:** Light oaky note, hint of butter and vanilla. Cidery vinegar carries into the flavor, distracting from the apple fruit notes, and shifting the balance a bit. Crisp, slightly astringent finish balanced with a medium body and petillant carbonation. (20/24)

**Overall Impression:** The cidery vinegar notes seemed a bit out of place, and perhaps indicate the delicate nature of this beverage, which may have suffered in the cross-continental shipping. There was a definite suggestion of oak aging, which lent complexity. A distinctly refreshing session beverage that stands well on its own, or with a classic soft cheese and fruit plate. Perfect for sharing on mid- to late-summer evenings on the deck with friends. (8/10)

**Total Score: (42/50)**



**Aroma:** First impression is of fresh apples and pears, with a hint of sulfite in the background. I pick up some mild oaky notes in the background, along with a very slight musty character that recalls walking in the woods after a spring rain. The bouquet also includes some yeast esters and a hint of alcohol. (8/10)

**Appearance:** The color is deep gold to copper—unusual for a cider but intriguing. The carbonation is sparkling, though not effervescent, and the clarity is pristine. (6/6)

**Flavor:** There is an abundance of depth and complexity. The fresh apple flavor is like biting into a dessert apple, but there are enough tannins and acidity to attenuate the sweetness. The oak character is present, but subtle, and has me wondering if this was aged in wood, or whether this is due to tannins from the apples. The finish is moderately dry, first tannin but then ending with a light acidity. (22/24)

**Overall Impression:** Very tasty and well-balanced. It has the fresh dessert apple character that I have come to expect in French ciders, and the flavors explode across the palate, starting with a little sweetness with the tannins and acidity gradually taking over and ending with a pleasantly dry finish with some woodiness. (9/10)

**Total Score: (45/50)**



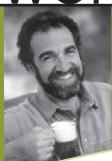
**Aroma:** Moderately sweet, lightly caramelly nose—like baked apples with brown sugar. Inviting, clean and intriguing. Very light acidity. No alcohol. Nothing off. (8/10)

**Appearance:** Beautiful reddish-brown color, both pale and deep in character at the same time. Darker than most; makes you wonder about varieties of apples used. Brilliantly clear. A few bubbles remain after an effervescent pour. (6/6)

**Flavor:** Petillant, a fair amount of tannin, low acidity, off-dry. Aged apple flavor like Calvados. Some initial sweetness but gets drier in finish and the tannins take over. A little minerally. Medium to medium-full body. Apple sweetness plays with tannins in finish—nice. (19/24)

**Overall Impression:** An unusual take on French cider—has a definitely fruity character and some sweetness but the tannins are a little forward. Unusual dark color. Excellent fruit character—very tasty. After judging, I enjoyed this with a semi-soft Trappist-style cheese (Chaumes) and it worked brilliantly. If a cider pairs well with a great French cheese, then it must be *très authentique, non?* (8/10)

**Total Score: (41/50)**



# Mayahuel: Lady of the Tortoise

Fourteen years ago, *Zymurgy* published a special edition called "Special Ingredients & Indigenous Beers." It's been a timeless treasure and resource for thousands of homebrewers. With today's renewed interest in indigenous beers from Aztec Mexico, I couldn't help recall an extraordinary article researched and written by longtime friend Jim Walton called *400 Rabbits or Aztec Social Beverages at the Time of Conquest*. Jim and I collaborated at the time and came up with a recipe that included corn, cocoa, chile pepper, honey and other ingredients.

At the end of Jim's article there is a final tribute: *The resulting beverage was named after the Aztec lords and ladies of precious intoxication—the 400 Rabbits—and Mayahuel, the first Mexican brewer to transform the sap of a giant agave into a divine elixir.*

"The sap of a giant agave" caught my eye. In 1994, agave extract was all but unknown in the U.S. Now it is a common sweetener available in many natural food stores. You've seen recipes using this ingredient in several of my recent writings in *Zymurgy*.



Jim and I happened to run into each other on the streets of Boulder recently. He's involved with a company called Madhava Honey (based here in Colorado) that is importing agave extract. It was fascinating to learn how this non-tequila agave is grown

and harvested and the rich agricultural heritage it has had in Mexico for cen-

turies. Aztecs used agave extract in brewing their beers.

## Mayahuel: Lady of the Tortoise Throne Ale

### Mash/Extract Recipe

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

|                 |  |
|-----------------|--|
| <b>2.5 lb</b>   | (1.15 kg) pale malt  |
| <b>1.25 lb</b>  | (568 g) flaked corn  |
| <b>4.0 oz</b>   | (113 g) Belgian Special-B malt   |
| <b>2.5 lb</b>   | (1.15 kg) agave extract  |
| <b>1.0 lb</b>   | (454 g) light honey  |
| <b>8.0 oz</b>   | (225 g) unsweetened cocoa powder   |
| <b>0.5 oz</b>   | (14 g) dried hot chile or cayenne pepper   |
| <b>0.5 oz</b>   | (14 g) Mt. Hood hops 5% alpha (2.5 HBU/70 MBU) 60 min                                    |
| <b>1.25 oz</b>  | (35 g) Mt. Hood hops 5% alpha (6.25 HBU/175 MBU) 30 min                                  |
| <b>0.25 tsp</b> | (1 g) powdered Irish moss Ale yeast  |
| <b>0.75 cup</b> | (175 ml measure) corn sugar (priming bottles) or 0.33 cup (80 ml) corn sugar for kegging |

