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► The Journal of the American Homebrewers Association ►

Reeling It In:

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Best in U.S.**



In this issue:

15 BEERS
YOU
CAN
BREW

Texas'
Political
Brew-ha-ha

BREWING
WITH
OAT MALT

*Beer
Adventures
in
Argentina*

PLUS: *New Glarus Belgian Red Clone Recipe*



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by Jill Redding

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Publisher _____ Brewers Association™
 Executive Editor _____ Ray Daniels
 Editor-in-Chief _____ Jill Redding
 Art Director _____ Kelli Gomez
 Graphic Designer _____ Kerry Fannon
 Graphics/Production Director _____ Stephanie Johnson
 Senior Designer/Web Designer _____ Julie Lawrason
 Sales & Marketing Director _____ Cindy Jones
 cindy@brewersassociation.org
 Advertising & Sponsorship _____ Chris Pryor
 pryor@brewersassociation.org
 Advertising & Sponsorship Coordinator _____ Stephanie Hutton
 hutton@brewersassociation.org
 Marketing Coordinator _____ Michelle Byers
 michelle@brewersassociation.org
 Circulation Coordinator _____ Jason Bell
American Homebrewers Association®
 Director _____ Gary Glass
 Membership Coordinator _____ Kathryn Porter
 Project Coordinator _____ Janis Gross

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Best Beers in America

Asking **Zymurgy** readers to list their 20 favorite beers available commercially in the United States is always a fun experience. For one thing, I always learn about beers I've never heard of.



For another, it's fun to see the comments some provide about their favorite beers.

The votes range from the specific, "J.W. Lee's Harvest (aged in Calvados cask)"; "Corona Extra, with a lime, at the beach"; and "PBR in a can after cutting wood on a hot, early autumn afternoon with Angelina Jolie," to the not-so-specific: "Anything that Tod Mott brews."

One thing that becomes obvious is that **Zymurgy** readers have adventurous palates and far-reaching tastes. Along with the aforementioned Corona and Pabst Blue Ribbon, there were also votes for Bud Light and Negra Modelo ("Nothing goes better with hot Mexican food"). There was the assortment of usual suspects from breweries such as Dogfish Head, Stone, Rogue, Sierra Nevada and Deschutes. There were more imports than usual, led by a vast array of Belgian beers. But there was also a wide variety of beers from craft breweries big and small, brand new and already established.

U.S. craft breweries posted 12-percent growth in production in 2006, meaning there is an even wider variety of brews for you to try in 2007. Craft brewers are known for their innovation when it comes to trying different styles and excelling at them.

"Let me just say that nobody is throwing it

down like Tomme Arthur and Jeff Bagby at Port Brewing and Lost Abbey," commented **Zymurgy** reader Jeff Hubbard of Erie, Colo. "They have set a new standard in defining what great beers should be rather than pandering to what the marketing department says will sell."

Hubbard cited Lost Abbey's Angel's Share, a strong ale aged in bourbon barrels, as "pure bottled poetry. If you haven't had it, you must." Another **Zymurgy** reader, Jeff Long of Sterling Va., voted Angel's Share his number one pick, saying, "This beer transcends beer."

I can't wait to see what these and other brewers like Dogfish Head's Sam Calagione, whose brewery got the most votes in this year's survey, are offering up each year. Calagione isn't afraid to experiment with beers such as his Chateau Jiahu, brewed with pre-gelatinized rice flakes, honey, grapes, barley malt, hawthorn fruit, chrysanthemum flowers and sake yeast, and Dogfish is offering a Festina Peche this year. Rogue brewer John Maier regularly pushes the envelope with brews such as his Ten Thousand Brew Ale (brewed in no particular style, Maier says) and the newly released Dad's Little Helper Malt Liquor. Boston Beer, which currently has 23 beers in its portfolio including the world's strongest beer (Utopias) and a chocolate bock, introduces a new beer each year.

In all, it's a great time to be a craft beer lover, whether you're brewing it yourself, stopping by your neighborhood brewpub or going to festivals to try new beers that you can't currently get at home but might be able to in the near future. Enjoy!

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



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Amahl Turczyn Scheppach

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26 | The Magic of Middle Colored Malts

By Randy Mosher

Middle colored malts are well worth getting to know, as they can add the kind of magic that will have your friends coming back for free beer after free beer.

34 | Oat Malt: What's In It for You?

By Drew Beechum

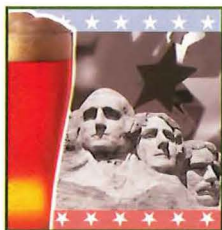
Recently, oat malt has been enjoying a mini-revival and it's not hard to see why with its rich, nutty flavor. What can oat malt add to your next homebrewing adventure?

40 | Looking for Beer in All the Wrong Places

By Ralph Bucca

Desperate for good beer in his travels to non-tourist foreign destinations, a volunteer for the Farmer-to-Farmer program is forced to get creative.

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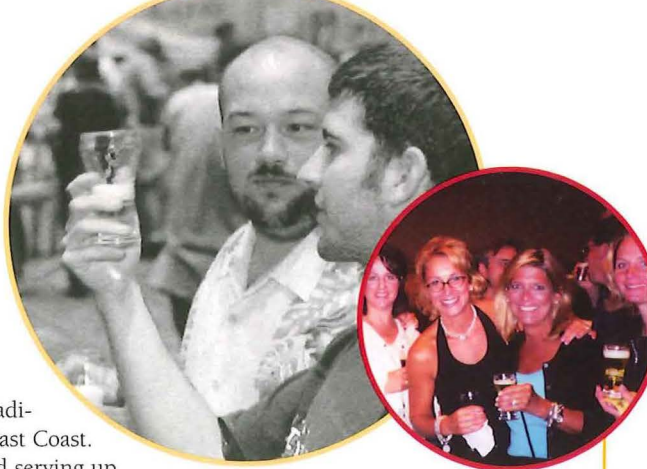
>> GET THERE!

State College MicroBrewers & Importers Exposition

The 10th Annual State College MicroBrewers & Importers Exposition is set for Saturday, July 28 at the Penn Stater Conference Center Hotel on the campus of Penn State University.

The State College BrewExpo has rapidly become a summer tradition for beer lovers and Penn State alumni from all over the East Coast. More than 60 brewers and specialty importers will be on hand serving up more than 150 craft beers from North America, Belgium, Germany, Eastern Europe and the British Isles. The exposition includes a gourmet international buffet, People's Choice gold medal competition, exhibits, interactive tasting seminars and beer-related merchandise.

Two sessions are available. Tickets are \$40 including beer sampling and the buffet as well as a souvenir pilsner tasting glass. For more information call 814-692-8529, e-mail info@scbrewexpo.com or go to www.scbrewexpo.com.



June 29-July 1

Seattle International Beer Festival Seattle, WA. E-mail: info@seattlebeerfest.com, Web: www.seattlebeerfest.com.

July 7

Canada Cup of Beer Vancouver, B.C. Contact: Colin Jack, E-mail: colin@canadacupofbeer.com, Web: <http://canadacupofbeer.com>

July 13-15

Portland International Beer Festival Portland, OR. E-mail: info@portland-beerfest.com, Web: www.portland-beerfest.com

July 20-21

Vermont Brewers Festival Burlington, VT. Phone: 802-244-6828, E-mail: vba@vermontbrewers.com, Web: www.vermontbrewers.com

July 21

12th Annual Indiana Microbrewers Festival Indianapolis, IN. Phone: 317-856-6092, Web: www.brewersofindianaguild.com

July 21

Belgium Comes to Cooperstown 2007 Cooperstown, N.Y. Phone: 800-544-1809, Web: www.ommegang.com

July 28

Music City Brewer's Festival Nashville, TN. Phone: 888-695-0888, Web: www.musiccitybrewersfest.com

October 11-13

Great American Beer Festival® Denver, CO. Contact: Bradley Latham, Phone: 303-447-0816 x 145, Fax: 303-447-2825, Web: www.beertown.org



BREW NEWS: Onion Rings Fueling Beer Trucks

The Arrogant Bastard onion rings that rose to fame over the years fueling fans at the Stone Anniversary Celebrations are now powering Stone Brewing Co. in a whole new way. Inspired by lead brewer John Egan, who converts waste vegetable oil himself, Stone decided it was time to not only take used vegetable oil from the Stone Brewing World Bistro & Gardens and convert it, but to use biodiesel as well. Stone is currently running its delivery trucks on B-20 (a fuel with 20-percent biodiesel), which equates to approximately 2,000 gallons per month of pure bio fuel being used. Stone hopes to completely switch over to a B99 or B100 (pure biodiesel) later this year.

In addition, Iron Springs Pub & Brewery in Fairfax, Calif. introduced its newly decaled alternative fuel delivery vehicle, the "Ambrewlance," which will deliver kegs of beer throughout the Bay Area and share a message of recycling and sustainability. The Ambrewlance, an old Sonoma County ambulance purchased at auction, has two fuel tanks. One tank holds diesel while the other contains filtered vegetable oil from the Iron Springs' fryers. The drive begins on diesel fuel. After five to 10 minutes on the road, the brewers flip a switch on the Ambrewlance console to use the vegetable oil tank for the remainder of the day.



John Egan, Stone Brewing Co. lead brewer, proudly shows off his biodiesel-fueled truck.

77 GREAT GADGET WHAT'S NEW FROM POLDER PRODUCTS

Beer Glass Scrubber

This restaurant-style washer is designed for home use and is perfect for cleaning the inside (and outside) of your pint glasses. A large bristle post is ideal for general washing, and a smaller post is sized for wine glasses, using softer bristles. It has firm-gripping suction cups to position in your sink or elsewhere, and is dishwasher safe (top rack only).

If you have several pint glasses to wash, Beer, Beer & More Beer suggests putting the Beer Glass Scrubber in a tall container with warm water and PBW for a great cleaning station.

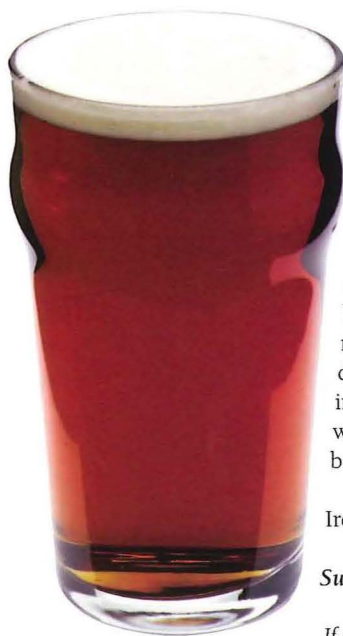
The Beer Glass Scrubber/Glass Washing Station (\$10.95 retail) is available at www.morebeer.com.



>> YOU GOTTA DRINK THIS

Iron Hill Anvil Ale (Served cask conditioned)

This is the kind of beer you find yourself curled up next to for the entire night.



After the generous 20-ounce hand-pumped English-pub style glass arrives with the final steps of the cascade still flowing, one is captured. The beer is served "warm," maybe 55° F. This difference in temperature skyrockets the smell of this beer into a new dimension, really bringing out the hops. The taste is dangerous in the sense that you find yourself diving in for more to try and identify the caramel and cereal-like flavors along with the presence of more hops. The taste is like walking on the beach, or hiking in the woods. It is relaxing and rewarding, and could easily replace most daily drinks. The texture is light and smooth without interruption. Creamy smooth goodness runs all the way from lips down one's throat, very refreshing. This beer would be a daily driver if it were a Volkswagen.

Iron Hill has brewpubs in Delaware and Pennsylvania.

Submitted by Brian Moore, Wilmington, Del.

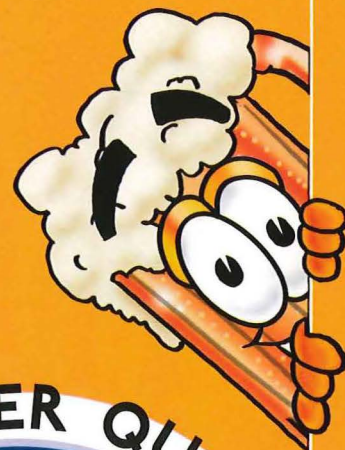
If you've had a beer you just have to tell the world about, send your description, in 150 words or fewer, to jill@brewersassociation.org.

THE LIST

10 WAYS TO DRINK BEER AND SAVE THE WORLD

Zymurgy contributor Chris O'Brien's recent book *Fermenting Revolution: How to Drink Beer and Save the World* (New Society Publishers, 2006) includes a 24-point action plan. Here are 10 steps of the plan for saving the world through beer drinking.

1. Buy local beer.
2. Recycle your empties.
3. Get thee to a brewpubbery.
4. Fill a growler.
5. Brew your own.
6. Teach a friend to homebrew.
7. Compost packaging, including six-pack carriers.
8. Enjoy organic.
9. Try beers made with local ingredients.
10. Keep the fridge stocked.



77 BEER QUOTE

I believe that we should accept a humble compliment that our larger, light-lager brewing brothers are now, for their own mass market, emulating the hoppy beers that we [craft brewers] create. We must be doing something right.
—Firestone Walker brewmaster
Matt Brynildson

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by Ray Daniels



Forgotten Flavors

As beer drinkers, we can't help imagining the flavor of any beer we read about. And as brewers we've acquired the ability to transform recipes and descriptions into actual beers that we can taste. Things also work the other way: certainly one of my early motivations for homebrewing was to brew beer styles absent from the store shelves of 1980s Chicago.

But recreations suffer a disappointing flaw. They convey only a sense of the original and too often we know that real insight is lost. The original, when tasted, often differs markedly from our own attempt.

Thus we learn to trust our tongues as much as our recipe books. And we can seldom consider that we truly understand a beer until we have tasted the real McCoy—preferably on its home turf.

When it comes to beers of the past, the ethereal flavors we seek flee to a more distant tavern—one long shuttered and locked, webbed by spiders, overgrown with ivy and ultimately reclaimed by time. When we read about the beers of 20, 50 or 100 years ago—no matter how complete the description—we can simply never taste them to discover for ourselves what they were like.

Or so I thought.

A recent trip to Europe landed me at the White Horse on Parson's Green, the iconic gastropub of London brought to prominence under the management of Mark Dorber, an earnest and demanding appreciator of fine flavors in food and drink, most especially beer. His attentive and superlative service of real ales brought the pub notice, but it expanded its scope to become a beacon of great beer known worldwide.



Disguising it in a smooth, elliptical crystal decanter, Mark Dorber pours his mystery beer.

I had visited many times, but this was to be the last as Dorber prepared to move on to other projects. Little did I know that he was intent on enjoying the treasures of his cellar while he could and that my colleagues and I were soon to be the beneficiaries.

As dinner proceeded, Dorber teased and tested the assembled group—brewers and beer folk from both sides of the Atlantic—with a selection of mystery beers. I scribbled terse notes between sips.

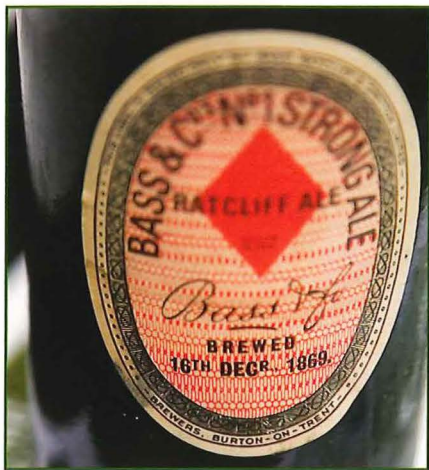
The first blind beer had a minerally and sulfur-like nose typical of many produced in Burton-upon-Trent and the palate displayed a nice hop flavor. It turned out to be Worthington White Shield—served from cask. We next tasted the bottled version of the same beer which was metallic in the nose and malty in the palate: a complete reversal!

Next up was an imperial stout of incredible depth and richness with lots of cooked

dark fruits in the nose—prunes, plums, raisins and such. It was Harvey's LeCoq Imperial Stout—brewed in 1993. This was followed by some more recent beers as we finished the cheese plate and then Mark invited all of the Americans in the group to join him in the cellar for "something special."

We trundled down to the cellar past patiently waiting firkins and kilderkins and hogsheads of ale and assembled around our host. To ensure the security of his mystery, Dorber presented the beer in a smooth, elliptical crystal decanter—deceptively modern in design!

From the first sniff, the leather-hued liquid emanated signs of age. It was winey, sherry-like and infused with maple-sweet notes. It was an inviting, delighting aroma that urged us on into the glass. There, in contrast to the aroma, we found a more spare and much subdued palate—one dried by age but still displaying earthy tones and quenching tartness.



The brief discussion among us revealed only that we knew the beer was old and I opined that it was “at least 20 years” of age. Dorber then produced the bottle: a crudely shaped vessel near the size of today’s 22-ounce bombers with a simple label stained and faded with age. It was a bottle of the recently discovered cache of Ratcliff Ale, brewed in 1869. Yes, 1869: we had just drunk a beer that was 138 years old!



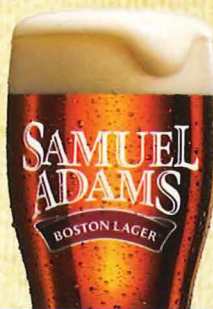
For years I have read about 19th century brewing and beers, especially those of England. Here finally was a real sip of that past and it spoke volumes. The beer, reportedly brewed to an original gravity of 1.120, was hardly a “typical” beer of the age. Yet it told of the flavors of English malt, stewed for nearly seven-score years in a liberal basting of alcohol. And it was something that clearly coincided with our established understandings of the genre of beer.

Certainly we can’t decide from this sample whether today’s Maris Otter malts taste the same as those of the 19th century—that would be asking too much. But finding laudable flavor in this long-lost bottle certainly fires the imaginings of immortality for any brewer. It throws the scope of our creativity from something that might resemble the lifespan of a small mammal to one that rivals that of the longest living things on this earth. I find my mind wandering to the development of beer time capsules collected from today’s great brewers and tucked away for 50, 100 and 150 years to help inform the opinions of generations in the future. And that leads us to wonder what they will brew, what they will drink—and indeed if they will drink at all!

All from a sip of beer.

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

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by Professor Surfeit



Charting Charred Wood Barrels

Dear Professor,

I received a new 5-gallon charred oak barrel and am eager to use it. However, I am hard pressed to find any literature on the subject of using oak barrels. So I called my local homebrew shop and was told British styles would be best suited for the charred oak. I then spoke to my homebrew club, and was told complementary styles are best suited: porter, smoked beer, barleywine, stout, etc.

Which is it? How broad or limited are the applications for such a barrel? Once I use the barrel for one style am I limited to that style for the life of the barrel?

I am also interested in the proper care for that barrel—how to clean, store, sanitize, etc. In addition, can you direct me to any substantive literature on the subject?

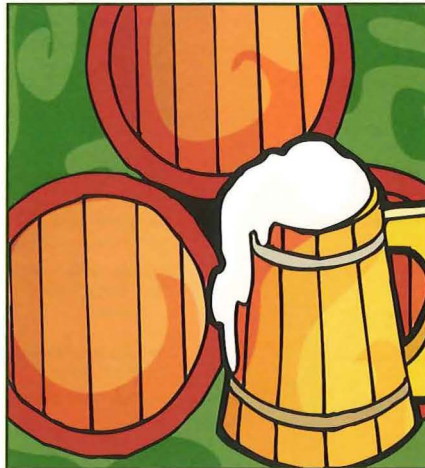
Thank you,
Matthew Shirley
San Diego, Calif.

Way interesting Matthew,

The simple answer is that bare charred wood barrels really have no traditional beers to call their own. Beer barrels always used some kind of tasteless pitch to coat and line the inside of the barrels and this really prevents the beer from contacting the wood.

That being said, there are a whole lot of innovative brewers, both homebrewers and craft brewers, who are creatively using wood barrels during fermentation and post-fermentation. It gets really interesting.

Some brewers use new oak barrels to impart a woody character to their brews. Others reuse once-used bourbon, whiskey, wine, port and sherry barrels to impart not only the residual flavors of what was once in the barrel, but also a measure of the wood or charred



wood character. Brewers also use wood barrels continuously to nurture fermentations of wild yeast and bacteria under experimental conditions, resulting in some unique and wonderful brews.

The question you should ask yourself is what are your favorite types of beer, whiskey, wine, port or sherry characters? Do you like

sour fermented brews? Do you like the oaky flavors of red and white wines? Do you like the bourbon-like flavors that charred oak contributes to whiskey? What kind of beer do you want to render to the wood? After you have at least given some consideration to what direction you wish to go, give your barrel a shot.

Wood is really difficult to keep sanitized so I wouldn't use your barrel for primary fermentation. Rather use it exclusively for aging, cellaring or lagering already fully fermented brews. In this way the alcohol will inhibit undesirable microorganism activity.

Speaking for myself I'd give some strong ales, stouts and porters a shot at the inside of your barrel. I'd also go easy on hop bitterness. The barrel will give quite a bit of character and hop bitterness may clash with it.

You are planning to use the barrel over and over again. Rinse it out really well. And if you are not going to use it for a while keep it filled

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with water. I'd also consult with the wine-knowledgeable homebrew shop owner/worker and ask about sulfating the keg to inhibit bacteria growth.

Roll out the barrel,
The Professor, Hb.D.

A Yeast for All Seasons

Dear Professor,
After listening to a very interesting interview with Charlie Papazian on www.basicbrewing.com, I was wondering about using a single yeast strain for both ales and lagers. I realize Charlie has his own yeast, but I was wondering what other yeasts can be used like this. The first one that comes to mind is Kölsch or

German ale yeast. Any thoughts or experience with this?

Thanks,
Tim Hagan
Gibsonia, Pa.

Dear Tim,
Papazian uses a lager yeast for both his ales and lagers. His particular yeast produces great lager character in beers fermented at about 55° F (13° C) and lagered close to 32° F (0° C). When the brews are fermented at temperatures close to 70° F (21° C) and then "cellared" at 55° F (13° C) they offer some nice fruity/estery characters.

Different lager yeasts will behave differently

at higher temperatures, so you'll have to experiment to find one that offers the ale-type character you are looking for in your beers. I'd figure that most true ale yeasts will not ferment very well, if at all, at lager fermentation temperatures, so when searching for an all-purpose yeast, play around with various strains of lager yeast.

Pitching for Papazian yet again,
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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It Just Doesn't Add Up

Dear Zymurgy,

I very much enjoyed Tom Schmidlin's discussion of beer color that appeared in the May/June issue, and thank him for providing a low cost, simple way of approximating SRM. However, there seems to be a problem of arithmetic in the first two paragraphs on page 41.



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Tom's example dilutes one part Guinness with 4.5 parts water for a dilution factor of $1/(1+4.5)=1/5.5=0.1818$, not 0.22 as he claims. And $0.1818*52=9.45$, not 11.6. Similarly, in the second paragraph, the dilution factor in the example is $1/(1+4)=1/5=0.2$ and $0.2*52=10.4$, not 13 as presented.

Obviously, there is an editorial error here, whether his or yours is irrelevant, but there is some confusion that needs to be cleared up for the benefit of homebrewers who may not be arithmetically inclined, or who just want to brew beer.

C. Wayne Freeark
AHA Member

Article author Tom Schmidlin responds:
At the end of the article when I'm explaining how to calculate the color there are two similar mistakes where the math doesn't work:

"For example, if you used 1 part Guinness

and 4.5 parts water, your dilution would be $1 / (1 + 4.5) = 22$ percent Guinness. Since the SRM measurement of Guinness is 52 you simply multiply $52 * 0.22 = 11.6$ SRM, which is the color of your unknown beer."

Probably the easiest way to fix it would be to change 4.5 to 3.5 throughout this part, then it works fine. So it would read:

"For example, if you used 1 part Guinness and 3.5 parts water, your dilution would be $1 / (1 + 3.5) = 22$ -percent Guinness. Since the SRM measurement of Guinness is 52 you simply multiply $52 * 0.22 = 11.6$ SRM, which is the color of your unknown beer."

Right below that I did it again:

"... so begin by diluting the Guinness with four parts water. This should give you a reference sample of $(1 / (1 + 4)) * 52 = 13$ SRM."

This is another case where replacing 4 with 3 will fix it. So it should read:

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"... so begin by diluting the Guinness with three parts water. This should give you a reference sample of $(1 / (1 + 3)) * 52 = 13$ SRM."

Send your letters to Dear Zymurgy, PO Box 1679, Boulder, CO 80306 or e-mail jill@brewersassociation.org.

ersassociation.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.

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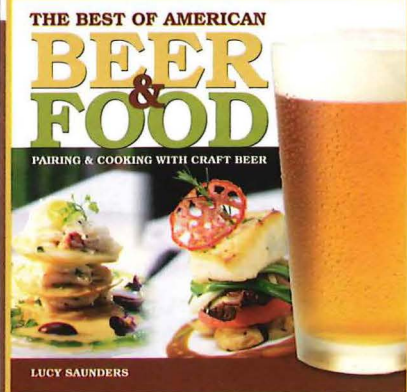
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Strong Ales

Strong ales are divided into two main categories: Old ales, a fairly open style of strong ale mainly differentiated from barleywines by their lower strength, and barleywines, of which there are English and American subcategories.

Modern old ales can be considered the descendants of stock ale, sometime called stale, which was often blended into newer, weaker beers to fortify them. These strong, keeping beers were sometimes consumed at full strength after a significant period of aging, which is perhaps how they came to be known as Old Ale. Since modern sanitation methods were unknown in the early days of stock ale, many were aged in unlined wooden barrels or tuns and developed lactic sourness or *Brettanomyces* character despite their relatively high (1.060 to 1.090 O.G.) alcoholic strength. Some modern commercial examples, notably Gales Prize Old Ale, are made to bring about a similar flavor profile and carry forward these traditional "stale" flavors.

The majority of modern old ales, however, are still aged extensively, but exhibit a clean, malty character. The extra conditioning time can develop sherry or port-like oxidation, dried fruit and caramel overtones, and a subtle but present alcoholic warmth. Dark or roasted malts should be used sparingly in these beers, as too much roastiness would be considered inappropriate. That said, however, there are several modern old ales and Winter Warmers (which fall into the Old Ale category, though many are on the lighter end of the strength scale) that are very dark in color, especially in Britain. This suggests the use of black patent malt or something similar, though much of the color can be developed from kettle caramelization. Thus, color is unlim-

ited on the darker end of the scale: 10 to 22+ SRM.

Hop character should be muted, with aroma and flavor making little to no impact, and kettle hops providing just enough bitterness to balance or partially balance malt sweetness. However, the BJCP leaves the upper end of the bitterness scale for this category open-ended (30 to 60+ IBUs), again indicating what a wide range of beers can be entered as an old ale. Adjuncts may also be used, both in the form of brewing sugars and starches, to boost alcoholic strength and perhaps lighten body as well (6 to 9+ percent abv). Like barleywines, these beers were traditionally mashed at higher temperatures to encourage higher finishing gravities (1.015 to



Old Ale

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

2 cans	Coopers Light Malt Extract
1.0 lb	(0.45 kg) Special B Malt (120 L)
0.5 lb	(0.23 kg) 60 L Crystal Malt
1.0 lb	(0.45 kg) Molasses or Treacle
2.75 oz	(78 g) Brewers Gold pellet hops, 7% alpha acid (60 min)
0.5 tsp	(14 g) Irish moss (10 min)
	Wyeast 1028 London Ale Yeast or White Labs WLP007 Dry English Ale Yeast
	Coopers Brewery
	Carbonation Drops for bottling

Original Specific Gravity: 1.070
Final Specific Gravity: 1.017
IBUs: 46
ABV: 7.1%



Directions

Steep grains in 1.5 gallons of 150° F water for 20 minutes. Remove grains and sparge with 1 gallon of 170° F water. Stir in extract and molasses and bring to a boil. After 30 minutes, top up with additional 0.5 gallon of water if necessary, bring back to a boil and add hops. Boil for 50 minutes and add Irish moss. Boil another 10 minutes, strain into fermenter with enough cold water to make 5 gallons. When temperature gets down to 68° F, aerate and pitch yeast. Ferment at 65-68° F for two weeks. Rack to secondary and store at 65-68° F for four to six weeks. Prime with Coopers carbonation drops and bottle. Age for six months or more.

1.022+), although many modern old ales, particularly winter warmers, can taste quite dry. This may be due more to dark malts in the grain bill and alcohol content than attenuation. British ale yeast with relatively low attenuation should be used to reach the target finishing gravity range (1.015 to 1.022+).

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Barleywines are the strongest of the ales (1.080 to 1.120+ O.G.), and like port wines they can be enjoyed relatively fresh (especially in the case of American barleywines that feature resinous Pacific Northwest hops in the aroma) or well-aged. Lack of aging should not be considered a fault, unless green flavors or aromas are apparent, or hot alcohols that would otherwise age out. English barleywines can favor malt or hops, but are primarily known for rich, complex malt character (35 to 70 IBUs). Aged versions can have wine-, sherry- or port-like aromas and flavors from the malt, and will generally have less overt hop character. Dried fruit, caramel or bread-like flavors may also be present. Even malt-heavy barleywines should not be overly sweet or cloying, but should have enough bitterness (or alcohol) to balance. Hoppy English barleywines usually still have a good malt presence balanced with aromatic English ale hops like Goldings, Fuggles, Northdown, Target and the like.

American barleywines are expected to be moderately to very hoppy, and hops should be present in aroma, flavor and bitterness. A wider variety of hops can be used in American versions, but strong, high-alpha hops like Chinook, Cascade, Columbus, Horizon and Centennial would all be good choices. Because of the liberal use of both hops and malt, barley-



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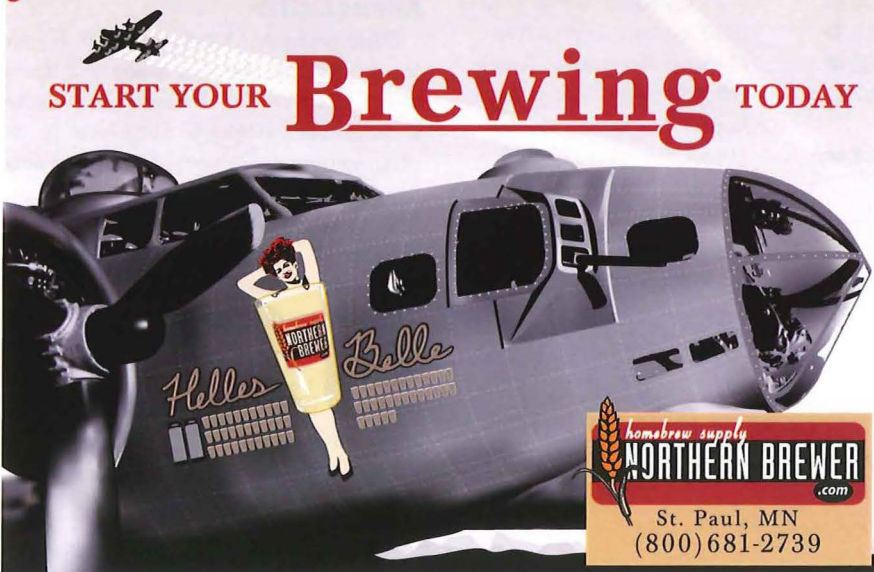
wines can exhibit chill haze at lower temperatures, but should clear as they warm. A rich copper to dark brown color (8 to 22 SRM) is typical. "Legs" on the glass can show high alcohol content and viscosity in stronger versions (8 to 12+ percent abv).

Carbonation is usually low to moderate, and head retention can be very high for younger barleywines or lower for well-aged ones. Well-modified two-row pale malt should make up the bulk of the grain bill, but caramel malts can also be used as well as adjuncts. Roast barley and other dark, bitter grains are not appropriate unless that bitterness is masked by malt sweetness. As with old ales, much of the color can and should come from a lengthy boil. For English varieties, the yeast should be the same strain one would use for a fruity, flavorful bitter, but obviously much greater quantities should be used for full attenuation, and some of the less alcohol-tolerant strains may have to be roused at least once during fermentation to reach the target finishing gravity range (1.018 to 1.030+ for English). American barleywines are typically fermented with a neutral, well-attenuating ale yeast like the Chico or California ale strain.

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

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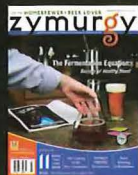
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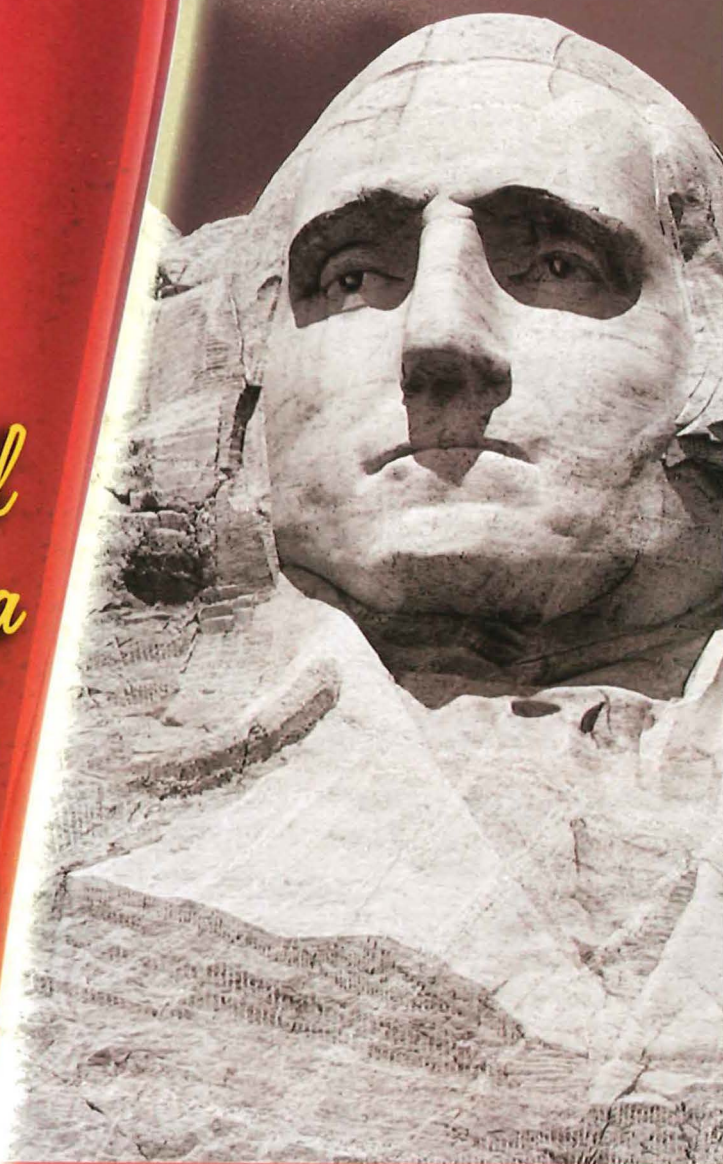




The Results Are In!
5th Annual Survey

*Zymurgy's
Best Commercial
Beers in America*

By Jill Redding





*Each of the past five years, we've asked Zymurgy readers
to send us a list of their 20 favorite beers.
The only rule is that the beer has to be commercially
available somewhere in the United States. →*

We received more than 1,100 votes for 618 different beers from 293 different brewers across the United States and beyond. And this year, we have a new winner. Unlike last year's results, in which New Belgium's Fat Tire and Sierra Nevada's Bigfoot Barleywine tied for top beer, this year there was a clear-cut favorite.

Your favorite beer in America for 2007 is...drumroll, please...Dogfish Head 90 Minute IPA.

"Very cool!" responded Dogfish Head founder and CEO Sam Calagione when told about the survey results. "We've been brewing 90 Minute for going on eight years now. I'm proud to say it is catching up with 60 Minute [Dogfish's flagship

beer] in sales. Who would have thought eight years ago that a brewery in coastal Delaware could sell thousands of cases of 90 IBU, 9-percent abv beer a week?"

Dogfish Head 90 Minute has been making its way up in the readers' poll for the last five years, finishing in a tie for 18th in 2003, a tie for third in 2004, and a tie for fourth in 2005.

"We don't do any advertising for 90 Minute, so I know the appreciation for it came to light through hardcore beer folk turning their friends on to it one pint or bottle at a time," said Calagione.

In a tie for second place this year were two perennial favorites, Sierra Nevada Pale Ale and Stone Arrogant Bastard. A six-pack of



Top Ranked Beer

(T indicates Tie)

- 1.Dogfish Head 90 Minute IPA
- T2.Sierra Nevada Pale Ale
- T2.Stone Arrogant Bastard
- T4.Alaskan Smoked Porter
- T4.Dogfish Head 60 Minute IPA
- T4.Guinness Draught
- T4.North Coast Old Rasputin
- T4.Schneider Aventinus
- T4.Sierra Nevada Celebration Ale
- T10. ..New Glarus Belgian Red
- T10. ..Samuel Adams Boston Lager
- T12. ..Anchor Steam
- T12. ..Bell's Expedition Stout
- T12. ..Stone IPA
- T12. ..Victory Prima Pils
- T16. ..Bell's Two-Hearted Ale
- T16. ..New Belgium 1554 Black Ale
- T16. ..Ommegang Hennepin
- T16. ..Orval
- T16. ..Paulaner Salvator
- T16. ..Pilsner Urquell
- T16. ..Russian River Pliny the Elder
- T16. ..Three Floyds Dreadnaught
- T16. ..Troegs Nugget Nectar
- T16. ..Unibroue La Fin du Monde
- T16. ..Victory Hop Devil
- T27. ..Bear Republic Hop Rod Rye
- T27. ..Bell's Hopslam
- T27. ..Brooklyn Black Chocolate Stout
- T27. ..Dogfish Head Raison d'Etre
- T27. ..Dogfish Head World Wide Stout

- T27.....Goose Island Bourbon County Stout
- T27. ..Sierra Nevada Bigfoot Barleywine
- T34. ..Alesmith Speedway Stout
- T34. ..Avery IPA
- T34. ..Avery Maharaja
- T34. ..Ayinger Celebrator
- T34. ..Duvel
- T34. ..Rochefort 10
- T34. ..Rogue Dead Guy Ale
- T34. ..Samuel Smith's Oatmeal Stout
- T34. ..Stone Ruination IPA
- T34. ..Three Floyds Alpha King
- T34. ..Victory Storm King
- T45. ..Anchor Porter
- T45. ..Avery Ellie's Brown
- T45. ..Bass Ale
- T45. ..Chimay Grand Reserve
- T45. ..Huyghe Delirium Tremens
- T45. ..Flying Dog Snake Dog IPA
- T45. ..Goose Island Honkers Ale
- T45. ..Great Divide Oak Aged Yeti
- T45. ..New Belgium La Folie
- T45. ..Ommegang Abbey Ale
- T45. ..Rogue Brutal Bitter
- T45. ..Rogue Old Crustacean
- T45. ..Russian River Pliny the Younger
- T45. ..Smuttynose Big A IPA
- T45. ..Stone 10th Anniversary IPA
- T45. ..Unibroue Maudite
- T45. ..Verhaeghe Duchesse de Bourgogne



Brewery Rankings

(T indicates tie)

These rankings are based on total votes received by each brewery's beers.

- 1.Dogfish Head Craft Brewery, Milton, Del.
- 2.Stone Brewing Co., Escondido, Calif.
- 3.Bell's Brewery, Kalamazoo, Mich.
- 4.Sierra Nevada Brewing Co., Chico, Calif.
- T5.Victory Brewing Co., Downingtown, Pa.
- T5.Rogue Ales, Newport, Ore.
- 7.Avery Brewing Co., Boulder, Colo.
- 8.Three Floyds Brewing Co., Munster, Ind.
- T9.New Belgium Brewing Co., Fort Collins, Colo.
- T9.Goose Island Beer Co., Chicago, Ill.
- 11.Boston Beer Company, Boston, Mass.
- 12.New Glarus Brewing Co., New Glarus, Wis.
- 13.Brewery Ommegang, Cooperstown, N.Y.
- T14.Russian River Brewing Co., Santa Rosa, Calif.
- T14.Saint Arnold Brewing Co., Houston, Texas
- 16.Anchor Brewing, San Francisco, Calif.
- T17.North Coast Brewing Co., Fort Bragg, Calif.
- T17.Paulaner Brewery, Munich, Germany
- T19.Troegs Brewing Co., Harrisburg, Pa.
- T19.Unibroue, Chambly, Quebec
- T19.Great Lakes Brewing Co., Cleveland, Ohio
- T22.Alaskan Brewing Co., Juneau, Alaska
- T22.Alesmith Brewing Co., San Diego, Calif.
- T22.Boulevard Brewing Co., Kansas City, Mo.
- T22.Brooklyn Brewery, Brooklyn, N.Y.
- T22.Deschutes Brewery, Bend, Ore.

beers finished in a tie for fourth, including Alaskan Smoked Porter, Dogfish Head 60 Minute IPA, Guinness Draught, North Coast Old Rasputin, Schneider Aventinus and Sierra Nevada Celebration Ale.

Zymurgy reader Ron Hall of Corvallis, Ore. described Celebration Ale as "maybe the oldest in the recent wave of imperial IPAs, and still the best. It's easy to make an 'over-the-top' hoppy IPA, but it's not easy to achieve a perfect blend of malts, Cascade and Centennial hops, and fruity ale yeast esters in a way that always tastes hoppy, clean and perfectly balanced. This is perfection in a bottle."

Last year's two top vote-getters didn't even crack the top 25, showing the changing tastes and palates of Zymurgy readers as they discover even more choices and



Best Portfolio

(T indicates tie)

Ranked by number of beer brands named in the poll.