**Target Original Gravity:** 1.046 (11.5 B)

**Approximate Final Gravity:** 1.010 (2.5 B)

**IBU's:** about 22

**Approximate color:** 12 SRM (24 EBC)

**Alcohol:** 4.6% by volume

#### Directions

Heat 1 gallon (3.8 liters) water to 172° F (77.5° C) and add crushed grains to the water. Stir well to distribute heat. Temperature should stabilize at about 155° F (68° C). Wrap a towel around the pot and set aside for about 45 minutes. Have a homebrew.

After 45 minutes add heat to the mini-mash and raise the temperature to 167° F (75° C). Pass the liquid and grains into a strainer and rinse with 170° F (77° C) water. Discard the grains. Add more water to the sweet extract you have just produced, bringing the volume up to about 2.5 gallons (9.5 liters). Add agave extract, honey and 60 minute hops and bring to a boil.

The total boil time will be 60 minutes. When 30 minutes remain add the 30-minute hops. When 10 minutes remain add Irish moss, cocoa and chile. 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 2.5 gallons (9.5 liter) of cold water has been added. If necessary add cold water to achieve a 5-gallon (19 liter) batch size. Aerate the wort very well.

Pitch the yeast when temperature of wort is about 70° F (21° C). Ferment at about 70° F (21° C) for about one week or 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.



Here is the original article in its entirety, along with my original recipe for 400 Rabbits Aztec Style Ale. Also added is my 2008 reformulation I call Mayahuel: Lady of the Tortoise Throne Ale.

## 400 Rabbits, or Aztec Social Beverages at the Time of Conquest

Hernando Cortes arrived in the Aztec city of Tenochtitlan around 1520 and was amazed to find a civilization as complex and magnificent as his own. When invited to banquet with the ruler, Moctezuma II, the Spaniards were treated to a spectacle of music and dance and feasted on chocolate, partridge and turkey. Tobacco smoking already was known to Cortes from the Caribbean, but the Aztecs had many other foods and herbs to surprise their guests. The Spanish were especially intrigued by beverages of chocolate, or *cacao*. Their very preparation was dependent on class status and the rulers had a special etiquette prescribing their use. Some recipes may have included psychoactive agents such as *teonanacatl*, the divine mushroom, but the majority of chocolate drinks were laced with chile peppers and the petals of fragrant flowers.

Ritual intoxication was an important feature of Aztec social life on all levels, and the preparation of maguey, a fermented beverage from the sap of the giant agave, was the alcoholic beverage of the masses. *Ocotli*, or *pulque*, was regulated by a pantheon of gods known collectively as the Centzon Totochtin—the 400 (or innumerable) Rabbits. This stemmed from the Mesoamerican image of a rabbit on the face of the moon fostering the notion that this sign ruled the night sky and ecstatic behavior. As in all other cultures, there was a thin line between ecstasy and licentiousness, and the 400 Rabbits had an alternative meaning best translated by the English expression “three sheets to the wind.”

In pre-Colombian Mexico, fermentation was believed to be a mystical process and, in addition to *ocotli*, there were two types of fermented alcoholic beverages that are still ceremonially prepared today. In the

north the Tarahumara [see *Zymurgy*, Fall 1980, *Native Brewing in America* by Bill Litzinger] tribe drinks huge quantities of *tesguino*, a fermented corn beer brewed in huge earthen pots. In the southern low-

## 400 Rabbits Ale

*Inspired by a conversation of what it might have been like drinking the beer of the Aztecs, our conclusion was that surely they made beer. And it was likely that corn, honey, chocolate, chile peppers and hallucinogens would probably have been the primary ingredients. Not quite the same as the German beer purity law.*

*We left out the hallucinogens, and added relatively low-dose hops for bitterness, knowing full well that quite a bit of bitterness would come from the cocoa. We also used malted barley, because this is the 20th century and we wanted to start out with something that resembled modern day beer while still paying tribute to the Aztec culture.*

*The beer is soothingly warm without burning. Szechuan chiles have the effect of warming the back of your throat. 400 Rabbits had a distinct but mild chocolate bitterness. Hops also contributed to the bitterness, but the overall character was rounded by the addition of the Special B malt. The effects of the corn and honey lightened the flavor, body and overall character of what could have been a much heavier bodied beer without. 400 Rabbits is just the beginning.*