1.Rogue Ales (14 beers)
- T2.Dogfish Head (13 beers)
- T2.Bell's Brewery (13 beers)
4.Avery Brewing Co. (12 beers)
5.Goose Island (11 beers)
- T6.Saint Arnold (10 beers)
- T6.Three Floyds (10 beers)
- T6.Stone (10 beers)
- T9.New Belgium (9 beers)
- T9.Boston Beer (9 beers)
11.Pizza Port (8 beers)
- T12.Great Lakes (7 beers)
- T12.Russian River (7 beers)
- T12.Victory (7 beers)
- T15.New Glarus (6 beers)
- T15.Sierra Nevada (6 beers)

diversity among the available craft beer in America.

"Being able to rattle off 20 beers in five minutes that are among my very favorite and that 99 percent of the drinking populace has never touched their lips to is a good thing indeed," said **Zymurgy** reader Jeff Hubbard of Erie, Colo.

Foreign Affairs

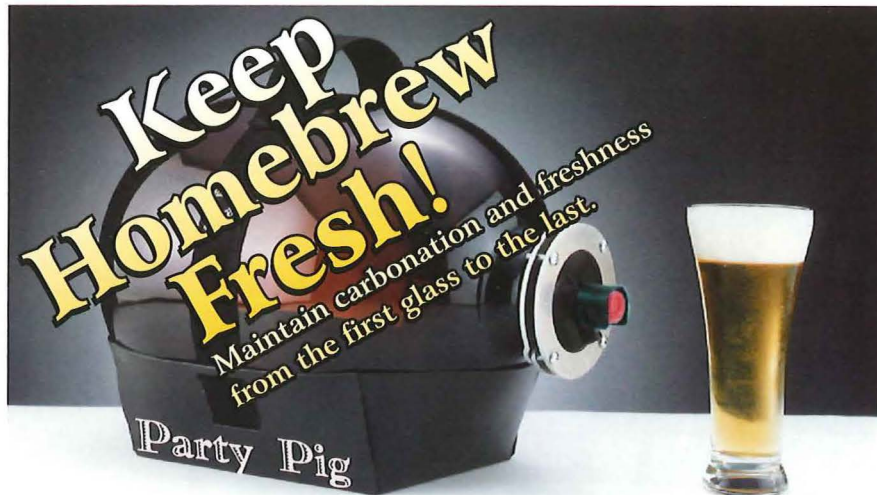
Responses again this year showed that **Zymurgy** readers love the beers brewed



Top Imports

(T indicates tie)

- T1.Guinness Draught
- T1.Schneider Aventinus
- T3.Orval
- T3.Paulaner Salvator
- T3.Pilsner Urquell
- T3.Unibroue La Fin du Monde
- T7.Ayinger Celebrator
- T7.Duvel
- T7.Rochefort 10
- T10.Bass Ale
- T10.Chimay Grand Reserve
- T10.Huyghe Delirium Tremens
- T10.Unibroue Maudite
- T10.Verhaeghe Duchesse de Bourgogne



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Dogfish Head Raison D'Etre Clone

Recipe by Amahl Turczyn Scheppach

Sam Calagione's big, extreme Belgian ale uses golden raisins and candi sugar to give it an alcohol boost and tons of complex flavor. It is typical of the experimental, maverick brewing style Dogfish Head is known for. If you are familiar with the beers of Brasserie D'Achoffe in Moortgat, Belgium, you will recognize the strong, slightly sweet and multi-layered aromatic character of this beer, since the ale yeast used to ferment Raison D'Etre is said to be the same strain used by that brewery (see recipe for matching strains—or, you can culture the yeast from a bottle of La Chouffe). Culture up a large starter of this yeast before pitching, and keep the fermentation temperature at 70-75° F (21-24° C). You can ferment this beer as warm as 85° F (29.4° C) but realize that you will be encouraging fruity, spicy flavors and aromas to develop, and possibly some fusel alcohols as well.

Ingredients

for 5 U.S. gallons (19 liters)

12.0 lb	(5.44 kg) Belgian pale malt
8.0 oz	(227 g) 60L crystal malt
4.0 oz	(114 g) chocolate malt
8.0 oz	(227 g) clear candi sugar, 10 min
6.0 oz	(170 g) golden raisins, pureed, 10 min
1.0 oz	(28 g) Magnum pellet hops (14% a.a.) 60 min
0.5 oz	(14 g) Vanguard pellet hops, 4.5% a.a.) steep
	Wyeast 3522 Belgian Ardennes or White Labs WLP510 Belgian Bastogne

Original Target Gravity: 1.079

Final Target Gravity: 1.019

IBUs: 60

Directions

Mash grains at 152° F (67° C) for 60 minutes. Mash out at 158° F (70° C) for 10 minutes. Sparge and bring to a boil, adding hops at specified intervals.

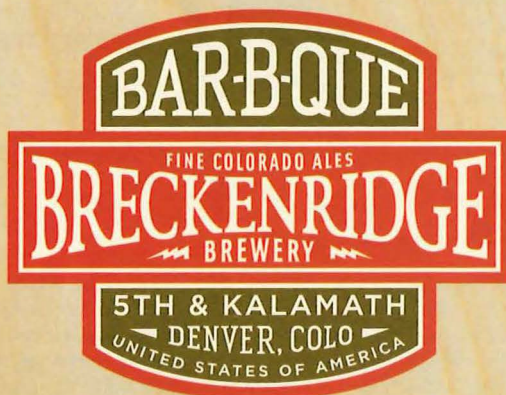
Halfway through boil, remove two cups of wort from kettle and soak raisins for 10-20 minutes. Puree in a blender and add back to kettle 10 minutes from the end of the boil, along with the candi sugar. Shut off the boil and add aromatic hops. Chill to 70° F (21° C), aerate or oxygenate well and pitch ale yeast slurry. Ferment at 70-75° F (21-24° C) until fermentation is complete.

Partial Extract Substitution: Substitute 9.5 lb light malt extract syrup (4.3 kg) for pale malt. Steep crushed grains in 150° F (65.5° C) water for 30 minutes. Add extract, bring to a boil and add hops at specified intervals.

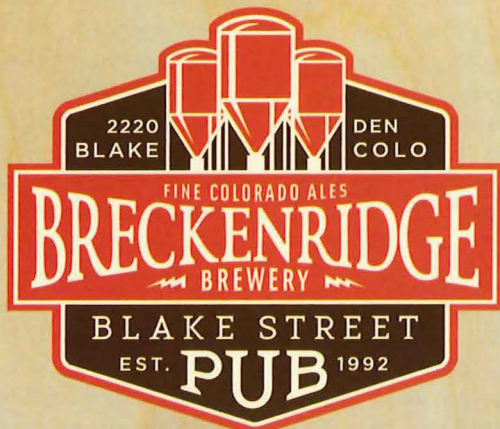
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Spirit of Homebrew

This ranking is based on total number of votes received divided by annual production in barrels.

1. AleSmith Brewing Co., San Diego, Calif.
2. Russian River Brewing Co., Santa Rosa, Calif.
3. Three Floyds Brewing, Munster, Ind.
4. Avery Brewing Co., Boulder, Colo.
5. Brewery Ommegang, Cooperstown, N.Y.

by their local brewpubs and microbreweries as well as those available in the U.S. from Ireland, Germany, Belgium, England, the Czech Republic, Canada and beyond. Ireland's Guinness was again the top import—but it had to share that distinction this time around with Schneider Aventinus, a wheat doppelbock brewed in Kelheim, Germany.

Belgium's Orval, Canada's La Fin du Monde (Unibroue), Germany's Paulaner Salvator and Pilsner Urquell of the Czech Republic all finished in a tie for 16th.

In all, a record 15 imports cracked the top 50, with the majority (six) hailing from Belgium. Germany had three beers in the top 50 (Ayinger Celebrator along with the aforementioned Schneider and Salvator) while Canada and the U.K. each had two.

At least one *Zymurgy* reader is partial to British beers, enjoying U.S. craft beers that emulate those styles. "I lived in England for a year, so my favorites are those that best replicate an English bitter," explained George Cary. "Grizzly Peak (of Ann Arbor, Mich.) has by far the best beer I have had in the U.S."

Ahead of the Pack

As in years past, we also kept track of which breweries received the most votes. This year's top brewery, by a landslide, is Dogfish Head Craft Brewery, based in Milton, Del., led by its 90 Minute and 60 Minute IPA.

"Our brewery's success in general comes from the loyalty and support we get from

the homebrewing and beer enthusiast community," commented Calagione.

In all, Dogfish placed four beers in the top 50, including Raison d'Etre and World Wide Stout.

Ommegang Hennepin Clone

Recipe by Amahl Turczyn Scheppach

Hennepin is a Belgian-style ale made by Brewery Ommegang in Cooperstown, N.Y. It is done in the Saison style, and is both strong and refreshing. You may consider bottle-conditioning in heavy 750 mL corked bottles, but it will taste just as good from a keg. You can use a Saison ale yeast, but a good Belgian, Abbey or Trappist yeast should give you good results.

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

9.0 lb	(4.08 kg) Belgian Pils malt
2.0 lb	(0.91 kg) clear Belgian candi sugar
1.0 oz	(28 g) Styrian Goldings pellet hops (5% a.a.) 60 min
0.5 oz	(14 g) Saaz pellet hops (3% a.a.) 2 min
1 T	crushed coriander seed (15 min)
1 T	bitter orange peel (15 min)
1 T	powdered ginger (5 min)
	Belgian ale yeast

Original Target Gravity: 1.068

Final Target Gravity: 1.006 – 1.009

IBUs: 24

Directions

Conduct a protein rest at 122° F (50° C) for 20 minutes. Increase mash temperature to 152° F (67° C) and hold for 60 minutes. Mash out at 158° F (70° C) for 10 minutes and proceed with sparge. Add hops and spices at specified intervals. When boil is complete, chill to 70° F (21° C), aerate or oxygenate and pitch yeast. Ferment at 68-70° F (20-21° C) until terminal gravity is reached. Prime and bottle or keg, and condition packaged beer for two to three weeks at 65-70° F (18-21° C).

Partial Extract Substitution: Substitute 7.25 lb extra light malt extract (3.29 kg) for grain. Add candi sugar and proceed with boil.

Zymurgy reader Jeff Long of Sterling, Va. loves Raison d'Etre partly for its intriguing list of ingredients, including beet sugar, green raisins and Belgian style yeast.

"There are raisins in my beer, and I like it," said Long. "Raisin flavors really work in this beer. It has a rich golden color and is best served in a snifter."

Finishing second among breweries was Stone Brewing of Escondido, Calif., while Bell's Brewery of Kalamazoo, Mich., placed third.

We also tabulated which breweries had the most brands in the voting. Topping that list yet again is Rogue Ales in Newport, Ore. with 14 of the beers in its vast portfolio getting votes.

"The Rogue Imperial Stout is the richest, most satisfying, warming dark beer I have tasted, and serves as my inspiration as a homebrewer," said *Zymurgy* reader Bruce Hall. "It has as much complexity of flavor as a good French Bordeaux 10 times the price, and I use it to confound wine snobs who look down on beer."

Aventinus Wheat Doppelbock Clone

Recipe by Amahl Turczyn Scheppach

This beer, brewed by one of the most prestigious Bavarian wheat beer breweries in the world, Schneider, is the classic example of a very unusual style. It is nearly overwhelming to the senses, with spicy flavors from the yeast, like clove, chocolate, and banana, lots of malt in the flavor, and an alcohol warmth in the finish. Definitely a special-occasion beer. Brewing Aventinus with an all-grain setup can be difficult, since large mashes with a high proportion of wheat malt can mean a very slow sparge, but there are steps you can take to speed things up. A proper protein rest, the liberal addition of rice hulls or other neutral-tasting chaff to increase sparge flow, and mashing out at a high temperature will all get things moving. You can also try a decoction mash schedule. This will not only bring out maltier flavors from your grain (in fact, you can substitute two-row for the melanoidin malt if doing a decoction mash), but will assist with lautering. If you don't want to set yourself up for a long brew day, there are some excellent wheat malt extracts out there, but if you do decide to try your hand at the traditional wheat beer method with all grain, the use of German malt is definitely recommended. German wheat ale yeast is the preference for yeast, and you can also use a hefeweizen yeast as long as it isn't American hefeweizen; that yeast is a "cleaner" strain, and will not produce the esters and phenolics typical of the style.

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

7.0 lb	(3.18 kg) German wheat malt
5.0 lb	(2.27 kg) German Pilsner malt
1.0 lb	(0.45 kg) Munich malt
4.0 oz	(113 g) melanoidin malt
1.0 oz	(28 g) German Carafa®
1-3 lb	(0.45-1.36 kg) rice hulls for sparge (optional)
0.5 oz	(14 g) Hallertau Hersbrucker pellet hops (3.5% a.a.) 60 min
	German, Weißenstephan or Bavarian wheat ale yeast

Original Target Gravity: 1.077

Final Target Gravity: 1.015

IBUs: 10.3

Directions

Mash in with rice hulls if needed. Step infusion mash: Conduct a protein rest at 122° F (50° C) for 20 minutes. Raise mash temperature to 150° F (65.5° C) and hold for 60 minutes. Mash out at 168° F (75.5° C) for 10 minutes. Or, conduct a double or triple decoction mash (recommended) with main mash temperature rests at 122, 148, 155 and 168° F (50, 64, 68 and 75.5° C).

Ferment at 68° F (20° C) for one week, or until fermentation is complete. Allow plenty of room in your fermenter, as these yeasts tend to be very flocculant. A 6.5-gallon (24.6 L) or larger vessel is recommended. Make preparations for a blowoff assembly (wide ID blowoff vinyl tube inserted in carboy mouth, with the other end in sanitizer solution to bubble out gas) just in case your fermenting beer decides to wander.

Partial Extract Recipe: Substitute 5.5 lb wheat malt extract (2.49 kg) and 3.75 lb pale malt extract (1.7 kg) for the wheat and Pilsner malt grain. Crush and steep the Munich and specialty grains in 150° F (65.5° C) brewing water for 30 minutes and remove. Add extracts and hops and commence with boil.

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Hood River, Oregon USA

Tying for second were Dogfish and Bell's with 13 beers each, while Avery Brewing Co. of Boulder, Colo., finished fourth with 12 beers.

Great Beers, Small Breweries

Once again, we salute those breweries that, though small in production, rank high with beer lovers. We determine the Spirit of Homebrew Award by taking a brewery's total number of votes and dividing it by the brewery's production in number of barrels.

For the second straight year, AleSmith Brewing Co. of San Diego is this year's Spirit of Homebrew winner. The brewery produces 1,200 barrels of beer per year including Speedway Stout, Wee Heavy, YuleSmith and Horny Devil.

Second place went to Russian River Brewing Co. of Santa Rosa, Calif., which brews 3,000 barrels per year. Russian River's Pliny the Elder (tie for 16th) and Pliny the Younger (tie for 45th) both made the top 50 in the poll.

We determine the Spirit of Homebrew Award by taking a brewery's total number of votes and dividing it by the brewery's production in number of barrels.

Recipes

As usual, we're providing clone recipes for some of the top vote-getters. The recipe for 90 Minute IPA can be found in the July/August 2005 *Zymurgy*, while we've also run clone recipes in the past for most of the top 10 beers including Sierra Nevada Pale Ale and Stone Arrogant Bastard. However, *Zymurgy* contributor Amahl Turczyn Scheppach still had plenty of great beers to choose from in the list, so we've provided clone recipes for five more favorites. Give them a try and let us know what you think.

Thanks for voting! We'll include information about participating in the 2008 poll in future issues and on the AHA TechTalk forum.

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

North Coast Old Rasputin Russian Imperial Stout Clone

Recipe by Amahl Turczyn Scheppach

This is a huge, complex beer, heavy on flavor and aroma, with lots of warming alcohol. It will age well, but with lots of late hops, you may want to let it condition for only a month or so. As with any high-gravity beer, pitch double the yeast you normally would—it's a great beer to pitch the dregs of another beer into. Aerate very well, and keep the fermentation temperatures from rising too far over 70° F (21° C). The California ale yeast or "Chico" strain does very well with this beer, and can handle the extra-high gravity. Grain bitterness is controlled very well with the use of dark crystal and brown malts to temper the roast and chocolate.

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

14.0 lb	(6.35 kg) pale two-row malt
1.0 lb	(0.45 kg) Carastan malt
1.0 lb	(0.45 kg) 120 L crystal malt
0.5 lb	(227 g) chocolate malt
0.5 lb	(227 g) brown malt
0.25 lb	(114 g) roast barley
2.0 oz	(56 g) Cluster pellet hops (7% a.a.) 60 min
1.0 oz	(28 g) Northern Brewer pellet hops (9% a.a.) 2 min
1.0 oz	(28 g) Centennial pellet hops (10.5 a.a.) 2 min
	American or California ale yeast

Original Target Gravity: 1.090

Final Target Gravity: 1.022

IBUs: 92

Directions

Mash grains at 152° F (67° C) for 60 minutes. Mash out at 158° F (70° C) for 10 minutes. Sparge and proceed with boil, adding hops at specified intervals.

Chill to 70° F (21° C), aerate or oxygenate well and pitch ale yeast slurry. Ferment at 68° F (20° C) until fermentation is complete.

Partial Extract Substitution: Substitute 9.9 lb (4.5 kg) light malt extract for the pale malt and increase Cluster hops to 2.75 oz (78 g). Steep crushed grains in 150° F (65.5° C) water for 30 minutes then sparge with 170° F (77° C) water. Add extract, bring to a boil and add hops at specified intervals.



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New Glarus Wisconsin Belgian Red Ale Clone

Recipe by Amahl Turczyn Scheppach

New Glarus says it uses over a pound of Door County (Montmorency variety) cherries per bottle. A 19-liter batch fills 25.3 750-milliliter bottles! Twenty-five pounds (11.34 kg) of whole cherries is a lot for a homebrewer to clean, pit and then ferment in a batch of beer. Fortunately there is an easier way to make cherry beer. This recipe uses organic Montmorency juice from Knudsen, and while it isn't cheap (\$5-7 per quart), it takes a lot of work out of the brew day. Knudsen doesn't use any sweeteners or preservatives (although it is pasteurized), so it's almost as good as using fresh fruit. Knudsen says there are 2.6 pounds (1.18 kg) of whole fruit per quart, which means you would have to use almost 10 quarts (9.46 L) to reach the same proportion in the New Glarus beer. This gets expensive very quickly, but you can get away with adding less juice... 1 gallon juice (3.79 L) to 4 gallons wheat beer (15.14 L) will give you an unmistakable cherry aroma, flavor and color, and a surprising tartness. After several attempts at this recipe, the 1:4 ratio seemed to be the best compromise between not spending a fortune on fruit and still retaining the huge cherry presence that the New Glarus beer delivers. And of course, you can always increase the cherry proportion. Just remember that the more fruit juice you add, the drier the beer will finish, so you may need to adjust the amount of crystal malt. A little malt sweetness is crucial for balance in this beer; otherwise you end up with something that more closely resembles a cherry wine. The Belgian wheat ale or wit yeast will give some yeast complexity and a bit more tartness, but any clean, well-attenuating ale yeast works well in this recipe.

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

5.0 lb	(2.27 kg) two-row pale malt
2.0 lb	(0.91 kg) wheat malt
6.0 oz	(170 g) 40L crystal
0.5 oz	(14 g) Belgian roast barley
4 qt	(3.79 L) Knudsen Just Tart Cherry juice
1.0 oz	(28 g) Hallertau hops, aged for 1 year, 60 min
0.25 oz	(7 g) boiled, toasted oak chips (optional)
	Belgian Wheat Ale yeast or ale yeast

Original Target Gravity: 1.057

Final Target Gravity: 1.007 – 1.012

IBUs: 8.6

Directions

Mash grains at 156° F (69° C) for one hour. Sparge and lauter to collect 4.5 gallons (17 L). Add hops and boil one hour. Chill 4 gallons (15 L) wort to fermentation temperature, pitch yeast and ferment at 65° F (18.3° C).

When terminal gravity has been reached, rack approximately 4 gallons (15 L) finished beer onto 1 gallon (3.79 L) cherry juice. Allow secondary fermentation to commence at 65° for one week or until finished. Chill to 32-35° F (0-1.6° C) if possible and lager for four to six weeks. Add oak chips during the last week, if using, but monitor the beer closely...you don't want too much oak flavor to come through. Bottle in heavy Champagne-style 750 mL bottles with 0.75 cup corn sugar per 5-gallon batch, or keg with moderate to high carbonation.

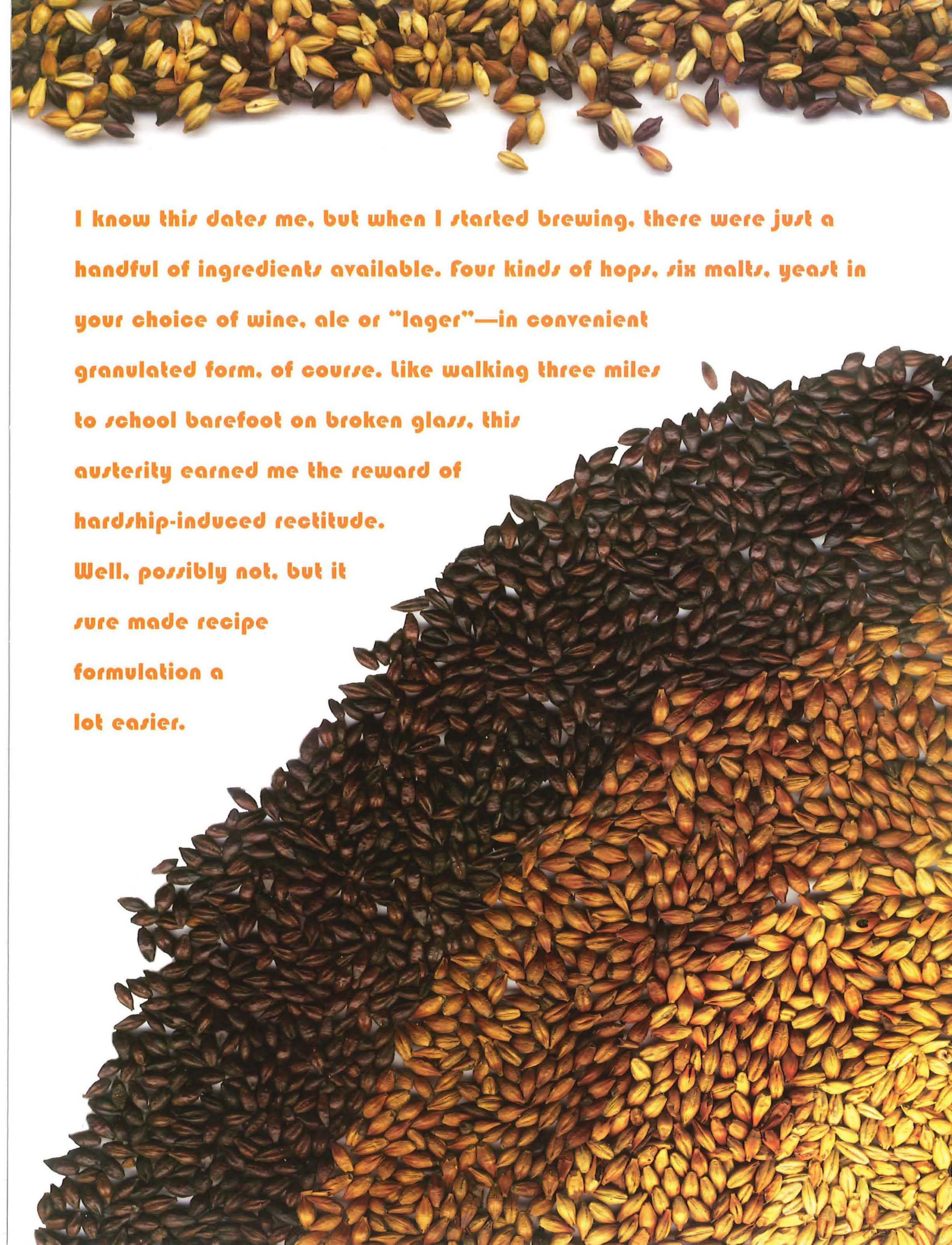
Partial Extract Substitution: Substitute 4 lb (1.81 kg) light malt extract and 1.5 lb (0.68 kg) wheat malt extract for Pale and wheat malts. Steep crushed specialty malts in 150° F (65.5° C) brewing water for 30 minutes, remove, and add malt extracts. Bring to a boil and add hops 60 minutes from end of boil. Top up to 4 gallons (15 L) and chill before pitching yeast and ferment at 65° F (18.3° C).

BEYOND CRYSTAL

FINDING THE MAGIC IN MIDDLE COLORED MALTS

BY RANDY MOSHER





I know this dates me, but when I started brewing, there were just a handful of ingredients available. Four kinds of hops, six malts, yeast in your choice of wine, ale or "lager"—in convenient granulated form, of course. Like walking three miles to school barefoot on broken glass, this austerity earned me the reward of hardship-induced rectitude. Well, possibly not, but it sure made recipe formulation a lot easier.

Even for brewers who started just a few years back, the current choices can be bewildering. Fabulous new hops show up every year and yeast purveyors now have seasonal products. It's a good time to be a homebrewer, to be sure.

Malt is now a colorful parade of choices, although as we will see, there is very little new under the sun. Old-school 1982 homebrew invariably contained pale or pils malt, a fair dollop of crystal and perhaps a little black patent, and the books of

that era, which many people still learn on, are steeped in that tradition.

In this article, we're going to focus mainly on the "other" middle colored malts. These don't have a convenient handle like crystal, so they make a bit of an unruly group. But they are well worth getting to know, as they can add the kind of magic that will have your friends coming back for free beer after free beer.

We'll start with a little history, and then move on to the fun-filled world of organic chemistry to try to put them all in perspective and get a grip on how best to use them in various recipes. Be advised that this is by no means a definitive survey of every commercially available malt between 15 and 75° Lovibond. Products differ, often dramatically from one manufacturer to another. You will have some homework to do.

History of Malt

As early as ancient Sumeria, roughly 5,000 years ago, malt was being kilned to varying degrees. Scholars have found linguistic references to malt kilns and the remains of parched barley and emmer (a type of wheat used in brewing at that time). Red, brown and black beers are recorded in the little clay tablets with cuneiform markings on them.

Egypt was a big beer drinking nation, what with all the thirst-inducing pyramid building. Archaeological evidence has been found there of wet-kilned malt, evidenced by a decrease in birefringence in polarized light, just like modern-day crystal or caramel malt. Like I said, nothing new.

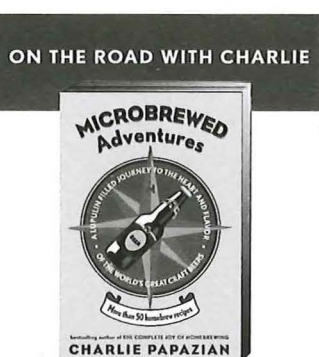
What those old gals knew was that malt and beer flavor are highly sensitive to the particulars of time, temperature and moisture during the kilning process.

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& winemaking needs



We'll be getting to that in a more scientific way in a moment.

In European brewing until recently, relatively few malt types were available at any one time and place. Brewers made a limited range of products, and often malted their own barley. Keeping up with the fickle tastes of the Internet age was not what they were about. Most of the classic lager styles, for example, depended on a single malt, e.g. Dortmund malt for Dortmunder beer and Kulmbach malt for Kulmbacher beer. By the time we have really detailed documentation, in England around 1700, we see just four malts: white, pale, amber and brown.

By the mid 19th century, brewers had become largely industrialized, which meant the scale of the operation could benefit from improvements in the economics of beer production. After 1847, the English allowed adjuncts—usually sugar or corn grits—to be added to the formerly all-malt grist. Less malt in the beer meant less malt flavor, and the stage was set for a type of malt with really intense flavor. And right about 1875, crystal malt (usually called caramel on the Continent) appeared. It has been used ever since. In decoction country, energy use has all but eliminated that ancient process, and crystal helps compensate for the missing caramelization that occurs during the mash boiling phases of the procedure.

We are fortunate today to have helped support our craft brewing brethren to the point where we have a specialty malt market large enough for many different domestic and imported brands. One homebrewing mail order catalog lists 90 different malts and grain adjuncts.

The Science of Brown

For the science portion of this discourse, we will need to talk about Maillard chem-

Malt Analysis 101

Moisture Content (MC): Given as a percentage. Lower is better. Avoid malts with moisture content of 5 percent or more. Slack (moist) malt stores poorly; weight of water contributes nothing to the beer.

Color: Typically given in degrees Lovibond. European malts use European Brewing Convention (EBC) units. $EBC = 1.97 \times SRM$ (Lovibond); $SRM = 0.508 \times EBC$.

Extract, Dry Basis, fine Grind (DBFG): Extract yield from the malt adjusted to 0 percent moisture and using American Society of Brewing Chemist (ASBC) laboratory mash and ground to ASBC fine grind standards. The higher the DBFG number the better.

Extract, Dry Basis, Coarse Grind (DBCG): Extract yield from the malt adjusted to 0 percent moisture and using American Society of Brewing Chemist (ASBC) laboratory mash and ground to ASBC coarse grind standards.

FG-CG Difference: The difference between the fine grind and coarse grind extract indicates the degree of malt modification. Unless you are using a decoction mash, look for malt with an FG-CG difference of less than 2.0 percent.

Diastatic Power (DP): Measures the combined alpha and beta amylase strength of the malt. Six-row base malts have the highest diastatic power followed by two-row and pale ale malts, while darker kilned malts will have lower diastatic power.

Protein: Given as a percentage. All-malt beers should not exceed 12-percent protein in the malt bill.

S/T, Soluble nitrogen/total nitrogen ratio: This essentially indicates the percentage of protein that is soluble for a given malt. S/T is an indicator of the degree of modification of the malt. Malts in the 30-33 percent range would be considered "undermodified" and would need to be decoction mashed.

Mealy/Half-Glassy/Glassy: The more mealy a malt the better it will mash. Glassy grains do not crush well. Look for malts with at least 92-percent mealy grains for step mashes or decoctions, and at least 95-percent mealy grains for single step infusion mashes.


Size: Malt size is measured by running the malt through sieves. There are various measurements for size. Some are measured as a percentage of Plump, percentage "Thru," or by various sieve sizes. The plumper the malt the better, though uniformity of size is also a factor to look for. Thin or thru means malt that is smaller than 2.2 mm. Look for malt that is 2 percent or less thin or thru.

Viscosity: This is a measure of the viscosity of the wort in a laboratory mash. High viscosity will lead to slower lautering. Viscosities of 1.75 are considered high, typically due to glucans or other gums.

Odor: This would indicate any off odors detected in the mash. Most specialty malts will be "very aromatic."

Clarity: Most malts will be clear to slightly hazy. Highly kilned specialty malts will be dark.

For a more thorough explanation of malt analysis, see Greg Noonan's *New Brewing Lager Beer*.



istry. Every time you pop a slice of bread into the toaster, you're using it. So much of what we like about food—the gloriously toasty, nutty, caramelly, roasty flavors that come from cooking—are due to Maillard reactions. And it's not just about starch. The delicious crusty char on your cheeseburger is a Maillard product, too.

Maillard browning occurs when carbohydrates combine with nitrogenous material (usually protein subcomponents like amino acids) in the presence of heat and moisture. This begets a dense thicket of specific reactions with the end products falling into one of two classes of chemicals responsible for the colors and aromas of browning.

The aromatic component is a group called heterocyclics—small, ring-shaped molecules incorporating oxygen, sulfur or nitrogen into their structure. They are highly volatile, and very potent in terms of aroma, often in the low parts-per-billion threshold range. Chemically, they are classified as pyrroles, pyrazines, furanones and a number of other “oles” and “ines.” Learning their individual names won't help you. There is always a mix of different ones, and they act in what is called an aromatic “matrix,” which means individual scents blend together into a composite aroma qualitatively different from any of its constituents. This is notorious in coffee, a predominantly Maillard product. Of the 900 identified aromatic chemicals in coffee, scientists really don't know which of them is responsible for coffee aroma. And so it goes with beer.

That doesn't mean it's all a big mush, however. Here's the key bit: Every different combination of carbohydrates, nitrogen, time, temperature, moisture, pH and other variables will give you a different set of end products. Keep this in mind as we go through the list of mid-colored malts, as those are tools maltsters use to create their range of flavors.

The other set of Maillard products are melanoidins. I often see them referred to in brewing discussions as if they were the aromatic chemicals, but this is not the case. Instead, they're a sort of tarry goo, largely without flavor or aroma. They are polymeric, meaning they are big molecules strung together from the starches and nitrogenous materials in the mix. It is known that some tend to be more yellowish and others more reddish, but other than that, science hasn't really had any compelling reason to elucidate their structure, as it is likely to be highly variable.

Choc Full O' Cherry

Cherry Chocolate Porter
All-Grain Recipe (75 percent efficiency)

Ingredients

for 5 U.S. gallons (19 liters)

This uses the depths of roasted malt to create an enveloping chocolaty base for the added ingredients. Makes a great beer without the chocolate and cherries, too!

2.5 lb	(1.1 kg) Pilsener malt (1.6°L)
10.0 lb	(4.5 kg) Munich malt (8°L)
0.75 lb	(340 g) Dark crystal malt (80°L)
1.0 lb	(454 g) Melanoidin malt (33°L)
0.5 lb	(227 g) Carafa® (röstmalz) malt (470°L)
0.7 oz	(18g) Northern Brewer pellets, 8% AA, 20 IBU, 60 min
0.5 oz	(13g) Northern Brewer pellets, 8% AA, 10 IBU, 30 min
5–10 lb	previously frozen sour cherries
0.5–1.0 lb	roasted cocoa nibs, crushed lightly
	European ale yeast; Belgian or lager a possibility, too

Original Target Gravity: 1.075/18.2°P


Alcohol by volume: 6.0–7.2%

Color: deep reddish brown, calc. at 38° SRM
IBUs: 30

Directions

Mash 1 hour at 152° F (67° C). Ferment the beer through the primary. Then to the secondary, add frozen sour cherries and cocoa nibs. Allow the beer to stay on the fruit and cocoa nibs for at least two weeks—a month or two is better. Rack to another secondary, allow to settle before bottling or kegging. Note: hop calculations are based on pellets. Figure on 25 percent more if using whole hops.

Mini-mash Substitution: Substitute 5.5 lbs of amber dry extract for the Munich, and mash the rest of the ingredients for an hour at 150°F (66°C), adding the drained, sparged wort to the extract.



So which malts are we talking about? We'll cover crystal a little, but it's really my goal to get you from habitually adding crystal to every batch you make. Some are simply darker versions of malts used as base malts. Melanoidin/aromatic is essentially more deeply toasted Munich malt, for example. For those and others like biscuit/amber, the catchall category is "kilned" malts. Crystal malts are their own group, of course. Another class encompassing honey malt and brumalt is sort of a hybrid between crystal and kilned malts. Roasted malts are the very dark types, including German Röstmalz chocolate and black patent malts.

If you are primarily an extract brewer, the other mid-colored malts don't offer the convenience of crystal. In order to use them, you will need to do a mini-mash, usually with an equal amount of pale or pils malt to aid conversion. Yes, it's a little more trouble, but it opens up a whole world of flavor choices and is a great stepping-stone to full all-malt brewing.

Probably the most confusing thing about these malts is the terminology. Each maltster names these as they see fit, and it ends up being a mix of tradition, national norms and trade names. I will list all the synonyms at the top of each description.

No matter what words I use here to describe these malts, the vocabulary of flavor and aroma is always somewhat deficient, not to mention highly personal. I would suggest you personally investigate these malts, as do all the best brewers I know. This actually makes for an easy and rewarding club activity. Simply order a pound or two of a bunch of different malts, lay them out for tasting and let people have at it. A little preface on the nature of Maillard chemistry helps people under-

stand what they are tasting. In addition to dry malt, you might undertake to make little mini-mash "malt tea" samples, which will allow people to taste the malts in liquid form. You can use a water bath and canning jars for a 20-minute saccharification rest around 155-160° F, then just

strain them through a coffee filter. These will hold for a few days in the refrigerator.

The Malts

Amber, aka Biscuit (Briess Victory): These have been around a very long time, having a lineage in England that extends

Scarlet Pumpnickel Red Rye Ale

All-Grain Recipe
(75 percent efficiency)

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

The idea here is to use every trick in the mid-colored malt book, going for considerable complexity under a smooth, hoppy surface. Note that you can double these hop quantities if you want to, and dry-hopping is definitely encouraged as well. A pound of rice hulls may make sparging easier.

3.0 lb	(1.4 kg) Pilsener malt (1.6°L)
6.0 lb	(2.7 kg) Vienna malt (4°L)
1.0 lb	(454 g) Brumalt/Honey Malt (25°L)
0.5 lb	(227 g) Amber/Biscuit malt (27°L)
0.75 lb	(340 g) Melanoidin malt (33°L)
1.0 lb	(454 g) Malted Rye
2.0 oz	(57 g) Carafa II (röstmalz) malt (470°L)
0.5 oz	(13 g) Simcoe pellets, 13% AA, 25 IBU, 60 min
0.75 oz	(10 g) Simcoe pellets, 13% AA, 16 IBU, 30 min
1.0 oz	(28 g) E. Kent Golding pellets, 5% AA, 4 IBU, 5 min
	American (Chico) ale yeast

Original Target Gravity: 1.065/15.9°P
Alcohol by volume: 5.5–6.4%
Color: deep red-amber, calc @ 17° SRM
IBUs: 45

Directions

Mash for 1 hour at 147° F (64° C). Note: Hop calculations are based on pellets. Figure on 25 percent more if using whole hops.

Mini-mash substitution: Substitute 3.25 lbs of pale dry extract for the Vienna, and mash the rest of the ingredients for an hour at 150° F (66° C), adding the drained, sparged wort to the extract.



back at least to the days of unhopped ale 500 years ago. Amber is nothing more than a toasted pale ale malt, of between 24 and 28 °Lovibond. In *Malting and Brewing Science*, Hough, Briggs and Stevens (1971) say: "Amber malts are prepared by kiln-drying well-modified malt to 3–4 percent moisture and then 'ambering' in the kiln or a drum by heating rapidly to 200° F (93.3° C), in 15–20 minutes and then gradually to 280–300° F (138–149° C). The higher temperature is maintained until the correct colour, 35–100 E.B.C. units, is obtained."

It is important to note that this malt is kilned dry, which gives it quite a different aromatic profile from moist-kilned malts of similar color, such as melanoidin. It is also one of the easiest malts to create at home, in that the starting point is simply dry pale malt. The original Goose Island brewer, Victor Ecmovich, claims that Briess Victory was created at his request (in 1987) and named for him. "Victor E. Get it?" Amber/biscuit has a sharply toasty, brown character, notably lacking

in caramelly notes. It contains sufficient enzymes to convert itself.

Amber is ideal for use as the signature malt in brown ale. In my experience, nothing tastes quite so "brown" as amber malt. You might think chocolate would be the choice here, but I find it too roasty and a little too sharp for the smooth character needed in a brown ale. It's a nice addition for depth and complexity in dry stouts, as it doesn't add sweetness that would be inappropriate for the style.

Melanoidin/Aromatic/Dark Munich:

These are moist-kilned malts of between 15 and 33 °Lovibond. At the end of malting, high-moisture malt is artificially starved for air, which stops respiration but allows proteolytic and amylolytic enzymes to function. This creates a bounty of sugars and nitrogenous products to feed the Maillard activity that will occur during kilning.

I think melanoidin/aromatic malts are the most underappreciated out there. They provide a lot of luscious caramel aroma without

the sweet raisiny chewiness that crystal adds. On the palate they have a very soft toastiness, perfect for adding a little balance to sweetish beers like Oktoberfests, Scottish ales or bocks. Belgian brewers like them for their ability to add richness and depth to amber or brown beers such as Belgian pale ales, dubbel or strong dark ale. Remember, the Belgians value drinkability in stronger beers, so melanoidin is probably a better choice than crystal, and can certainly be used in larger quantities.

Brown Malt (Briess "Special Roast" at 50 °L):

This is the malt that built porter. Once the famous brew was based entirely on brown malt brought in from Hertfordshire, but as brewing scientists armed with hydrometers (Richardson, 1777) found out how much less extract was yielded from brown malt, things quickly changed, and this knowledge was in fact the impetus for the invention of black patent malt.

Brown malt was kilned rapidly over a roaring fire, traditionally of oak or hornbeam logs, even as recently as the mid-20th century. Hough, Briggs and Stevens give a kilning profile of two-and-a-half hours at 350° F (177° C) and mention the "...characteristic flavour derived from wood smoke. This material..." noted in 1971, "...is now only used rarely." Early versions of brown malt were capable of converting themselves, but I'm not sure I'd count on that from modern versions. This is another malt that can be made quite successfully at home.





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Brown malt has a sharp coffee-like toasty/roasty flavor, almost a bit of a campfire character, although contemporary versions are definitely not smoked. However, brown malt character would be highly complementary to smoked malt notes, so would make a perfect addition to smoked porter. Or, you can wood-roast your own. You really can't make an authentic 18th century porter without it. Other uses include

all manner of black beers, especially when a coffee-like touch is welcome.

You can also use it in small quantities in brown or amber beers; Scotch and old ales come to mind.

Honey Malt/Brumalt:

This is a sort of crystal/melanoidin hybrid malt of German origin, although Hind in 1948 describes a British malt called "diamber" which matches its profile quite closely.