### Mash-Extract Recipe

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

|                         |   |
|-------------------------|---|
| <b>1.25 lb</b>          | (0.57 kg) pre gelatinized corn flakes   |
| <b>2.25 lb</b>          | (1.0 kg) two-row American lager malt  |
| <b>0.25 lb</b>          | (114 g) Belgian Special "B" malt  |
| <b>0.25 lb</b>          | (114 g) chocolate malt  |
| Add to the mash runoff: |   |
| <b>1.75 lb</b>          | (0.8 kg) light dried malt extract   |
| <b>1.0 lb</b>           | (0.45 kg) honey   |
| <b>6.0 oz</b>           | (170 g) cocoa powder  |
| <b>0.5 oz</b>           | (14 g) crushed Szechuan chile pepper pods (or other types of chile to suit your taste)    |
| <b>4.7</b>              | Homebrew Bittering Units (I used 1 oz (28 g) 4.7% alpha acid American Crystal whole hops) |
| <b>0.5 oz</b>           | (14 g) Crystal hops for late kettle aroma hops  |
| <b>0.25 tsp</b>         | Irish moss  |
| <b>0.75 cup</b>         | (178 ml) corn sugar for bottling  |
|                         | Ale or Lager yeast  |

**Original Gravity:** 1.044 to 1.048 (11-12 B)

**Final Gravity:** 1.014-1.018 (3.5-4.5 B)

**IBUs:** about 23

#### Directions

A step infusion mash is employed to mash the grains. Add 4 quarts (3.8 liters) of 130° F (54.5° C) water to the crushed grain, stir, stabilize and hold the temperature at 122° F (50° C) for 30 minutes. Add 2 quarts (1.9 liters) of boiling water and stabilize temperature at about 150 to 152° F (65.5-67° C) and hold for about 45 minutes. Temperature may be allowed to drop from 152 to 148° F with no worrying. Raise temperature to 160° F (71° C) and hold for 10 to 15 minutes to complete conversion.

After conversion, raise temperature to 167° F (75° C), lauter and sparge with 2 gallons (7.6 liters) of 170° F (77° C) water. Collect about 2 1/2 to 3 gallons (9.5 -11.4 liters) of runoff and add the malt extract, honey, cocoa, chile pepper, bittering hops and bring to a full boil.

The total boil time will be about 60 minutes. When 15 minutes remain add Irish moss. After a total wort boil of 60 minutes turn off the heat, add the aroma hops, then strain and sparge into a sanitized fermenter to which you've added 2 gallons of water. It helps to pre-chill (33° F (1° C)) the water added to the fermenter rather than simply adding warmer tap water.

Bitterness of about 23 IBUs was calculated for this recipe by making the following assumptions: 1. Whole hops were used; 2. The wort boil was a concentrated boil with about 2 lb (0.9 kg) of extract per gallon (3.8 liters) of liquid boiled; 3) 28 percent utilization was assumed for 60 minutes of boiling. Beginners and intermediate brewers should relax, don't worry and have a homebrew. Bottle with priming sugar when fermentation is complete.

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### Extra Special Bitter (continued from 60)

Shepherd Neame's Bishop's Finger are all good examples of an Extra Special Bitter. The first American ESB we were aware of was Redhook ESB.

### One Final Note

Many people will know that we were Michael Jackson's local brewer. When you have a local brewery, you tend to regard it with some affection, and I think Michael had some affection for Fuller's.

When we won the gold medal for English style ESB at the World Beer Cup in 2006, Michael grabbed hold of me before I got to the stage. He had a huge grin on his face and shook me by the hand. He was as pleased as I was to get this award, and it's a moment that I will never forget. Another thing I won't forget is the heartfelt congratulations I received from numerous American brewers. It was a night that makes everything worthwhile.

**John Keeling is the brewing director at Fuller, Smith and Turner in London, England.**

lands a ritual beverage is made by the Lacandone Maya called *balche*, which is honey fermented in a hollow log and flavored by the bitter bark of the balche tree. Because the taste is so bitter and emetic, the beverage is only prepared for special occasions, such as invoking the rain gods during a time of drought.

Following long tradition, Mexico City still has its pulquerias where pulque-octoli is consumed by Nahuatl and Otomi Indians for refreshment. The original ceremonial function of this beverage has not been forgotten. Even today pulque brewing is accompanied by singing and incantations, reflecting the days when the fermentation of octoli was ruled by the goddess *Mayahuel*, Lady of the Tortoise Throne and patroness of precious drink and childbirth. As the deity most involved with the creation of ritual libations, she was the chief of the 400 Rabbits. Even beverages prepared for domestic consumption were attended by considerable ritual and sacred songs.

Ocotli is good for only about 24 hours before it degenerates into unpalatable slime. No drinking could occur in Aztec times without the collusion of *Mayahuel*'s ladies who brewed this social beverage, often by beginning the fermentation process with their own saliva. Spanish chronicles report such frequent drinking for the innumerable Aztec festivals that octoli-making must have burdened many women with full-time specialization.

Although drinking octoli in the service of the gods was not considered to be a bad thing, licentious behavior was a clear and present danger to the Aztec social order. There are many reports of secular drinking and if this was taken to excess, the Aztec state reacted with swift and decisive punishment. Public drunkenness was considered to be such an indecency that harsh penalties, increasing in severity according to rank, were meted out to offenders. A noble who couldn't hold his octoli in public was put to death, while a tipsy *macehualli*, or common peasant, had his head shaved and his property confiscated. Repeat offenders were only given two strikes and then they were out—usually by the method of strangulation.