Color ranges from 20 to 30 °Lovibond. Despite the name, it really doesn't taste like honey, but it is smoother and less sharp than crystal of comparable color, with a more friable, less sugary texture. It definitely has less of the heavy, dried-fruit character of crystal. A proprietary (read: secret) process is used to produce it, but Hough, Briggs and Stevens describe a 122° F (50° C) oxygen-starved rest of 24 hours at the end of malting, followed by a kilning at 212° F (100° C). Since this stewing and moist kilning procedure is less intense than crystal, it contains sufficient enzymes to convert itself, and may be used in proportions up to about 25 percent of the grist.

I would recommend it to extract brewers looking for a less sweet malty kick than crystal delivers. It's nice as the predominant malt in French and Belgian mid-colored beers, such as bière de garde, dubbel and all manner of no-style specialties. Brumalt can lend a firm supporting maltiness in dark beers such as schwarzbier or even oatmeal stout. It's also useful in adding a bit of sweetness to brown ales, lest they become too austere from all that amber malt.

Röstmalz (Weyermann Carafa®): Although this stretches the concept of "mid-colored," these underused dark malts deserve a place in every brewer's kit, so we should mention them. These are the German take on black malt, most likely developed during the early 19th century as German brewers sought to find malts to create their own interpretations of porter, the beer that was at that time the "next big thing" in the beer world. Since lagers have such smooth, clean flavors, it was logical that Continental brewers would develop roast malts that worked with that aesthetic, and

röstmalz was the result. These are deliciously creamy, free from the kind of harsh bitterness that can accompany black patent malt. It comes in a variety of colors, as shown by the Weyermann Carafa range: I at 337 °L; II at 425 °L; and III at 470 °L, which is still a little less black than patent. In addition, Carafa is offered in dehusked versions for an even smoother flavor.

Röstmalz is indispensable for schwarzbier, itself a descendant of the German porter style. It's also great for a soft roasty bottom note in bock and doppelbock, and it is completely unobtrusive as a coloring agent in any lighter to medium colored beer. I would use the lighter version as a backbone for a chocolate flavored beer or a cherry stout where too much sharp roastiness might fight the subtle added flavors. Anybody for a beery version of a chocolate-covered cherry?

Randy Mosher is author of *Radical Brewing* and a frequent contributor to *Zymurgy*.

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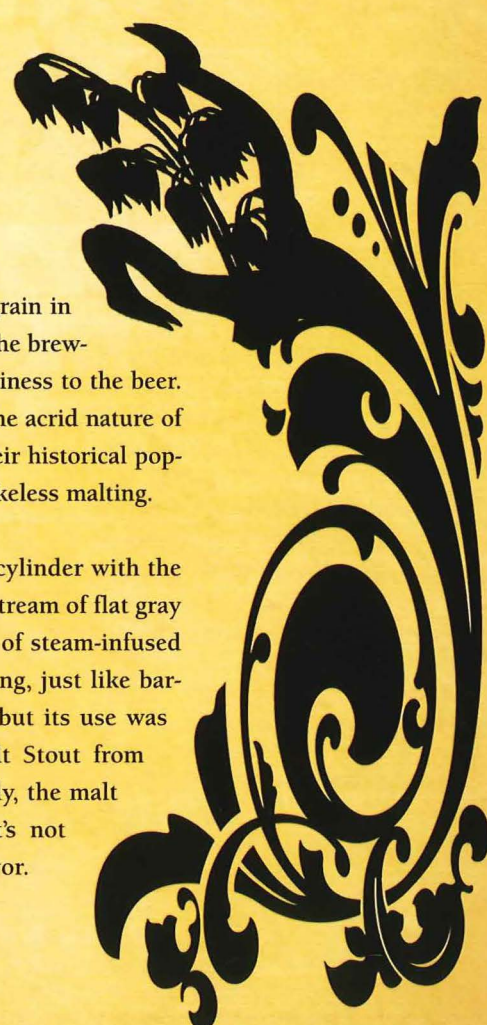
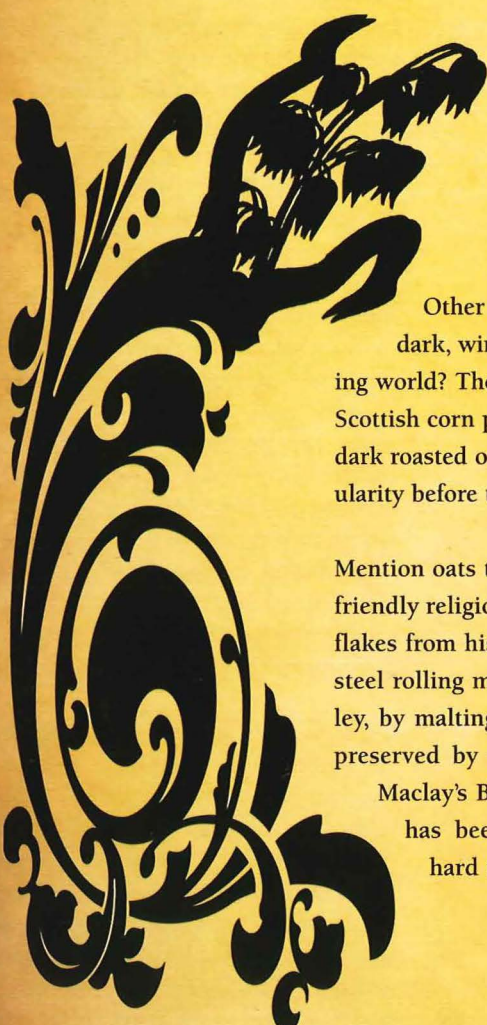
BY DREW BEECHUM

SAMUEL JOHNSON, ENGLISH AUTHOR AND LEXICOGRAPHER, FAMOUSLY DEFINED OATS AS "A GRAIN, WHICH IN ENGLAND IS GENERALLY GIVEN TO HORSES, BUT IN SCOTLAND SUPPORTS THE PEOPLE."

OLD SAM SHOULD BE FORGIVEN FOR HIS CONFUSION, FOR HE FORGOT THE HUMBLE OAT'S LONG HISTORY IN BEER.

STUMBLING BACK IN HISTORY TO 1067, SAINT HILDEGARD PRESCRIBED HOPS FOR BEERS MADE WITH OATS.

EVEN NOW IN PARTS OF THE ANDES, A BEER SIMILAR TO CHICHA IS MADE FROM ROLLED OATS.



Other than being a cheap and plentiful grain in dark, wintry climes, what do oats bring to the brewing world? They lend a richness and a round silkiness to the beer. Scottish corn polishes the rough edges. Taming the acrid nature of dark roasted or burnt grains, in part, explains their historical popularity before the development of controlled smokeless malting.

Mention oats today and people picture that tall cylinder with the friendly religious man pouring forth an endless stream of flat gray flakes from his black hat. But before the advent of steam-infused steel rolling mills, oats were prepared for brewing, just like barley, by malting. Oat malt has been a rare find, but its use was preserved by the now retired famous Oat Malt Stout from Maclay's Brewing of Alloa, Scotland. Recently, the malt has been enjoying a mini-revival and it's not hard to see why with its rich, nutty flavor.

PRODUCTION OF OAT MALT

Thomas Fawcett & Sons of Yorkshire, England is one of the last to floor malt and the last major British maltster to produce oat malt. Discussing their methods, James Fawcett, managing director, stressed that the challenge lies in finding good malting material. Since oats are not specifically bred for brewing like modern barley, Fawcett's sorts and picks the best of what is available. Finding a balance between the plumpest oat berries and a low, manageable total nitrogen level (1.6 to 1.75 percent) is critical. Like their barley malts, the oat malt is painstakingly turned by hand on large malting floors until the germination is complete. Fawcett's then lightly kilns the malt to a low 4°L before being shipped off.

In the last decade, Fawcett's has begun exporting its malt around the world.

Import into the United States is handled by North Country Malt Supply of upstate New York. They offer online sales of bags and smaller quantities. Additionally, several retailers offer oat malt for resale. Check with your local homebrew supply store for the availability of Fawcett's in your area.

USING OAT MALT

In modern brewing usage, oat malt is treated as a specialty adjunct, comprising just 5 to 10 percent of the grain bill. Dominating the list of traditional usage are stouts. The richness and luxurious mouthfeel from oats' natural fat content and high protein levels softens the burnt character of roasted barley and black patent. Leveraging the boosted body results in different applications: rounding out the thin nature of a low gravity mild or bitter; providing a pale beer with

a sturdy backbone to resist a bitter blast of hops; or polishing the warmth of a heartily alcoholic dram. Thinking of malted oats' use and effects as a subtle cross between wheat malt, flaked oats and pale crystal malt opens the brewing field wide.

Interestingly, the grain has enough diastatic power to convert itself. Brewers have even reported making all oat malt beers. According to Fawcett's there is probably insufficient supplemental enzymatic activity to convert large quantities of specialty grains. Extract brewers take heart! The ability to self-convert means that, unlike flaked oats, steeping oat malt is viable. Take care to steep your grains in the lower-150s and suddenly making oatmeal stouts with no residual starch is a snap.

An oat kernel is incredibly tiny, smaller than wheat berries or six-row barley. A thin, papery husk protects its starchy interiors. This diminutive nature presents the greatest brewing challenge. Grain mills need extremely tight settings to correctly crush the malt. If your smallest gap is still too wide, mixing the oats with barley may help. Regardless, you should run the oats through multiple crushing runs to ensure a proper cracking.

British brewers are renowned for simplicity in methodology. The straightforward single infusion mash suffices for the range of traditional British ingredients and styles. This practice holds for the use of oat malt. However, pay close attention to the nitrogen and protein levels of your lot. As they climb you'll encounter more haze-causing elements in your mash. Similar in protein levels to malted wheat, a protein mash and a long recirculation can mitigate the problem for oats as well.

Everyone fears a stuck sparge, and oats are notorious for adding to a brewer's concerns. The included Haarlem Bokbier recipe uses oat malt, rye malt and wheat malt for nearly two-thirds of the grain bill. Pentosans, a type of large polysaccharide present in all three, can gum up a lauter fast without sufficient filtering material. Thankfully, the thin, papery husk is a boon to the adventurous brew-

MAC'S GONE OAT MALT STOUT

Ingredients

for 5.5 U.S. gallons (20.8 L)

8.00 lb	(3.6 kg) Maris Otter Pale Malt
1.00 lb	(0.45 kg) Thomas Fawcett Oat Malt
1.00 lb	(0.45 kg) Scottish Crystal 150L
0.75 lb	(0.34 kg) Scottish Roasted Barley
0.25 lb	(0.11 kg) Scottish Black Patent
0.5 oz	(14.2 g) Target pellet hops, 10.0% alpha acid (60 min)
0.5 oz	(14.2 g) Challenger pellet hops, 7.0% alpha acid (20 min)
1.25 tsp	(5.9 g) calcium carbonate Wyeast 1728 Scottish Ale or Wyeast 1318 London III

Original Target Gravity: 1.052

SRM: 43.0

IBUs: 26.9

Boil Time: 60 Minutes

Directions

Saccharification rest at 153° F (67° C) for 60 minutes (1.25 quarts/lb infusion).

Partial Mash Recipe

5.0 lb	(2.7 kg) Light liquid malt extract (quality name-brand)
2.0 lb	(0.9 kg) Maris Otter Pale Malt
1.00 lb	(0.45 kg) Thomas Fawcett Oat Malt
1.00 lb	(0.45 kg) Scottish Crystal 150L
0.75 lb	(0.34 kg) Scottish Roasted Barley
0.25 lb	(0.11 kg) Scottish Black Patent
0.75 oz	(21.3 g) Target pellet hops, 10.0% alpha acid (60 min)
0.5 oz	(14.2 g) Challenger pellet hops, 7.0% alpha acid (20 min)
0.75 tsp	(3.5 g) calcium carbonate Wyeast 1728 Scottish Ale or Wyeast 1318 London III

Directions

Add grains and calcium carbonate to 1.67 gallons (6.3 L) of 165° F (74° C) water. Steep at 153° F (67° C) for 60 minutes, then sparge with 1.5 gallons (5.7 L) of 170° F (77° C) water. Add extract and bring to a boil. Boil 60 minutes adding hops as indicated in recipe. Strain into a fermenter with enough cold water to make 5.5 gallons. Pitch yeast when temperature drops below 70° F (21° C) and aerate well.

er and improves wort separation. For malt bills with high proportions of non-barley malts, start your lauter slowly and monitor the wort flow closely until you feel confident that you're running freely. Cutting the mash midway through sparging is highly recommended since gummy mash encourages channeling.

Can we put our beer where our mouth is? Is this stuff really that versatile? Presented here are four recipes that encompass traditional, non-traditional and historical uses. All take advantage of the unique and sometimes subtle nature of malted oats to cajole nuances that would otherwise be lost.

MAC'S GONE OAT MALT STOUT

MacLay's may have turned off the kettles at the Thistle Brewery and with it the production of its Oat Malt Stout, but that certainly won't stop the intrepid homebrewer! This true original was first brewed during the reign of Queen Victoria and was the pride and joy of Alloa. While the beer was brewed for a while at Williams Brothers, it appears when the contract moved to Belhaven the beer was lost to history.

At 5.5-percent abv, Mac's Gone is a full percent stronger than the original, but shares its creamy, roasted, toasty notes. A stout backbone of Maris Otter or Golden Promise is bolstered with equal doses of Scottish Crystal, roasted barley and oat malt. That last addition is what pushes the beer to the peak. If your water is low in carbonates the small addition of calcium carbonate helps control the effect of the roasted barley on the mash pH. When fermented with a lower attenuating yeast strain, the stout retains a touch of sweetness playing off the roast and nuttiness of the oat malt.

HAVER ANOTHER AK MILD

To me, gathering with friends and sharing beers is the high water mark of this obsession. Faced with a choice of more than 25 beers at the club's festival is a mouthwatering prospect. The usual homebrewing preference for pushing the limits makes it a daunting task to sample and converse with crowds over a long day of tap surfing. Combined with a desire to prove my

HOW TO BREW

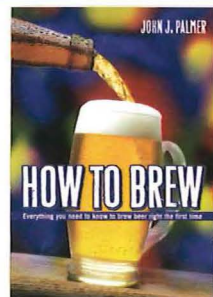
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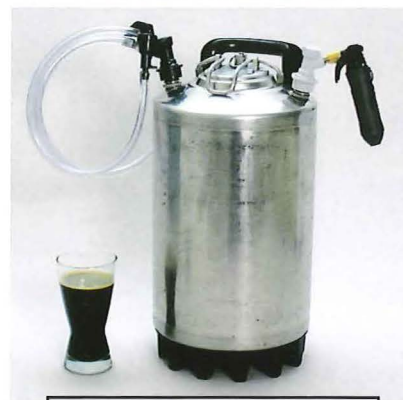


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AMARILLO OATER XPA

Ingredients

for 5.5 U.S. gallons (20.8 L)

8.0 lb	(3.6 kg) Domestic two-row
2.0 lb	(0.9 kg) Thomas Fawcett Oat Malt
0.5 lb	(0.2 kg) Crystal 8L
0.5 lb	(0.2 kg) Munich Malt
1.00 oz	(28 g) Amarillo pellet hops, 9.4% alpha acid (First Wort Hop)
0.75 oz	(21 g) Amarillo pellet hops, 9.4% alpha acid (60 min.)
0.50 oz	(14 g) Amarillo pellet hops, 9.4% alpha acid (15 min.)
1.00 oz	(28 g) Cascade pellet hops, 5.75% alpha acid (0 min.) White Labs WLP001 California Ale, Wyeast 1056 Chico Ale or Safale US-56

Original Target Gravity: 1.050

SRM: 4.4

IBUs: 74.0

Boil Time: 60 Minutes

Directions

Saccharification rest at 152° F (66° C) for 60 minutes (infused at 1.25 quarts/lb). Add first wort hops to kettle as you collect run-off from the mash.

Partial Mash Recipe

4.5 lb	(2.0 kg) Light liquid malt extract (quality name-brand)
2.0 lb	(3.6 kg) Domestic 2-Row
2.0 lb	(0.9 kg) Thomas Fawcett Oat Malt
0.5 lb	(0.2 kg) Crystal 8L
0.5 lb	(0.2 kg) Munich Malt
1.00 oz	(28 g) Amarillo pellet hops, 9.4% alpha acid (First Wort Hop)
1.75 oz	(50 g) Amarillo pellet hops, 9.4% alpha acid (60 min.)
0.50 oz	(14 g) Amarillo pellet hops, 9.4% alpha acid (15 min.)
1.00 oz	(28 g) Cascade pellet hops, 5.75% alpha acid (0 min.) White Labs WLP001 California Ale, Wyeast 1056 Chico Ale or Safale US-56

Directions

Add grains to 1.67 gallons (6.3 L) of 165° F (74° C) water. Steep at 152° F (67° C) for 60 minutes, then sparge with 1.5 gallons (5.7 L) of 170° F (77° C) water. Add extract and first wort hops, then bring to a boil. Boil 60 minutes adding hops as indicated in recipe. Strain into a fermenter with enough cold water to make 5.5 gallons. Pitch yeast when temperature drops below 70° F (21° C) and aerate well.

need for a beer engine, I started brewing milds and found that, like stouts, a judicious application of flaked oats rounds the body and cuts the acidic roast.

David Sutula's style series book *Mild Ale* introduced the concept of the Pale or AK Mild to me. Wanting to switch up and take a break from my traditional dark mild, I formulated a recipe with a base of Maris Otter and small additions of light English Crystal, Belgian Aromatic malt and organic turbinado sugar. Taking advantage of a gift from a fellow brewer, I added a pound of oat malt. The end reward was a pale beer that is silky and malt forward; rich, complex and eminently quaffable. The name plays on Haver, the Middle English word for oats.

AMARILLO OATER XPA

Encouraged by the success of the AK and following Maclay's history of brewing Oat Malt Pale Ale, I put a twist on another favorite session ale, Extra Pale Ale. While I love the exuberant hop expression of a Double IPA, drinking more than a pint or two quickly puts this imbiber on the road to his pillow. An XPA solves this dilemma and delivers the hop kick I crave with just enough malt to keep the tongue from buckling.

Amarillo hops, with their bold grapefruit aroma and brisk, clean bittering, have a permanent home in many breweries. Thanks to its low cohumulone content, Amarillo can be used in large doses without becoming harshly bitter. This smooth hop character and the rich texture of the oat malt lets the Oater XPA ride tall with a bracing 74 IBUs on a 1.050 OG beer. The last-minute dose of Cascades twists the horse's tail and boosts the catty notes that many read as "hoppy." At 5-percent abv, it's easy to kick back and watch a few tumbleweeds roll by.

BROUWERIJ VAN CITTERS HAARLEM BOKBIER

In addition to being a great brewer, Gregg Van Citters is a relentless researcher and proud of his knightly Dutch heritage. Utilizing his passions and strengths, Van Citters has brought back a beer all but lost to history. At first blush, the grain bill appears to be a disaster waiting in the wings, but Gregg reports no stuck mashes

during all the years of brewing this particular “extreme historical” monster.

Van Citters’ clan settled and flourished outside the Zeeland capital of Middleburg during the rise of the Hanseatic League and later the Dutch East India Company (VOC). With the family’s long involvement in trade, he knew they must have traded grain and hops. Putting his nose to the history books, he stumbled across a series of grain bills culled from the country’s tax records.

The initial formulation attempts centered on pre-1400 Koyt gruit ales that consisted of up to 75-percent malted oats. Respecting the historical contribution of the Dutch in spreading the use of hops, Van Citter then pursued a traditional Haarlem recipe from 1507 with 47.5-percent oat malt and Pilsner with a 5-percent kicker of wheat malt. His latest iteration, featured here, comes from the 1515 tax rolls of Gouda with an inspired addition of rye to finish this golden, sticky, slightly sweet-bodied beer that finishes dry and a healthy 9-percent abv. Even with nearly two-thirds of the mash occupied by sticky, gummy non-barley malts, he has had free and easy lauters. This held true even when we mashed 87 pounds of grain and produced a barrel of this recipe on our HERMS brewery. This despite 57 pounds of oats, wheat and rye! Most importantly Gregg’s research begs the question, “Who says the extreme beer movement started only recently?”

CONCLUSION

I’m sure that after sampling a few of these beers, old Samuel Johnson would change his tune. As for his disparaging remarks about Scotsmen, his friend, biographer and Scot James Boswell deftly defended the power of oats saying, “That is why in England you have such fine horses and in Scotland we have such fine people.” And now we can add fine beer to the mix as well.

Drew Beechum is a former president of the Maltose Falcons, America’s oldest homebrew club. He lives in Los Angeles, Calif. When not busy playing with computers for pay, he plays with beer.