However, there was a prominent exception to these laws. A special dispensation to drink in public was given to those who had reached the age of an Aztec century, or a full calendar cycle (52 years to you and me). Perhaps the conditions of life were such that the elderly were honored for their sheer survival, but the Aztecs certainly recognized that lewd and violent behavior passes with youth while the aged usually conduct themselves with more dignity and containment.

Because I have recently completed one Aztec cycle, I wanted to honor the occasion with a pre-Colombian beer. By chance I ran into Charlie Papazian at a local pub and we discussed my project over a couple of beers. Not knowing of any bottled beer that is based on foods of purely pre-Colombian origin, Charlie proposed fusing the European process of brewing beer with the Mesoamerican ingredients known to be the basis of their ritual beverages. We chose corn and honey plus chocolate and chile—the unlikely ingredients of *mole*, Mexico's national dish—to add to the standard hops, barley malt and sugar of a conventional beer. The resulting beverage was named after the Aztec lords and ladies of precious intoxication—the 400 Rabbits—and *Mayahuel*, the first Mexican brewer to transform the sap of a giant agave into a divine elixir.

**Charlie Papazian is the founder of the American Homebrewers Association.**



**Reader Advisory: Warning!**

These pages are rated XG (eXtra Geeky) by the Bureau of Magazine Muckymucks. Items in this section may contain raw data, graphic functions, full statistics and undiluted biochemistry. Keep away from poets, squeamish novices and others who may find the joyously technical nature of this prose to be mindbendingly conceptual or socially offensive. Also, because of the complex nature of brewing science, there is no guarantee that you will live longer, brew better or win any awards in the next homebrew competition based upon the conclusions presented here.

## Optimum Mash pH

By Søren Tygesen

In the July/August issue of *Zymurgy*, John Palmer discussed the importance of obtaining the right mash pH for the final flavor profile of the beer. In this article I will show how little effort it takes to arrive at the proper mash pH range, no matter what style of beer you brew.

In the “old days,” the local brew water dictated what beer styles could be brewed. Today we understand water chemistry and its influence on brewing and we can manipulate it. If you are an all-grain brewer and want to brew a wide variety of beer styles, you will eventually have to look at your water profile and adjust it to arrive at optimum mash pH. You don’t have to be a chemist to do this, as Palmer has created an Excel worksheet that will do all the work for us. The only thing you need to know is that dark malt lowers pH more than light malts. Therefore beer color can be used to calculate the amount of salts/acids you need to add to the mash to get in the right mash pH range, which is between 5.1-5.5 measured at mash temperature. pH measured at room temperature is about 0.3 higher, so the range is 5.4-5.8.

The worksheet can be accessed at Palmer’s Web site [www.howtobrew.com](http://www.howtobrew.com). Before I found the worksheet, I had already bought a digital pH meter to measure mash pH, but these gadgets can be expensive and don’t last forever. Adjusting mash pH by means of a pH meter is an iterative process where you add something and measure to see if you are at the right pH range. Therefore I set out to test if the worksheet would get me in the right pH range with one pre-calculated salt/acid addition to the mash throughout the full spectrum of beer colors.

### Using the Worksheet

First download Palmer’s worksheet at: [www.howtobrew.com/section3/Palmers\\_Mash\\_RA\\_ver2c.xls](http://www.howtobrew.com/section3/Palmers_Mash_RA_ver2c.xls) (U.S. units). There is also a metric version at: [www.howtobrew.com/section3/Palmers\\_Metric\\_RA\\_ver2b.xls](http://www.howtobrew.com/section3/Palmers_Metric_RA_ver2b.xls).

Next, go to your homebrew store and buy the most common brewing salts/acid listed in Table 1.

You will also need a local water report and a brewing software package, or the capa-

**TABLE 1- COMMON SALTS/ACID USED TO ADJUST THE MASH PH AND WATER PROFILE IN BREWING.**

Gypsum ( $\text{CaSO}_4$ ), Calcium Chloride ( $\text{CaCl}_2$ ), Magnesium sulfate ( $\text{MgSO}_4$ ), lactic acid → Lowers mash pH (often needed with lighter beer colors)

Chalk ( $\text{CaCO}_3$ ), Baking soda ( $\text{NaHCO}_3$ ) → Raises mash pH (often needed with darker beer colors)

|    | B            | C             | D               | E                 | F            | G              | H             | I        | J | K                    | L  | M              | N               |
|----|--------------|---------------|-----------------|-------------------|--------------|----------------|---------------|----------|---|----------------------|--|----------------|-----------------|
| 14 | Source Water | Calcium (ppm) | Magnesium (ppm) | Bicarbonate (ppm) | Sodium (ppm) | Chloride (ppm) | Sulfate (ppm) | Water pH |   | (Effective Hardness) | Residual Alkalinity as CaCO <sub>3</sub> | Est. EBC (Low) | Est. EBC (High) |
| 15 | (ppm)        | 48            | 5               | 150               | 18           | 27             | 10            | 7.8      |   | 36                   | 87                                       | 24             | 34              |

Table 2—Mineral concentration from the water report entered in the worksheet.

|   | B                  | C             | D              |
|---|--------------------|---------------|----------------|
| 7 | Target Color (EBC) | Est. RA (Low) | Est. RA (High) |
| 8 | 18                 | -11           | 48             |

Table 3—Target color and estimated RA.

bility to calculate the estimated color of the beer you want to brew. To fine-tune the beer color calculations, go to your maltster's homepage and check if the malt color values are the same as in your brewing software.

Next, open the worksheet. Under Step 2 you must type the concentration of the relevant minerals from your water report into the worksheet (Table 2). Notice that concentrations measured in ppm and mg/l are equivalent.

|    | B                          | C                           | D                               | E                                  | F                               | G                            | H                        | I                         |
|----|----------------------------|-----------------------------|---------------------------------|------------------------------------|---------------------------------|------------------------------|--------------------------|---------------------------|
| 22 | Target Residual Alkalinity | Total Mash Water Volume (L) | Volume of Source Water (Liters) | Volume of Distilled Water (Liters) | Additional Eff. Hardness Needed | Additional Alkalinity Needed | Target RA Est. EBC (Low) | Target RA Est. EBC (High) |
| 23 | 48.0                       | 19.3                        | 19.3                            | 0.0                                | 39                              | 0                            | 18                       | 28                        |

Table 4—Entered target RA and amount of mash water.

The worksheet now tells you what beer color your local water is suited for with no adjustments (M15 and N15). In my case it is EBC 24-34 (12-17 SRM), which could be an American Amber or a Düsseldorf Alt.

In the following example, I want to brew a pale ale with a color of EBC 18 (9 SRM) so I need to modify my water. Since I am brewing a lighter colored beer than what my water is suited for, I need to add something to lower mash pH. I can do

|    | B               | C            | D                                 | E                        |
|----|-----------------|--------------|-----------------------------------|--------------------------|
| 33 | Acid Adjustment | Bottle Conc. | Est. Acid-Only Mash Addition (ml) | Mash Water Addition (ml) |
| 34 | Hydrochloric    | 37%          | 1.3                               | 0.0                      |
| 35 | Lactic          | 80%          | 1.4                               | 1.4                      |

Table 5—Adjusting the mash pH with lactic acid.

|    | K                    | L  | M              | N               |
|----|----------------------|--|----------------|-----------------|
| 38 | (Effective Hardness) | Residual Alkalinity as CaCO <sub>3</sub> | Est. EBC (Low) | Est. EBC (High) |
| 39 | 18                   | 45                                       | 18             | 27              |

Table 6—Mash pH adjusted for beer color between EBC 18-27.

that with either lactic acid or salts that lower the mash pH (Table 1).

#### Recipe:

6.00 kg Pale Ale malt (EBC 7)

0.45 kg Crystal malt (EBC 120)

19.3 liters mash water

Calculated EBC 18 (9 SRM)

First enter the calculated beer color in cell B8 (Table 3). In the cells C8 and D8 you see the numbers -11 and 48, which are estimates for residual alkalinity (RA). In other words, it is the range of residual alkalinity that should produce a mash pH of 5.4-5.8 with the recipe grain bill. We will add lactic acid to the mash water to help it achieve an RA in this range. Also, we will be cautious and use the higher RA number, which means using the least amount of acid. We can always add more later if necessary.

Now enter the value 48 from D8 in B23 and the amount of mash water in D23 (Table 4).

Now you will see the number 1.4 milliliters in cell D35 (table 5). This is the amount of lactic acid to add to your mash.

|    | B              | C                       | D   | E   | F   | G                              |
|----|----------------|-------------------------|---|---|---|--------------------------------|
| 26 | Salt Additions | Chalk CaCO <sub>3</sub> | Gypsum CaSO <sub>4</sub> *2H <sub>2</sub> O | Calcium Chloride CaCl <sub>2</sub> *2H <sub>2</sub> O | Epsom Salt MgSO <sub>4</sub> *7H <sub>2</sub> O | Baking Soda NaHCO <sub>3</sub> |
| 27 | (grams)        | 0                       | 5   | 0   | 0   | 0                              |

Table 7—Adjusting the mash pH with gypsum.