BROUWERIJ VAN CITTERS HAARLEM BOKBIER

Ingredients

for 5.5 U.S. gallons (20.8 L)

8.00 lb	(3.6 kg) Thomas Fawcett Oat Malt
4.00 lb	(1.8 kg) Belgian Pilsner Malt
1.25 lb	(0.56 kg) Munich Malt
1.25 lb	(0.56 kg) Rye Malt
1.25 lb	(0.56 kg) Wheat Malt
0.75 oz	(21.3 g) Perle pellet hops, 5.7% alpha acid (60 min.)
0.50 oz	(14.2 g) Hallertau Tradition pellet hops, 6.0% alpha acid (40 min.)
0.50 oz	(14.2 g) Spalt pellet hops, 4.8% alpha acid (20 min.)
0.50 oz	(14.2 g) Styrian Goldings pellet hops, 4.0% alpha acid (5 min.)
1	Whirlfloc Tablet (20 min.)
	Wyeast 3822 Dutch Castle (Kasteel) or Wyeast 3787 Trappist High Gravity

Original Target Gravity: 1.073

SRM: 5.8

IBUs: 28.6

Boil Time: 60 Minutes

Directions

Mash

Acid Rest Temp: 104° F (40° C) (20 min.)
Protein Rest Temp: 122° F (50° C) (20 min.)
Saccharification Rest Temp: 154° F (68° C) (30 min.)
Mash-out Rest Temp: 165° F (74° C) (10 min.)
Sparge Temp: 170° F (77° C) (40 min.)

HAVE ANOTHER AK MILD

Ingredients

for 5.5 U.S. gallons (20.8 L)

6.00 lb	(2.7 kg) Maris Otter Malt
1.00 lb	(0.45 kg) Thomas Fawcett Oat Malt
0.50 lb	(0.22 kg) Crystal 35L
0.50 lb	(0.22 kg) Turbinado Sugar
0.25 lb	(0.11 kg) Aromatic Malt
0.25 oz	(7.1 g) Target pellet hops, 10.0% alpha acid (60 min)
0.12 oz	(3.4 g) Challenger pellet hops, 7.0% alpha acid (30 min)
	Wyeast 1275 Thames Valley Ale

Original Target Gravity: 1.038

SRM: 6.2

IBUs: 13.2

Boil Time: 60 Minutes

Directions

Saccharification rest at 152° F (66° C) for 60 minutes (1.5 quarts/lb infusion).

Partial Mash Recipe

3.0 lb	(1.4 kg) liquid malt extract (quality name-brand)
2.0 lb	(0.9 kg) Maris Otter Malt
1.0 lb	(0.45 kg) Thomas Fawcett Oat Malt
0.50 lb	(0.22 kg) Crystal 35L
0.50 lb	(0.22 kg) Turbinado Sugar
0.25 lb	(0.11 kg) Aromatic Malt
0.33 oz	(9.4 g) Target pellet hops, 10.0% alpha acid (60 min)
0.12 oz	(3.4 g) Challenger pellet hops, 7.0% alpha acid (30 min)
	Wyeast 1275 Thames Valley Ale

Directions

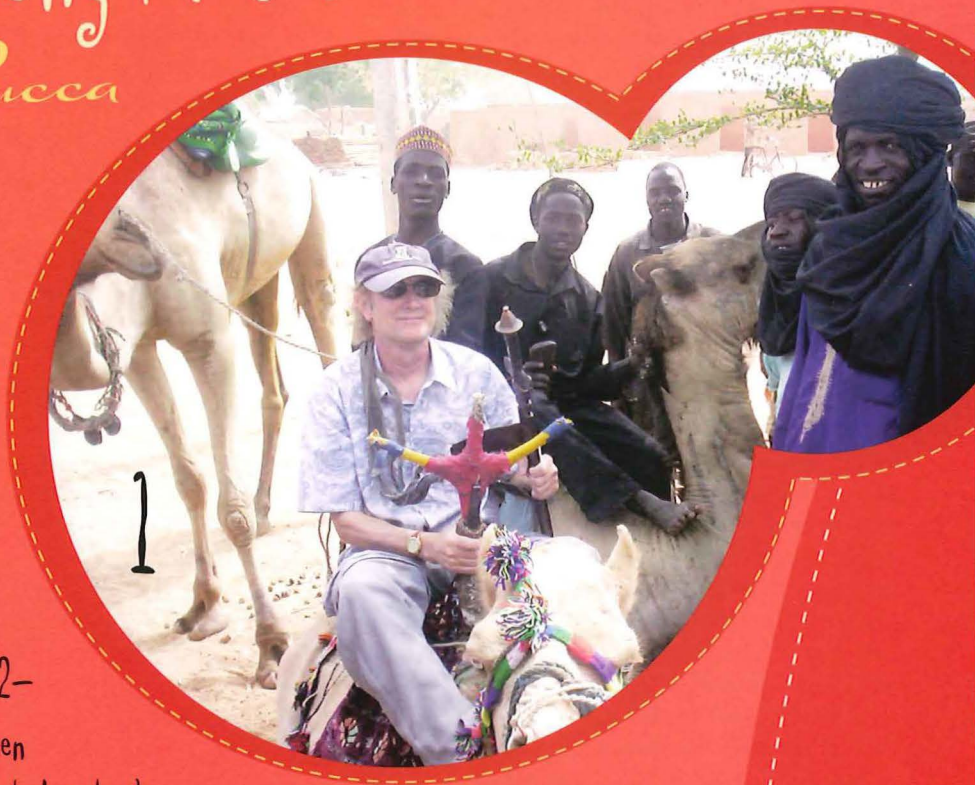
Add grains to 1.4 gallons (6.3 L) of 163° F (73° C) water. Steep at 152° F (67° C) for 60 minutes, then sparge with 1.5 gallons (5.7 L) of 170° F (77° C) water. Add extract and bring to a boil. Boil 60 minutes adding hops as indicated in recipe. Strain into a fermenter with enough cold water to make 5.5 gallons. Pitch yeast when temperature drops below 70° F (21° C) and aerate well.

Looking for Beer in All the Wrong Places

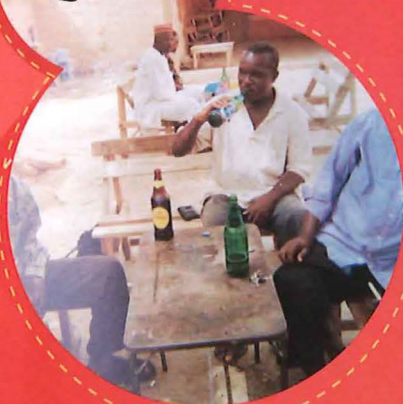
By Ralph Bucca

I finally tracked down Kourmys, fermented mare's milk dating back to when nomads rode the Central Asian range, while working in Osh, a city in the southern Kyrgyz Republic. My staff and I sat on the traditional restaurant beds and ordered a round. We were served a 12-ounce bowl of a white liquid with green things floating in it. They all downed their bowl immediately and licked their lips. All were watching, waiting for my reaction. Slowly I took a sip. Hmm, quite sour, like leftover milk. I told them it was an acquired taste and ordered them another round. I forced my bowl down over a long half hour, all for the sake of research.

For the past year-and-a-half I have combined my passion for non-tourist foreign travel and beer hunting in exotic locations by volunteering with the Farmer-to-Farmer Program. For anywhere from two to five weeks, I am sent to assist and train farmers in remote villages to process their crops, creating value-added products. I have worked in Nigeria, Guyana, El Salvador and the Kyrgyz Republic, all with distinctly different people, cultures, languages and beer.



2



Nigeria, February 2005

I first learned about the volunteer program at a farm demonstration event. Owning a small vineyard/farm, I have practical experience with processing fruits and vegetables. My assignment took me to northern Nigeria, where I was to assist local farmers in Katsina State and women's groups in the city of Kano on the processing, drying and marketing of their vegetable crops. My personal goals were to survive in this unfamiliar environment, ride a camel and try the local beers. I was far more successful with the farmers and the camel than finding a decent brew in Muslim Nigeria, the most alien of places. Consider living in 15th-century mud-brick dwellings with cell phones.

The Muslims drink a non-alcoholic malt beverage called Maltina, made with sorghum, maize, sugar and hop extract. It tastes just like unfermented beer, which it probably is. I tried it once—very sweet. No thanks.

Being desperate and resourceful, I did occasionally sample a few beers. While at my first hotel, the no-star Zambrush, I had the cook smuggle in my first Nigerian beer, Gulder. Although it was a typical lager, I savored it. It was my first beer in 10 days.

During the three weeks in Katsina, I was taken to a couple of bars run by Ibos, a Christian tribe (therefore beer drinkers) from

the eastern part of Nigeria. The first place was the Luna Club, a hotel/brothel with an outdoor courtyard and a fountain. Since I was the only white person (Batura) in town, I got some stares. However, Kennedy, my host, said I was safe as long as I didn't touch the women, or I might lose one of my hands. We hung out by the fountain and I tried a Star, one of the most common beers, another non-descript lager typical of most of the beers in Nigeria. They all came in returnable half-liter bottles, and cost 200 Naira (\$1.50).

My other beer experiences occurred at the King's Paradise Hotel (I'm not sure which king, but his idea of paradise is a little lower than mine, as it was just some ramshackle mud/brick buildings). While taking a walk one hot, dusty Sunday afternoon, I ran into Ken, the A/C repairman for my hotel, and told him of my no-beer plight. Being an Ibo, he sympathized and flagged down two passing motorbike taxis, and off we rode down a dirt path leading to the bar. We entered through a dark room that led outside to a beer garden courtyard.

Here I tried my first Nigerian Guinness Stout. It did not quite resemble the Irish version. It was dark, but with no roasted taste, sweet with little hop bitterness. We joined a couple of locals and I quizzed them on Nigerian beers. They said they preferred the Star brand because it was "hygienic." I guess that means clear and crisp, instead of the dark stout.

They told me about other Nigerian beers available in the Christian/Pagan South. Star, Guinness Stout, Harp, Samsabra and Heineken are brewed in Lagos. Other local Nigerian brands and their breweries are

Champion (Calabar), 33 (Imo), Rock (Jos), Dubic (Aba) and Kronenbourg (Kaduna). All of these breweries are located in the south or central part of Nigeria. I'm sure they use sorghum, the local grain, as the main ingredient, and not expensive imported barley. The beers made with sorghum tended to be a little sweeter than non-Nigerian barley brews.

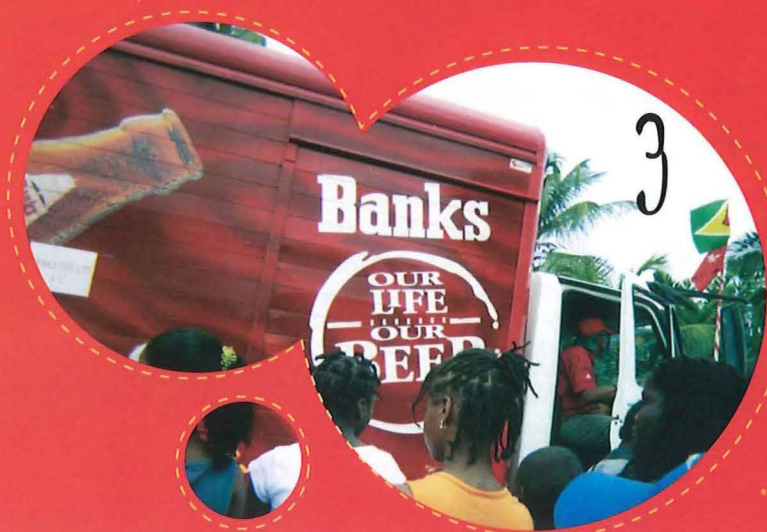
While throwing down a couple of brews, my companions ordered the local appetizer, served in a wooden bowl and containing onions and some spicy, chewy meat with an unusual taste. When I asked what it was, Ken pointed to a pile of discarded goat heads nearby.

I was then told of an African tradition. While drinking beer in Africa you must have two, because your mother has two breasts. True or not, it's a good excuse to have another brew on a hot afternoon in Nigeria.

Guyana, February 2006

Formerly British Guiana, this is a virtually unknown destination on the northeast corner of South America, surrounded by Venezuela and Suriname, who both claim Guyana territory, and also Brazil to the south. Guyana's claim to fame is the mass suicide-murder of more than 900 cultists by American Jim Jones in 1978.

The vast majority of the population are of East Indian or African descent, and live along the Atlantic coast, while the interior is thinly populated by the Amerindians living in villages along the many rivers, the main corridors of transport.



3



Traveling to the western frontier town of Charity, about 80 miles from the capital of Georgetown, can take up to seven hours. First you take a crowded minibus to Parika on the east bank of the Essequibo River. From there you choose either the 45-minute ride in a leaky wooden speedboat crammed with 10 passengers holding a tarp to keep out the rain and spray, or the four-hour car ferry pushed by a tugboat because the ferry engine died. You eventually get to Supernam on the Essequibo west bank. From there it's a 50-kilometer ride to the end of the road to Charity on the Pomeroon River, where you either go

up or down the river by watercraft.

My assignment was to start a tropical fruit winemaking industry from scratch. I worked with juice processors and women's small cottage groups who currently make sauces and condiments. The challenge was to make wine with their tropical fruits without the benefit of winemaking equipment or ingredients. Just trying to find an actual bottle of wine was a challenge itself.

I was in Charity for a week, hosted by two different families. The first lived upriver, a

10-minute boat trip to their 17-acre jungle estate. Imagine living in a tree house with wild animals roaming around. I got used to being awakened by the kiss kiss bird screeching at dawn.

From their dock on the riverbank you can watch the rush hour traffic of kids going to school in rickety boats paddled by their moms, or loads of produce in ancient motorboats. I asked my host if it would be OK to take a swim in the river, and he said it depends if the piranha are hungry or not.

I first worked with the Original Juice Centre, the most advanced of the groups, at the home of Nateram Ramnannan, aka Juiceman. Using existing equipment, Juiceman and his assistants processed guava, passion fruit and cherries with sugar, yeast and water into the primary stage of winemaking. After one week, they transferred the wine into the secondary stage, which should last approximately three months, and the final stage for the finished wine to be bottled and labeled. Juiceman is very excited about becoming the first big winemaker of Guyana.

Guyana reminded me of Belize, a small ex-Brit colony surrounded by a Latino world. Both are one-beer countries. In Belize you drink Belikan lager or stout. In Guyana it's Banks, also the only brewery in the country. While touring their plant I was intrigued by all their other products, such as rum, wine, bread and snacks. Banks was founded 57 years ago and is seen everywhere in the country. Banks beer is a typical lager reminiscent of regional Midwest beer, and is 75-percent of the company's output, made with French malt, German hops and yeast, and Guyana rice, which is 20 percent of the grain bill. The water is from an artesian well, and naturally soft. Banks, being originally British, also produces Shandy, a

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1.7-percent alcohol malt-lemon beverage labeled as champagne and targeted to non-beer drinking women. They also have a Malta, similar to the Nigerian one, which is basically non-alcoholic wort for the Muslim crowd. However, the real treat is Banks Milk Stout, my beer of choice. It's 100-percent barley, slightly roasty, sweet but not cloying at 7.5-percent abv. You can buy any of them for under \$1 a bottle.

While at Banks, I had the opportunity to meet with their winemakers. They produce a 9-percent wine-like beverage in 21 days. It comes in three styles: red, white and cherry brandy, and has virtually no taste. The "wine" consists of 75-percent rice and 25-percent sugar, food colorings, flavor and enzymes. They admit that it's not really wine, but it sells well. They are considering importing grape must to make a more authentic version.

I plan to return in several months to help them bottle and label the first tropical wines in Guyana. Of course, I'll have to reacquaint myself with the milk stout and investigate the rum.

El Salvador, March 2006

Next up was the smallest country in the Western Hemisphere, with a tropical climate, mountains, volcanoes and beaches. The location was Sonsonate, a small city about 60 kilometers from the capital of San Salvador. My mission was to teach a women's cooperative group called Zarahemla how to make dried fruit leather using their local tropical produce. They have mangos, which are found everywhere falling from the trees, as well as pineapple, banana, passion fruit and guava.

For the two weeks that I worked with Zarahemla, my assistant Estrella Chavez,



a 30-year-old native, drove me around, translated for me and accompanied me on most meals. I spent a few evenings with Estrella playing Crazy Eights and drinking Suprema, a 5.3-percent abv beer in a fancy foil-topped green bottle.

El Salvador has four beers from their one brewery, Industrias La Constancia S.A., located in San Salvador. Their beers were quite typical and reminded me of Budweiser products. I tried the Pilsener (4.7-percent), your basic mainstream beer in a longneck brown bottle. It had a slightly grainy taste that I liked. All El

Salvadorian beers are on the light side, as dark beers were tried but not accepted by the locals. They are made with malt, hops, yeast, adjuncts and water. In a tropical climate, they are cheap and refreshing.

After my assignment ended I stayed an extra week to get a sampling of El Salvador's attractions. I first chose El Imposible National Park located in the mountains. I spent three days hiking with my guide, a 20-something female who did not speak any English. I mostly followed her up and down the rugged terrain to mountaintops, rivers and pre-Columbian

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Mayan sites; I even found an ancient mortar on the trail, perhaps 1,000 years old. Since I was the only visitor in the park, I had my personal chef in the restaurant. The only beer available was Regia Extra (4.5-percent) in a can. It was cold, refreshing and cheap.

I ended my excursion with three days on the beach of Costa del Sol, located on the Pacific. I had a great time swimming in the warm surf, hanging out with the locals and eating the largest oysters I have ever seen. The shells must have been six inches in diameter and just three made a tasty meal. We drank Golden Light (4.1-percent abv), which comes in a standard green bottle and also tastes pretty standard.

Kyrgyzstan, July 2006

On an atlas, I located this small country somewhere in Central Asia, west of China. Oh no! Another Muslim no-alcohol country—what's a beer hunter to do? Still, this was a former Soviet Socialist Republic 15 years ago, and the Soviets sure liked their booze. My assignment was to teach local villagers how to dry and process their garlic into powder.

For my first class, we headed to the nearby village of Uchkun, a squalid mud-brick settlement that reminded me of Nigeria, but with greenery. I was directed to a makeshift ladder climbing up to a loft in a

barn. There I saw more garlic than I could imagine. It was about three feet deep in a 30-foot by 30-foot area.

I first showed them how to make solar drying trays of wood and window screening. I then had the villagers de-skin, chop and place the garlic on the trays to dry. We would return two days later when the garlic was dried. I taught them how to make garlic powder using a mortar and pestle. This training was repeated at three other villages while driving around in ancient Russian Ladas, eating lots of bread and watermelon and drinking tea.

At the second session of the classes, I proceeded to make probably the first garlic wine in Kyrgyzstan. This involved cooking up chopped garlic, raisins and sugar, then adding lemon juice and yeast. I emphasized that it was to be for cooking, not for drinking, but it might be a cure for alcoholism.

Fortunately, I discovered that their beer was cheap and available at every corner store. Pivo was sold in half-liter cans and bottles, with the labeling in the Cyrillic alphabet. I tried several different brands and they

mostly tasted like a typical lager. One brand called Baltica seemed to dominate. Interestingly, the beer is marketed numbered one through nine, with nine being the strongest. At a liquor store, I was determined to find a dark beer. I had the clerk hold up all the bottles to the light. Four and six were the only ones of color, with four being a red amber and six my favorite, a dark roasty porter. It became my pivo of choice and at 30 Soms, the price was right. As I wound down my assignment, I accumulated a good collection of brews to share with my beer friends back home.

My next assignment involves working with mushrooms in Tajikistan. I wonder if they have ever fermented them?

Ralph Bucca is a lifetime member of the American Homebrewers Association and a beer/travel writer for the *MidAtlantic Brewing News* for many years.

Photo Captions

1. The author getting ready for his first camel ride with the assistance of the Turaegs from Niger.
2. Sharing a few brews at the King's Paradise Hotel, Katsina Nigeria.
3. Danks truck during the Mashramani National Holiday parade.
4. Pilsener wall sign in El Salvador.
5. Local beer and carton wine.
6. Hanging out at the Hourmys bar in Osh, Kyrgyz Republic.
7. A couple of local beers in Kyrgyzstan.



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One way beer judges check their palates is by using commercial "calibration beers"—classic versions of the style they represent. Zymurgy has assembled a panel of four judges who have attained at least the rank of Master in the Beer Judge Certification Program. Each issue they will 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, pick up a bottle of each of the beverages and judge along with them in our Commercial Calibration.



For this Specialty Grains issue, we sent our judges two beers brewed with non-barley/wheat malt. Both are award-winning beers from opposite ends of the country.

First up is Terrapin Rye Pale Ale from Terrapin Brewing Co. in Athens, Ga. Six months after being released, it won a gold medal at the 2002 Great American Beer Festival for pale ale. The rye gives Rye Pale Ale its signature taste, and the beer is also brewed with five different hop varieties—Amarillo, Cascade, East Kent Goldings, Fuggle and Magnum. Included in the grain bill are two-row pale ale, Munich, Biscuit malt, honey malt and malted rye. The beer has 45 IBUs and is 5.3-percent alcohol by volume.

“Made with five varieties of hops and a generous amount of specialty malts, it offers a complex flavor and aroma that is both aggressive and well balanced—a rare find among beers,” says Terrapin.