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| Beer Style          | Calculated beer color (EBC) | Mash water amount | Water/malt ratio [l/kg] | Salt and acid added  | Mash pH Measured at 20°C | Residual alkalinity as CaCO <sub>3</sub> |
|---------------------|-----------------------------|-------------------|-------------------------|--|--------------------------|--|
| Northern German Alt | 25                          | 17.7              | 2.5/l                   | Nothing added  | 5.60                     | 87                                       |
| American Amber      | 28                          | 17.5              | 2.5/l                   | Nothing added  | 5.60                     | 87                                       |
| American Amber      | 35                          | 18.0              | 2.5/l                   | Nothing added  | 5.49                     | 87                                       |
| Pale Ale            | 19                          | 19.7              | 3/l                     | 2.1 ml lactic acid   | 5.66                     | 21                                       |
| IPA                 | 19                          | 18.8              | 3/l                     | 8 g CaSO <sub>4</sub>  | 5.65                     | 21                                       |
| Munchener Helles    | 10                          | 18.9              | 3/l                     | 5 ml lactic acid   | 5.52                     | -55                                      |
| Kölsch              | 7                           | 18.4              | 3/l                     | Lactic acid  | 5.50                     | -59                                      |
| American Amber      | 26                          | 29.4              | 3/l                     | Nothing added  | 5.73                     | 87                                       |
| Burtonized pale ale | 24                          | 18.7              | 3/l                     | 5g NaHCO <sub>3</sub> , 18g CaSO <sub>4</sub> , 6g MgSO <sub>4</sub> | 5.74                     | 73                                       |
| Porter              | 72                          | 23.1              | 3/l                     | 5g NaHO <sub>3</sub> , 9g CaCO <sub>3</sub>                          | 6.00                     | 295                                      |
| Schwarzbier         | 57                          | 30.6              | 3/l                     | 5g NaHCO <sub>3</sub> , 10g CaCO <sub>3</sub>                        | 5.64                     | 251                                      |
| Dark Lager          | 40                          | 19.1              | 3/l                     | 8g CaCO <sub>3</sub>   | 5.70                     | 173                                      |
| Doppelbock          | 27                          | 30.6              | 3/l                     | 2g CaCO <sub>3</sub> , 2 ml lactic acid                              | 5.63                     | 65                                       |
| Sparge water        | 20                          |                   |                         | 2.9 ml lactic acid in 20 liters                                      | 6.30                     |  |

Table 9—Beers brewed with calculated salt/acid addition and checked with pH meter

Type 1.4 in cell E35 and the numbers in cell M39 and N39 will change to 18 and 27 (Table 6). This means your mash water is now adjusted to fall in the right pH range for beers colored between 18-28 EBC (9-14 SRM). This is how little work there is to achieve the optimum pH range. (Alternatively, you could use the average of the RA range if you wanted the estimated color range to be centered around your target color.)

Now, let's do the same thing with a salt. Since elevated levels of calcium and sulfate can be appropriate for this beer style, I chose to add gypsum. Zero the lactic acid addition in cell E35 and jump straight to cell D27 and start adding gypsum (Table 7). If you enter 5g of gypsum you will see the numbers change in the cells M39 and N39 to 18 and 27 (Table 6).

When adding salts, don't overdo it. Adding too much salt can have a negative impact on the final beer flavor. Therefore you should decide how high a concentration of a given salt you will allow in your beer. One way to avoid too high a concentration of a given salt is to mix the different brewing salts and acid in the mash.

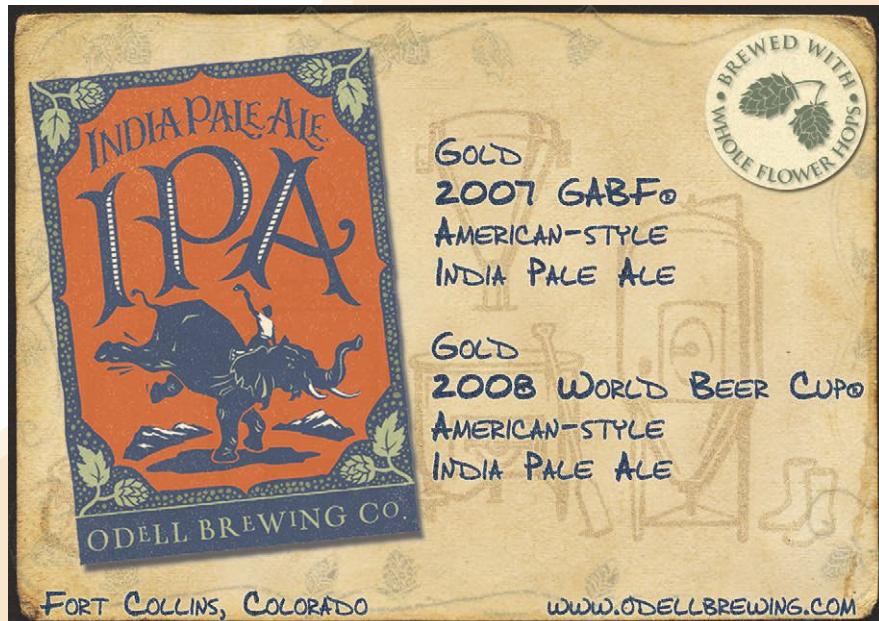
Finally, the sparge water can be acidified if you are worried about extracting tannins during sparging. This can be achieved by lowering the pH to 6. Enter the pH of your source water in cell B44, the desired pH



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number (6) in cell C44, and the amount of sparge water in cell D44. The amount of lactic acid you will have to add comes up in cell D48 (Table 8). If you are using hydrochloric acid for the addition instead of lactic, an equivalent amount is given in cell D47.

## Tests and Results

Below is the list of beers I brewed with calculated salt and acid additions and checked with a digital pH meter. (Table 9 on page 69)

Only the porter failed to fall within the desired pH range. I contacted Palmer for an

opinion on what could have gone wrong with my porter. His explanation was that the upper range of RA should stop around 250. This means that dark beers, like my porter, with RA higher than 250, should only be adjusted up to RA 250. Testing this with the schwarzbiere, I treated it as an EBC 50 beer and omitted 6g of CaCO<sub>3</sub> that could have been added to raise the estimated EBC low (cell M39) from 50 to 57. Doing this I arrived at the right pH range.