Our judges found the balance of rye and hops to be quite complex and interesting, resulting in an imminently drinkable beer.

Next up was Barney Flats Oatmeal Stout from Anderson Valley Brewing Co. in Boonville, Calif. The bottle label comes complete with a short lesson in Boontling, the local Anderson Valley dialect developed in the late 1800s.

This complex stout also won a gold medal at the Great American Beer Festival, in 1990. It is full-bodied and creamy, crafted with pale, caramel and chocolate malted barleys, blended with wheat and rolled oats, and balanced with a generous addition of hops. It is 5.7-percent alcohol by volume.

“With its deep, dark brown-black color, thick, full-bodied, velvety-smooth mouthfeel, mocha character and strong yet subtle hop bite, Barney Flats is one of the thickest, richest, most complex stouts on the market today,” says Anderson Valley’s Web site, which recommends serving it at between 40 and 45° F.

Our judges found Barney Flats Oatmeal Stout to be extremely drinkable, chocolatey and with a “killer flavor profile.”

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 III judge and principal author of the 2004 BJCP Style Guidelines who lives in Beavercreek, Ohio.



ON THE WEB

BJCP Style Guidelines

www.bjcp.org

Anderson Valley Brewing Company

www.avbc.com

Terrapin Brewing Company

www.terrapinbeer.com





Terrapin Rye Pale Ale—Terrapin Brewing Co., Athens, Ga.
BJCP Category: 23 Specialty Beer (American Pale Ale with Rye)

THE JUDGES' SCORES FOR TERRAPIN RYE PALE ALE



Aroma: Complex hop aroma with floral, woody and citrus character. A touch of caramel and toasted malts provide a good backbone for the hops. Rye is perceptible but subtle, adding to the complexity. Clean ale fermentation with some apricot esters. No DMS. No diacetyl. Very inviting aroma. (9/12)

Appearance: Light orange/amber color. Clear but not bright; a bit of chill haze that's OK for an ale. Adequate head and retention. Would expect more head and longer retention given the ingredients. (3/3)

Flavor: Malt sweetness up front with a hint of toasty graininess. Rye is subtle, providing a level of depth and complexity to the malt. High hop bitterness finishes with some hop astringency in aftertaste, but well balanced with the malt. Hop flavor is also complex, focusing on citrus but with earthy and floral notes also. No DMS or diacetyl. Moderate fermentation esters and alcohol, all balanced to result in a quintessential American Pale Ale. (17/20)

Mouthfeel: Medium body; a bit fuller than most American pale ales, likely due to the rye. Smooth mouthfeel initially yielding to significant lingering bitterness and some hop astringency. (4/5)

Overall Impression: An excellent American pale ale. The percentage of rye used seems to be much less than that in a Roggenbier yet it contributes to the overall malt complexity that blends well with the considerable hop complexity and bitterness. This is a beer that one can drink by the pint with pub grub and pizzas but with enough alcohol to justify the designated driver since you will not stop at one. (8/10)

Total Score: (41/50)



Aroma: Orange citrus and piney hop aroma dominates. Rich malt aromas: toasty, grainy and a little spicy give support. Mostly clean fermentation, with light fruity notes in the background. Pine hop aroma becomes more pronounced as the beer warms a bit. (9/12)

Appearance: Golden and clear with rocky persistent off-white foam; a few larger bubbles, but streams of tiny bubbles continually rise from the bottom of the glass. Head creates a lovely Belgian lace. (3/3)

Flavor: Sweet grainy malt character up front with some subdued but definite rye flavor. Supports an assertive orange fruity, piney, spicy, complex hop flavor and pleasant bitterness. Balance is toward the hop character, yet grainy rye flavor and sweetness come through, especially in the finish. Grainy presentation and spicy hop flavor become more pronounced as the beer warms a bit. (16/20)

Mouthfeel: Medium body with medium carbonation. Not quite creamy, but smooth. No alcoholic warmth. No astringency or sticky cloyingness, despite the perceptive sweetness. (4/5)

Overall Impression: Something about this beer makes me want to share it with friends. It lends a homey feeling. It's comfortable. Intriguing in its complexity, and interesting in the way sweet, spicy and grainy malt flavor and piney hop aromas intensify with just a slight rise in temperature. Even with the assertive hop flavor and bitterness, this beer still has a sweet note in the finish that showcases the pleasant malt character. As complex as it is, it is still approachable. Quite balanced, very enjoyable. Something I'd like to have a cooler full of at a picnic by the river. (7/10)

Total Score: (39/50)



Aroma: Spice notes, predominantly black pepper, with citrus and floral notes from American hops. Hops are not as pronounced as in most classic pale ale examples, but that allows some rye character to emerge. There is a slightly grainy, toasted malt in the background. Neutral fermentation character with low esters. (8/12)

Appearance: Light amber color with excellent clarity and head retention. Everything is right on the money. (3/3)

Flavor: Indistinct malt character, similar to an American wheat in that it primarily provides a backbone. Fairly assertive spiciness, again with black pepper notes. More American hops would be welcome. The hop bitterness is substantial—bordering on the IPA level—but not aggressive. The finish is somewhat dry but within bounds for the style. A slight graininess and a touch of acidity linger on the palate. (15/20)

Mouthfeel: Good body and creaminess, likely enhanced by the rye malt proteins. A slight astringency and soapiness coat the tongue after the beer is swallowed, but they offer only a minor distraction. (3/5)

Overall Impression: Very nice beer with an interesting blend of rye malt and hop character. The creamy mouthfeel, hop bitterness and peppery spiciness from the rye work well together and provide a complex flavor profile. The hop nose did not seem that fresh, and more flavor hops would also be welcome. The finish had a slight soapy character, but the beer was still enjoyable. (7/10)

Total Score: (36/50)



Aroma: Medium-high spicy, grainy, grassy nose; hop-forward. The grain/rye character blends well with the hops. Pungent. Light esters—lemony. Otherwise clean. Rough character lingers. (8/12)

Appearance: Pretty golden-amber color. Fairly clear. Medium-size cream-colored head, small frothy bubbles persisted until beer was finished (probably due to the rye). (3/3)

Flavor: Medium-high grassy, earthy, spicy hop flavor with medium-high bitterness. Clean malt backbone provides balance to the bitterness, making the apparent bitterness seem more medium in balance. Rye flavor apparent, giving a grainy, rustic, slightly harsh finish. Hops are more apparent in the finish, which is moderately long but not as crisp as most American pale ales. (16/20)

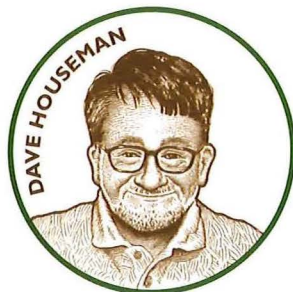
Mouthfeel: Medium body, medium-high carbonation. Mildly creamy with some hop- and grain-derived astringency apparent in the finish. (4/5)

Overall Impression: A complex pale ale—lots of interesting flavors. The rye is noticeable and plays with the hops nicely. There is a grassy, spicy, earthy quality that could come from both rye and hops. Definitely an American pale ale—the hops are nicely showcased. The beer has a moderately full presence, heavier than most pale ales but it does feature the rye character very well. (8/10)

Total Score: (39/50)



THE JUDGES' SCORES FOR BARNEY FLATS OATMEAL STOUT



Aroma: Roasted grains with coffee notes. Some caramel maltiness. No diacetyl. No DMS. Very low fermentation esters. Light alcohol. Moderately high hop aroma (citrus accented), unusual for an oatmeal stout but it works with this American version. Quite clean and very inviting. (9/12)

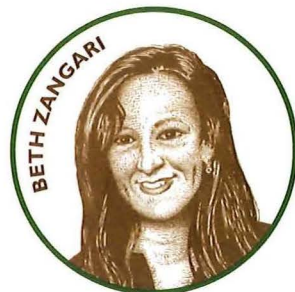
Appearance: Very dark brown to black. Opaque. Thin but lasting head. Well carbonated, OK for the bottled version but would be a bit high if served on tap with the same carbonation. (3/3)

Flavor: Chocolate and caramel malts provide a sweet Starbucks caramel latte character. Rich maltiness enhanced by oats that also provide a grainy nuttiness. Sweetness balances with the medium-high hop bitterness. Medium hop flavor of citrus, earthy and woody notes. Coffee 'n cream aftertaste. Low diacetyl, adds to richness. No DMS. (18/20)

Mouthfeel: Full bodied. Luscious, smooth, creamy mouthfeel with a hint of lingering bitterness and roasted malt and hop astringency in the aftertaste. Slight alcohol warming. Subtle oatmeal is smooth without being silky. Diacetyl and oats contribute to the smooth texture. (4/5)

Overall Impression: Extremely drinkable for a big, full, robust stout. Hops and malts are well balanced so that the sweetness isn't cloying at all. Chocolate and caramel malts rather than roasted barley add to the smoothness and low astringency. This beer lies between a Sweet Stout and a Foreign Extra Stout. Chocolate cheesecake or chocolate mousse would be great desserts to have with this oatmeal stout, or simply enjoy a pint or share a bottle over conversation on a cooler night. (9/10)

Total Score: (43/50)



Aroma: Some diacetyl up front, and a slight sour note that diminishes quickly. Coffee, earthy aromas dominate. Very low grapefruity aroma detected. Chocolate in the background. (8/12)

Appearance: Brown-black and opaque; some ruby highlights if the glass catches the light just right. Rocky, creamy, persistent tan head hangs on to the very end of the glass. (3/3)

Flavor: Roast grain character up front with a French roast coffee flavor, almost a little smoky. Very low diacetyl and slightly curranty fruit add a balancing creamy flavor. Very low citrus hop flavor mid-palate, but the focus is on coffee, some sweet chocolate and a clean finish with a hint of lingering hop bitterness. The balance of this beer is definitely toward the silky, creamy grist presentation. (17/20)

Mouthfeel: Full bodied and silky with moderate carbonation. Low alcoholic warming, but not hot. Finish is roasty and dry with a slight astringency that is short-lived. A very low alcohol warmth sneaks in at the very end. (4/5)

Overall Impression: This beer is something between a horn of zeese (that's "cup of coffee" in Boontling), and hydraulic mocha cake. The silky, creamy oatmeal character dresses the robust roast barley coffee character in a milk chocolate cloak. A little dried black currant accent apparent, though unobtrusive alcohol flavor. The grapefruit hop in the aroma is a Pacific Northwest presentation, separating this example from her British cousins, which have no hop aroma or flavor. This beer has complexity for those who enjoy dissecting beers, and simplicity for those who seek it. It goes equally well with a lox and caper omelet or a piece of chocolate cherry cake for dessert. (8/10)

Total Score: (40/50)



Aroma: Sweet toffee and chocolate come through first, with a restrained roast in the background. Mocha is also a good descriptor. Some fruitiness, particularly apricots and pears, reveal the ale character. Alcohol is present but is fairly well masked. No hop character, which is appropriate for this style. (9/12)

Appearance: Very deep brown, bordering on black yet not quite opaque. Beige head with an interesting mauve hue. Great head retention, and the clarity is excellent. (3/3)

Flavor: Some malty fullness at the forefront, but not quite as silky as some other oatmeal stouts I have tasted. Esters again have a stone fruit character but fade into a fairly roasty finish with bittersweet chocolate. Hop bitterness is moderate to high, more in line with an Irish Stout, as is the fairly dry finish. Some alcohol is evident, but well within my expectations for this style. (16/20)

Mouthfeel: Good carbonation, not as full-bodied as English examples of this style, but still solid. Some astringency is present in the finish, but not excessive, and a little alcoholic warmth is evident. (4/5)

Overall Impression: Very nice beer, and is obviously a fresh sample in great condition. It's a good example of how esters can complement and enhance dark malts. Although I commented that the dry roastiness is a little more "Irish" than the classic examples, I prefer this to overly sweet interpretations of the style. (8/10)

Total Score: (40/50)



Aroma: Moderate grassy, citrusy hops—unusual, but hey, it's from California. Mild roasted/chocolate malt, somewhat grainy. Hops tend to dominate. Light alcohol. Dark dried fruit. Chocolate becomes more prominent as it warms. (8/12)

Appearance: Very dark brown color, opaque. Tall frothy tan head lasted a long time. Tiny bubbles leave a juicy appearance as they settle. (3/3)

Flavor: Initial chocolate/malty sweetness, rich silky smooth palate. Finishes medium-dry with moderate bitterness and medium-low hop flavor. Oatmeal character is light but noticeable. Clean fermentation profile. Restrained roast flavors—mostly dark chocolate but with supporting caramel sweetness. Malt-forward beer but finishes with enough dryness and hops to not be cloying. (17/20)

Mouthfeel: Full body, medium-high carbonation (too much). Very creamy and smooth—nice. Moderately warming. Light astringency from roasted grain. (4/5)

Overall Impression: The hoppy nose is a little unusual but it has a killer flavor profile. Great balance and finish for such a thick, rich beer. Smooth and easy to drink. I'd expect this one to sneak up on you—seems strong. Chocolate flavors are wonderful. A great beer for cool weather. (9/10)

Total Score: (41/50)



Beer Adventures in Argentina

It's week three of four in Patagonia. My wife, Sandra, and I are on a bus having cleared the Andean border that separates Chile from Argentina. The second week of January is shaping up to be the coldest and snowiest on record at home in Colorado. In Patagonia, the summer solstice is warming the blue skies; the glacier-capped Osorno volcano gleams in the distance. Fields of green are harvested. Raspberries and peaches are in season.

In the comfort of a grand bus, I become fixated on an approaching large and lonely cottonwood tree. As we pass I can't help but smile as a weathered wooden billboard begs "Harry Deputade (Harry for Deputy)." Am I in rural America? Yes, though it happens to be South America.

Sandra and I had been talking about exploring Patagonia for years. Our vacation plans quickly turned into a four-week work trip as we quickly discovered that Argentina and Chile offer more than good wine—craft beer brewed by small, local entrepreneurs is emerging everywhere. Beer is my business and I was going to be working late.

Pale ale, porter, stout, barleywine, imperial stout, red and amber ales, blonde ale, German style bock, Scotch ale, fruit beers, gluten-free corn beers, smoked beer, German-style Kölsch, Pilsener, American-style IPA, German-style wheat, dark dunkel wheat, strong ale, Belgian abbey ale, German "helles" and dunkel, honey beer and even a version of "steam" beer were some that we were about to discover. Some were world class, some good to great and others, well, shall I say were "challenging" to the palate.

But this story isn't about the entire journey. It's about our first 10 hours and how it set

the tone for the hundreds of beers we were to experience and the dozens of brewers we met.

Two weeks before our vacation began I had contacted Cerveceros Caseros, a Buenos Aires homebrew club. That proved

South American Brown Ale

All-Grain Recipe

Ingredients

for 5 U.S. gallons (19 liters)

7.0 lb	(3.2 kg) pale malt
12.0 oz	(340 g) crystal malt 40-Lovibond
8.0 oz	(225 g) chocolate malt
4.0 oz	(113 g) Belgian Aromatic or German Melanoiden malt
4.0 oz	(113 g) Belgian Special-B malt
8.0 oz	(225 g) Brazilian Rapadura sugar or dark brown invert sugar
1.0 oz	(28 g) Glacier whole hops 5.9% alpha (6 HBU/165 MBU), 60 minute boiling
0.5 oz	(14 g) UK Kent Golding whole hops 5.7% alpha (2.9 HBU/80 MBU), 30 minute boiling
1.0 oz	(28 g) Argentine Traful hop pellets 6% alpha, 5 minute boiling
0.5 oz	(14 g) Argentine Traful hop pellets, dry hopping
0.25 tsp	(1 g) powdered Irish moss

Your favorite ale yeast

0.75 cup	(175 ml measure) corn sugar (priming bottles) or 0.33 cup (80 ml) corn sugar for kegging
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Target Original Gravity: 1.054 (13.5 B)

Approximate Final Gravity: 1.016 (4 B)

IBUs: 37

Approximate Color: 20 SRM (40 EBC)

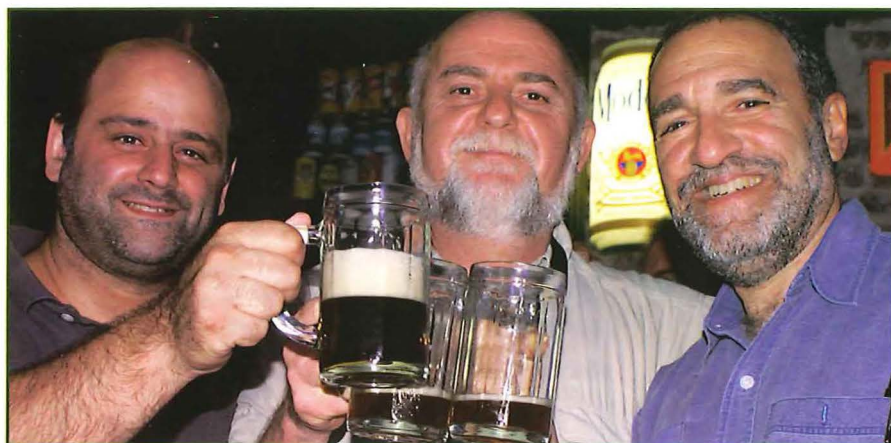
ABV: 5.1%

Directions

A step infusion mash is employed to mash the grains. Add 9 quarts (8.6 l) of 140° F (60° C) water to the crushed grain, stir, stabilize and hold the temperature at 132° F (53° C) for 30 minutes. Add 4.5 quarts (4.3 liters) of boiling water and add heat to bring temperature up to 155° F (68° C) and hold for about 30 minutes. Raise temperature to 167° F (75° C), laut and sparge with 3.5 gallons (13.5 liters) of 170° F (77° C) water. Collect about 5.5 gallons (21 liters) of runoff. Add 60-minute hops, rapadura (or dark invert sugar) and bring to a full and vigorous boil.

The total boil time will be 60 minutes. When 30 minutes remain add the 30-minute hops. When 10 minutes remain add the Irish moss. When five minutes remain add the 5-minute hops. After a total wort boil of 60 minutes turn off the heat and place the pot (with cover on) in a running cold-water bath for 30 minutes. Continue to chill in the immersion or use other methods to chill your wort. Strain and sparge the wort into a sanitized fermenter. Bring the total volume to 5 gallons (19 liters) with additional cold water if necessary. Aerate the wort very well.

Pitch the yeast when temperature of wort is about 70° F (21° C). Ferment at about 70° F (21° C) for about one week or when fermentation shows signs of calm and stopping. Rack from your primary to a secondary and add the hop pellets for dry hopping. If you have the capability "cellar" the beer at about 55° F (12.5° C) for about one week. Prime with sugar and bottle or keg when complete.



South American Brown Ale

Mash/Extract Recipe

Ingredients

for 5 U.S. gallons (19 liters)

6.0 lb	(2.7 kg) very light malt extract syrup or 4.8 lb (2.16 kg) very light dried malt extract
12.0 oz	(340 g) crystal malt 40-Lovibond
8.0 oz	(225 g) chocolate malt
4.0 oz	(113 g) Belgian Aromatic or German Melanoidan malt
4.0 oz	(113 g) Belgian Special-B malt
8.0 oz	(225 g) Brazilian Rapadura sugar or dark brown invert sugar
1.0 oz	(28 g) Glacier whole hops 5.9% alpha (6 HBU/165 MBU), 60 minute boiling
1.0 oz	(28 g) UK Kent Golding whole hops 5.7% alpha (5.8 HBU/160 MBU), 30 minute boiling
1.0 oz	(28 g) Argentine Traful hop pellets 6% alpha, 5 minute boiling
0.5 oz	(14 g) Argentine Traful hop pellets, DRY HOPPING
0.25 tsp	(1 g) powdered Irish moss

Your favorite ale yeast

0.75 cup	(175 ml measure) corn sugar (priming bottles) or 0.33 cup (80 ml) corn sugar for kegging
-----------------	--

Target Original Gravity: 1.054 (13.5 B)

Approximate Final Gravity: 1.016 (4 B)

IBUs: 37

Approximate Color: 20 SRM (40 EBC)

ABV: 5.1%

Directions

Heat 2 quarts (2 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 malt extract, rapadura (or dark invert sugar) and 60 minute hops and bring to a boil. The total boil time will be 60 minutes. When 30 minutes remain add the 30-minute hops. When 10 minutes remain add Irish moss. When 5 minutes remain add the 5-minute hops. After a total wort boil of 60 minutes turn off the heat.

Immerse the covered pot of wort in a cold water bath and let sit for 15-30 minutes or the time it takes to have a couple of homebrews. Strain out and sparge hops and direct the hot wort into a sanitized fermenter to which 2.5 gallons (9.5 liters) 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 and add the hop pellets for dry hopping. If you have the capability "cellar" the beer at about 55° F (12.5° C) for about one week. Prime with sugar and bottle or keg when complete.

to be the beginning of the undoing of our "vacation" turning into an endless four-week quest for craft beer and brewers.