## Why Adjust Mash pH?

From my experience, the benefit of achieving the right mash pH is that all the

|    | B                            | C                           | D                               |
|----|------------------------------|-----------------------------|---------------------------------|
| 43 | Measure Sparge Water pH@ 20C | Target Sparge Water pH@ 20C | Sparge Water Volume (L)         |
| 44 | 7,8                          | 6,0                         | 20                              |
| 46 | Acid Adjustment              | Bottle Conc.                | Est. Sparge Water Addition (ml) |
| 47 | Hydrochloric                 | 37%                         | 2,9                             |
| 48 | Lactic                       | 80%                         | 3,2                             |

Table 8—Adjusting pH of the sparge water.

different malts and hops really shine through in the final beer.

Palmer emphasizes that the beer color should only be taken as a guide and not as exact science. In spite of this, my tests have proven that by relying totally on calculated beer color, and not exceeding an RA of 250 (except perhaps for very dark beers), I can hit the right mash pH for any beer style using these calculations. Try this at home! If you don't have a pH meter, buy some pH test papers. The next few times you brew, use the worksheet to calculate the salt/acid addition to the mash and check the pH.

When you get familiar with the worksheet, you will find that it is a great tool for playing around with salt concentrations. You can mix all the salts you like and still be able to balance their concentrations and obtain the optimum pH range at the same time.

## Test Setup

All malts were from Weyermann: Pilsner, Pale Ale, Wheat, Vienna, Munich, Roasted Barley, Carafa I, Carafa Special III, Caramunich I, II & III, Caraamber, Caraaroma, Melanoidin. All were single infusion light body temperature mashes. Beer colors were calculated with Beersmith using Morey's formula. pH measured with Volcraft PHT-01 ATC.

**Søren Tygesen lives in Esbjerg, Denmark. A homebrewer since December 2006, he has already brewed 45 batches (1,393 liters) and his tastes currently lean toward German lagers and ales.**

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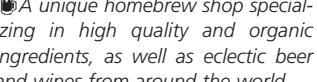
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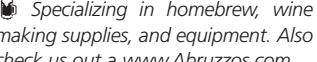
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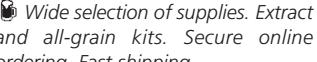
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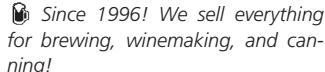
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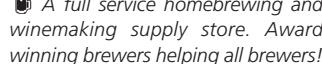
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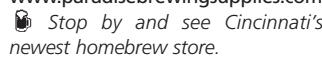
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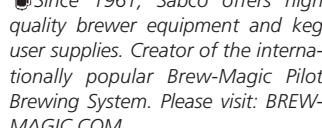
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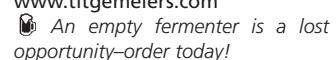
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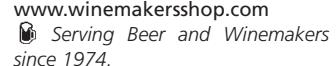
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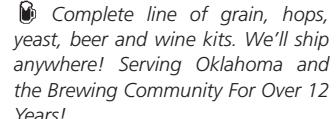
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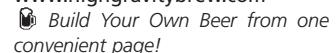
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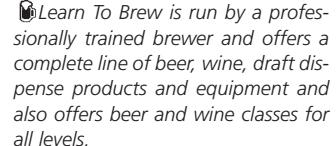


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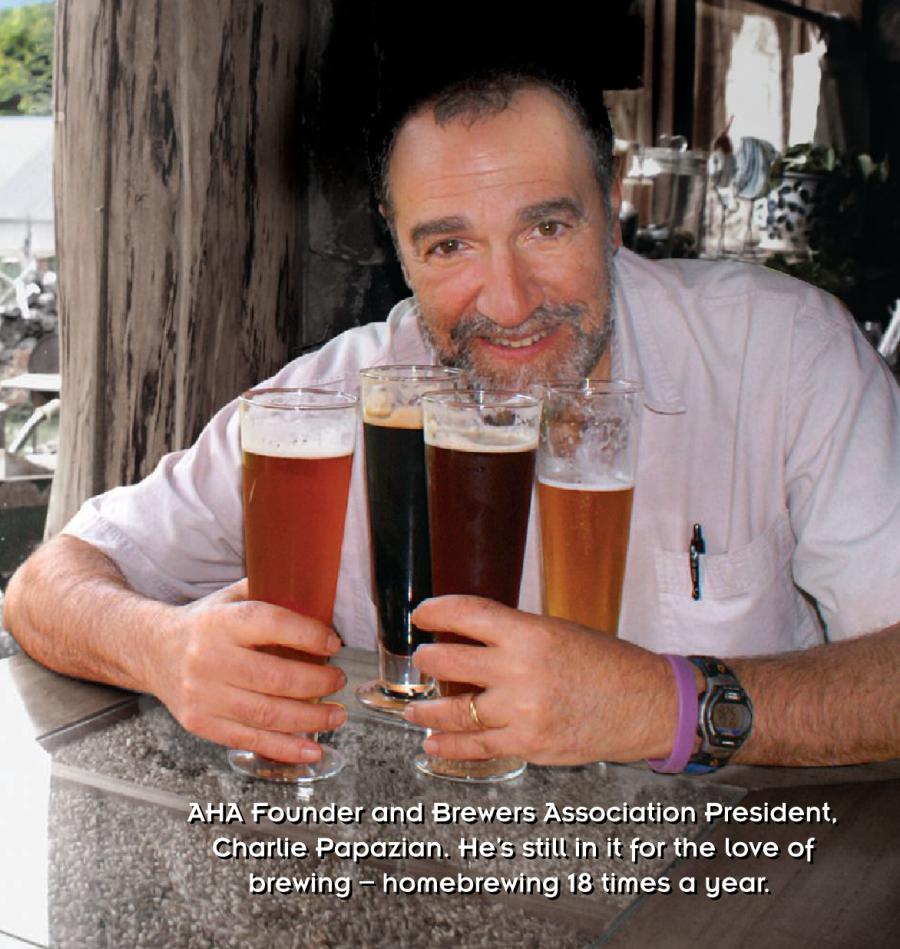
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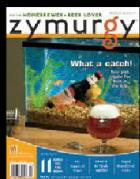


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\*Cover 2 is the inside front cover. Cover 3 is the inside back cover. Cover 4 is the outside back cover.

# A Pint for Mr. Jackson

I was planning a trip to London when the AHA's Big Brew recipe, a clone of the late Michael Jackson's favorite local beer, Fuller's Chiswick Bitter, was announced. Recalling Charlie Papazian's memoir to having a beer with him, I resolved to visit Michael's local pub, the Andover Arms, and raise a pint in his memory.

My last day in London, I rode the Tube out to Hammersmith on my quest. It hadn't really rained all day, but an umbrella was essential by the time I arrived at the Ravenscourt Park station. I had hastily scrawled a map of the area that morning when I left the house, and in London's maze of streets, leaving one or two off is never a good idea. I was soon lost among the endless rows of white two-story homes lining every street. Retracing my steps, I set out on the longest, most reliable route to find the residence that had served as his office. My handwritten map guided me accurately this time.

Without a house number, I would have never known it had been an office. It resembled every other house on the street, although a recent tempest had peeled the climbing vines from its face, leaving them to hang awkwardly. It had recently sold, and having been told Jackson's office was stuffed full of reference materials, bits of papers and things people had sent him, I wasn't too surprised to see orange sacks of beer-themed garbage outside. A pair of white plastic Uerige Dusseldorf Alt bier carriers reassured me that I had the right place.

Soon the house would have new occupants, most likely unaware of the impact its previous occupant had on beer lovers around the world. Michael gave so many people, myself included, their first lesson in beer appreciation through his



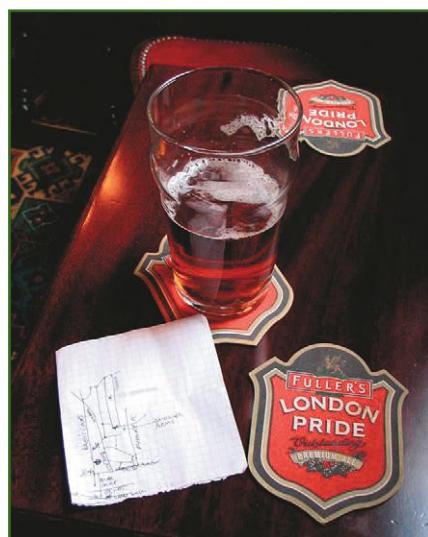
Michael's "local," the Andover Arms.

writing. The wind and rain suddenly seemed a bit colder.

I headed to the Andover Arms. From Jackson's office, the route was simple: two right corners and down the street behind the office. This was a route he certainly took many times over. It was about 5 p.m. and the pub was just starting to awaken with men who clearly knew one another from daily association, dropping in for a pint or two before heading home. The Arms was immaculately kept, with barley beige walls, red upholstery and a dark wood wainscoting.

I ordered a pint of Chiswick Bitter, Michael's favorite. It was my first time to try the beer and I was impressed. The beer was clean and crisp, a bright amber gold with an assertive nose of Goldings. The flavor was wonderfully balanced, just enough malt to back up the hops. I imagined Jackson there, with a visiting friend or fellow journalist, perhaps huddled over his copious notes or simply stopping in for a beer at the end of a long day's writing. I lifted my pint and glanced at the windswept grey skies outside. Thanks, Michael.

**Bev Blackwood has no pretensions about becoming the next Michael**



My hastily scrawled map and Chiswick Bitter.

**Jackson, but loves beer and single malt Scotch, enjoys traveling to breweries and distilleries and writing about them both. A former brewer for Saint Arnold Brewing Company, longtime homebrewer and active member in the Foam Rangers, he makes his home in Houston, Texas with his loving (and tolerant) wife and two dogs.**

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