I knew well in advance that the quality light lagers brewed by Quilmes in Argentina and CCU (Cristal) in Chile dominated beer choice. At first we anticipated a bleak landscape when it came to beer flavor. But things ain't always what you make them out to be. Jet-lagged and thirsty, Sandra and I were immersed in beer within hours of arrival.

Our rendezvous with the Buenos Aires Cerveceros Caseros (www.cerveceroscaseros.com.ar) at the Tressen Beer Bar Museum dispelled our thirsty anxiety immediately. Homebrew flowed like the nearby Rio Negro. Foamy Belgian-style saisons, creamy stouts, hoppy pale ales, malty brown ales and exquisitely fine barleywines were among the dozens of astounding homebrews quenching our dehydrated souls. In reflection they were the best set of beers we had on the entire trip. Mauricio Wagner and Gerardo LaPorta, representing the group, bequeathed us a case of homebrew for our onward journey. It didn't take us long to prime the pump.

We immediately realized that this blossoming group of beer enthusiasts was representative of the foundation of an emerging beer culture in South America, not unlike the contribution homebrewers in the U.S. have made to the variety and quality of beer in our own country.

Supplies and ingredients are becoming more readily available throughout South America and it seems that Argentinian homebrewers are leading the way to beer appreciation and beer adventure.



Sandra Papazian (left) and newfound amigos celebrating the merits of great Argentinian homebrew.

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Homebrew club Cerveceros Caseros of Buenos Aires, Argentina at the Tressen Beer Bar Museum.

Here's a brew I call South American Brown Ale, a more quietly hopped version of North American-style brown ales using Argentinian-grown hops called Trafal. It isn't likely you will find Trafal, Cascades, Columbus and other varieties of Argentinian-grown hops (which have different qualities than their northern

grown cousins), but feel free to substitute. And if you are brewing in South America, lucky you.

Charlie Papazian is founder of the American Homebrewers Association and president of the Brewers Association.

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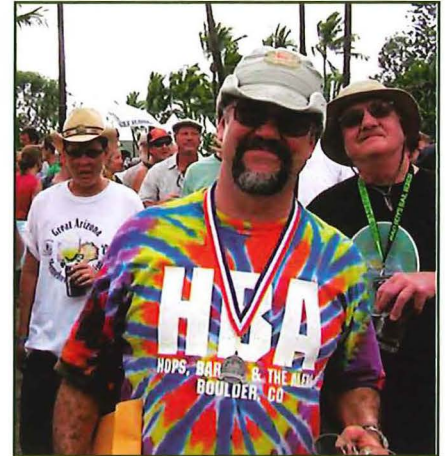
Must be 21 with valid identification to attend. Designated Driver tickets available.

The Great American Beer Festival
is presented by the Brewers Association
www.beertown.org



by Amahl Turczyn Scheppach

Kona Brewers Festival



This issue's Winners Circle takes you to the sunny shores of Hawaii for the 12th annual Kona Brewers Festival. Held on March 10, the Festival hosted more than 30 breweries and 60 beers and meads from Hawaii and the "mainland," with participants coming from as far away as Denver, Colo. and Homer, Alaska. In fact, eight of the craft breweries that participated this year were from Hawaii and 23 were from California, Oregon, Washington, and other states.

Twenty-five local restaurants also participated, serving a variety of tropical and traditional delicacies like sushi, barbecued ribs, kalua pork and mahi-mahi. The event also included a homebrew festival, Hawaiian rock music, hula dancing, a golf tournament, a brewers dinner, and, in keeping with the environmentally conscious spirit of the festival, a "trash fashion show." Proceeds from the festival go to environmental and cultural organizations.

According to organizer and award-winning homebrewer "Rocket" Rod Romanak, the event is put on primarily as a nonprofit fundraiser to support the Bill Healy Foundation, which provides grants for environmental conservation and for children. Several other beneficiaries also receive support from the festival. Since its inception in 1996, the Kona Brewers

Festival has raised over \$225,000 for charities on the Big Island of Hawaii.

For a venue, the Kona Brewers Festival traditionally uses the luau grounds at the King Kamehameha Kona Beach Resort, which is right on the waterfront. It's no wonder the festival's popularity continues to grow by leaps and bounds each year. This year

2,300 attendees turned out to enjoy the festivities, and tickets sold out two weeks in advance. Last year, they sold out just one week in advance. Since the event is primarily focused on the craft brewing scene in Hawaii, there is a real devotion by the

American Wheat Ale

Ingredients for 11.25 gallons (42.6 liters)

- 11.5 lb** (5.22 kg) GW two-row pale malt
- 1.0 lb** (0.45 kg) crystal malt 10 L
- 1.25 lb** (0.57 kg) Vienna malt
- 4.5 lb** (2.04 kg) wheat malt
- 1.5 lb** (0.68 kg) lehua blossom honey (5 min)
- 2.65 oz** (75 g) Liberty pellet hops, 3.2% a.a. 60 min
- 0.50 oz** (14 g) Liberty pellet hops, 3.2% a.a. 20 min
- Wyeast No. 1056 American Ale or WLP001 California Ale yeast
- 2 tabs** Whirlfloc
- Forced CO₂ to carbonate

Original Gravity: 1.049

Final Gravity: 1.007

IBUs: 19

Fermentation: 9 days primary in glass at 66° F (19° C)

Directions

Mash in at 149° F (65° C) and hold for 60 minutes. Mash out at 165° F (74° C) for 10 minutes. Sparge at 168° F (76° C) for 75 minutes. Boil for 55 minutes, then turn off heat and add the honey, and boil for an additional five minutes.



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organizers and sponsors to educate the public on high-quality beer made by small, locally owned brewing companies. So far, this devotion has paid off, both at the professional and amateur level.



AHA SPECIAL EVENTS

July 21

AHA Rally—Left Hand Brewing Co.

Longmont, CO. Contact: Kathryn Porter,
Phone: 888-822-6273 x 123, E-mail:
Kathryn@BrewersAssociation.org,
Web: www.AHAally.org

August 4

AHA Rally—Upland Brewing Co.

Bloomington, IN. Contact: Kathryn Porter,
Phone: 888-822-6273 x 123, E-mail:
Kathryn@BrewersAssociation.org,
Web: www.AHAally.org

September 22

AHA Rally—Elysian Brewing Co. @ Elysian Fields in conjunction with Ram Restaurant and Brewery

Seattle, WA. Contact: Kathryn Porter,
Phone: 888-822-6273 x 123, E-mail:
Kathryn@BrewersAssociation.org,
Web: www.AHAally.org

September 22

AHA Rally—Sebago Brewing Co.

Portland, ME. Contact: Kathryn Porter, Phone:
888-822-6273 x 123, E-mail: kathryn@brew-
ersassociation.org, Web: www.AHAally.org

September 29

AHA Rally—Stone Brewing Co.

Escondido, CA. Contact: Kathryn Porter,
Phone: 888-822-6273 x 123, E-mail:
Kathryn@BrewersAssociation.org,
Web: www.AHAally.org

October 11-13

Great American Beer Festival Denver, CO. Contact: Bradley Latham, Phone: 888-822-6273 x 145, E-mail:

Bradley@BrewersAssociation.org,
Web: www.GABF.org

October 13

GABF Pro-Am Competition Denver, CO. Contact: Janis Gross, Phone: 888-822-6273 x 134, E-mail: Janis@BrewersAssociation.org, Web: www.GABF.org

November 3

AHA Rally—Boulder Beer Co. Boulder, CO. Contact: Kathryn Porter, Phone: 888-822-6273 x 123, E-mail: Kathryn@BrewersAssociation.org, Web: www.AHAally.org

November 3

AHA Rally—Raccoon River Brewing Co. West Des Moines, IA. Contact: Kathryn Porter, Phone: 888-822-6273 x 123, E-mail: Kathryn@BrewersAssociation.org, Web: www.AHAally.org



KUDOS—BEST OF SHOW

AHA /BJCP Sanctioned Competition Program

August 2006

Benton/Franklin County Fair Homebrew
Competition, 19 entries—Perry Lamprey/John
Heitz, Kennewick, WA.

November 2006

Fall Classic, 212 entries—Nathan Zorich, White
Salmon, WA

February 2007

International Mead Fest Home Competition,
242 entries—David Baldwin, Grand Rapids, MI.
Best Florida Beer Championship Pro Brewer
Competition, 56 entries—Jamie Schee, Spanish
Springs, FL.
Homebrew Alley, 268 entries—Von Bair, CT.
2007 Peach State Brew-Off, 372 entries—Greg
Weatherford, Peachtree City, GA.

March 2007

UNYHA 29th Annual/18th Empire State Open,
238 entries—Kate Hargather, Fairport, NY.
Great Arizona Homebrew Competition, 132
entries—Dan Teff, Chandler, AZ.
18th Annual Reggae & Dredhop Competition,
241 entries—Ted Manahan, Ft. Collins, CO.
Best Florida Beer Championships at the Florida
State Fair, 366 entries—Ed Measom, Winter
Park, FL.
12th Annual Kona Brewers Festival Homebrew
Competition, 158 entries—Emmett Kinney,
Milliani, HI.
D.R.A.F.T. Spring Thaw, Club-Only Competition,
29 entries—Joe Harrington, Dayton, OH.
9th Annual Drunk Monk Challenge, 527
entries—David Files, Batavia, IL.
SODZ 4th Annual British Beerfest Competition,
116 entries—Rick Franckhauser, Cincinnati, OH.
Las Vegas Winterfest 2007, 62 entries—Bill Tobler,
Lake Jackson, TX.

Blessing of the Bock 2007, 18 entries—Dale
Wirt, Milwaukee, WI.

Celebrewtion, 74 entries—Jim Langlois,
Sacramento, CA.

Slurp & Burp Open, 327 entries—Ted Hausotter,
Baker City, OR.

Homebrew Fair III, 84 entries—Paul Cervenka,
Seattle, WA.

March Mashness, 108 entries—Roger Krause, St.
Cloud, MN.

Shamrock Open, 441 entries—Chris & Tina Cole,
Columbia, SC.

8th Werthogs Homebrew Competition, 44
entries—Matthew Smolak, Edmonton, AB.

BlueBonnet Brew-Off—21st Annual, 1,100
entries—Jonathan Goudy, Houston, TX.

BOSS Chicago Cup Challenge, 172 entries—Joe
Formanek, Bolingbrook, IL.

10 Annual Eastern Connecticut Homebrew
Competition, 219 entries—District 8 Brewers,
District 8, CT.

March in Montreal, 70 entries—Kevin Tighe, Ajax,
ON.

Hurricane Blowoff, 235 entries—Craig Birkmaier,
Gainesville, FL.

April 2007

Wort Hog Brewers Summer Beer Festival
Competition, 20 entries—Llewellyn Janse van
Rensburg, Johannesburg, South Africa.

2007 South Shore Brewoff, 159 entries—Kevin
Farrell, Medford, MA.

Snow Goose Break-Up Homebrew
Competition, 35 entries—Steve Jayich,
Anchorage, AK.

HAG Baltic Porter Incantation, 25 entries—Scott
Simpson, Newcastle NSW, Australia.



AHA/BJCP SANCTIONED COMPETITION PROGRAM CALENDAR



The Beer Judge Certification Program (BJCP) has two major projects underway: revising the BJCP exam and adding a new Mead and Cider certification. Stay tuned for program changes in the upcoming year, including enhanced Web applications and new member services.

Want to discuss judging, beer styles, competitions and exams? Join the BJCP Members Forum at www.bjcp.org/phpBB2/index.php. We have started an Advanced Judging FAQ section based on the Commercial Calibration session at the AHA National Homebrewers Conference 2006. Get all your judging questions answered!

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

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



June 30

OC Fair Homemade Beer Competition

Costa Mesa, CA. Contact: Kimiko Young, Phone: 714-708-1554, E-mail: kyoung@ocfair.com, Web: www.ocfair.com

June 30

U.P. North Fermentation Authority

Escanaba, MI. Contact: Michael Sattlem, Phone: 906-789-1945, E-mail: msattlem@yahoo.com, Web: www.Herefordandhops.com

July 1

WanCup2007

Sakura-shi, Chiba-ken, Japan. Contact: Koh-ichi Nittoh, Phone: +81-43-461-4931, E-mail: wancup2007@homebrew.gr.jp, Web: www.wancup.org

July 6

Canadian International Beer

Championship Barrie, ON, Canada. Contact: Kirk Sharpley, Phone: 705-792-6814, E-mail: kirk.cba@rogers.com

July 14

E.T. Barnette Homebrew Competition Fox, AK. Contact: Scott Stihler, Phone: 907-474-2138, E-mail: stihlerunits@mosquitobytes.com, Web: www.mosquitobytes.com/Den/Beer/Events/Events.html

July 14

NAH Mountaintop Homebrew

Competition Flagstaff, AZ. Contact: Thomas Vincent, Phone: 928-814-9504, E-mail: thomas_vincent@yahoo.com, Web: www.nazhombrewers.org

July 14

Dominion Cup Richmond, VA. Contact: Graham Cecil, Phone: 804-795-7669, E-mail: g.cecil@comcast.net, Web: www.jrhomebrewers.org

July 14

Indiana State Fair Brewers Cup Indianapolis, IN. Contact: Anita Johnson, Phone: 317-257-9463, E-mail: anita@greatfermentations.com, Web: www.brewerscup.org

July 21

Ohio State Fair Homebrew Competition

Columbus, OH. Contact: Brett Chance, Phone: 614-644-4126, E-mail: b.chance@expo.state.oh.us, Web: ohiostatefair.com

July 23

Montrose County Fair

Montrose, CO. Contact: Andrea Gray, Phone: 970-249-7106, E-mail: andrea Hoover@montrose.net, Web: www.blackcanyonbrewers.com

July 28

10th Annual Mountain Brewer Open

Huntington, WV. Contact: David Zalewski, Phone: 740-886-8828, E-mail: djzalewski@verizon.net, Web: www.hbd.org/gha

August 4

12th Annual Montgomery County Agricultural Fair Homebrew Competition

Gaithersburg, MD. Contact: Bill Ridgely, Phone: 301-762-6523, E-mail: ridgely@burp.org, Web: www.g_a_b_s.tripod.com

August 5

Western Washington Fair Amateur Beer Competition Puyallup, WA. Contact: Grace Nilsson, Phone: 253-845-9791, E-mail: pat@the-fair.com

August 11

Alamo City Cerveza Fest San Antonio, TX. Contact: Jeffrey Glovan, Phone: 210-695-3415, E-mail: jrglovan@yahoo.com, Web: www.groups.yahoo.com/group/SAbeergrout

August 12

Kentucky State Fair Louisville, KY. Contact: Bob Reed, Phone: 502-222-7439, E-mail: tobias@iglou.com, Web: www.kystatefair.org

August 18

Minnesota State Fair Homebrew

Competition St. Paul, MN. Contact: Sean Hewitt, Phone: 651-604-0314, E-mail: morelia1@prodigy.net, Web: www.mnbrewers.com/events/mnfair

August 18

AHA Club-Only Competition Strong Ale

Houston, TX. Contact: Mike Heniff, Phone: 281-489-3762, E-mail: m.heniff@earthlink.net, Web: www.beertown.org/homebrewing/schedule.html

August 18

Beer and Sweat Covington, KY. Contact: Ray Snyder, Phone: 513-515-0799, E-mail: raysnyder@fuse.net, Web: www.bloatarian.org

August 24

Colorado State Fair Homebrew

Competition Pueblo, CO. Contact: Deborah Wallace, Phone: 719-404-2080, E-mail: debbie.wallace@ag.state.co.us, Web: www.coloradostatefair.com

September 8

Santa Cruz County Fair Homebrew

Competition Watsonville, CA. Contact: Mia Bossie, Phone: 831-336-4569, E-mail: bossies@cruzio.com, Web: www.santacruzcounty-fair.com

September 8

AZ Society of Homebrewers 13th Annual

Oktoberfest Tempe, AZ. Contact: Barry Tingleff, Phone: 480-839-3988, E-mail: beer_me2@msn.com, Web: www.azhomebrewers.org

September 8

Malt Madness

Allentown, PA. Contact: Al Hazan, Phone: 570-421-1479, E-mail: hazan@ptd.net, Web: www.lehighvalleyhomebrewers.org

September 15

Schooner Homebrew Championship

Racine, WI. Contact: Rick McNabb, Phone: 262-878-1008, E-mail: yankeehomebrewer@sbcglobal.net, Web: www.theschooner.org

September 22

Commander SAAZ Interplanetary

Homebrew Blastoff Cocoa Beach, FL. Contact: Glenn Exline, Phone: 321-636-6925, E-mail: gexline@saaz.org, Web: www.saaz.org

September 29

Mid South Fair

Memphis, TN. Contact: Jeannie Parrish, Phone: 901-495-8733, E-mail: john.moranville@autozone.com, Web: www.mid-southfair.org

October 6

12th Annual Music City Brew Off

Nashville, TN. Contact: Tom Vista, Phone: 615-207-2952, E-mail: hoggod@hotmail.com, Web: www.musiccity-brewers.com

October 9

AHA Club-Only Competition Bock

Dallas, TX. Contact: Larry Kemp, Phone: 817-595-3511, E-mail: kempbrewing@aim.com, Web: www.beer-town.org/homebrewing/schedule.html

October 20

Pacific Brewers Cup

San Pedro, CA. Contact: Robert Wise, Phone: 714-828-4709, E-mail: wise.robert@epa.gov, Web: www.LBHB.org

October 20

Valhalla: The Meading of Life

Philadelphia, PA. Contact: Suzanne McMurphy, Phone: 215-753-7211, E-mail: theimann@verizon.net, Web: www.valhalla-mead.com

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"The Kona Brewers Festival and the homebrew competition have generated tremendous interest in craft breweries and homebrewing in the state of Hawaii," said Romanak. "Each year, more retail stores and restaurants are offering much more extensive selections of craft brews."

The festival's homebrew competition has also attracted an increasing number of participants over the years. In 1996 there were 30 homebrew competition entries. This year, the Beer Judge Certification Program (BJCP) judges analyzed 158 entries. Romanak said 65 percent of those were from the Big Island, Oahu and Maui, while the remainder came in from Oregon, California, Arizona, Illinois and Texas. They even got two entries from Guam. The most popular categories were American Pale Ale with 20 entries, India Pale Ale with 16 and Porter with 15. However, several exotic recipes included an oak bourbon IPA, a coffee porter with locally grown Kona coffee, and lychee and jaboticaba meads (these are both tropical tree fruits).

Local homebrew clubs the Kona Coast Barley Boyz and the Orchid Alers from Hilo, Hawaii both lent their efforts to making sure the homebrew competition went smoothly under the tutelage of Romanak and assistant organizer Fred Housel.

When asked about his goals for next year's event, Romanak's first response was "a larger venue." He also wants increased promotion and sponsorship, a homebrewing education booth and greater prizes for homebrew competition winners.

Emmett Kinney won Best of Show at this year's Kona Brewers Festival homebrew competition with his American Wheat Ale. Kinney said, "*Zymurgy* is a great magazine and has been a valuable resource that I've learned a lot from. I've always viewed it as a learning tool, and now to possibly share knowledge with the other readers is an unexpected surprise."

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

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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.

Mash Water Calculations

By Steve Holle

Editor's Note: The following discussion presents a step-by-step overview of some important calculations for the advanced homebrewer. The procedures are excerpts from *A Handbook of Basic Brewing Calculations* that have been modified for use by the homebrewer. Many of the scientific principles supporting the calculations that are explained in detail in the book are only summarized in this discussion to focus on applying the calculations to a typical brew.

The usefulness of the equations is illustrated through the brewing of 10 gallons of beer (12 °Plato, 35 IBU) using a typical homebrewing system consisting of a 15-gallon mash/lauter tun and 15-gallon kettle. The steps are presented sequentially so that the reader can understand how the various steps and outcomes relate to each other.

Mash Water Volume

Professional brewers typically determine the amount of mash water based on a ratio of water weight to grain weight ranging from a low of 2 lb water per 1 lb grain to as much as 5 lb water to 1 lb grain. For most non-stirred, floating infusion mashes (i.e. mashes used by most homebrewers), the water-to-grist ratio is typically between 2.0 to 3.0 lb water per lb grain. (Many homebrewers may use the standard 1 qt water per 1 lb grain, which is about 2.1 lb water per 1 lb grain).

Since water is usually measured by volume, we need to convert lb of water to gallons. Since water weighs about 8.32 lb/gal at room temperature, we divide the lb of mash water by 8.32 lb/gal to determine the volume of room temperature

mash water. If we use a water-to-grist ratio of 2.5 to 1 with the 17.4 lb of grain, we determine that we need 5.23 gallons of room temperature water.

$$17.4 \text{ lb of grain} \times (2.5 \text{ lb of water/lb of grain} \div 8.32 \text{ lb/gal}) = 5.23 \text{ gal @ } 68^\circ \text{ F}$$

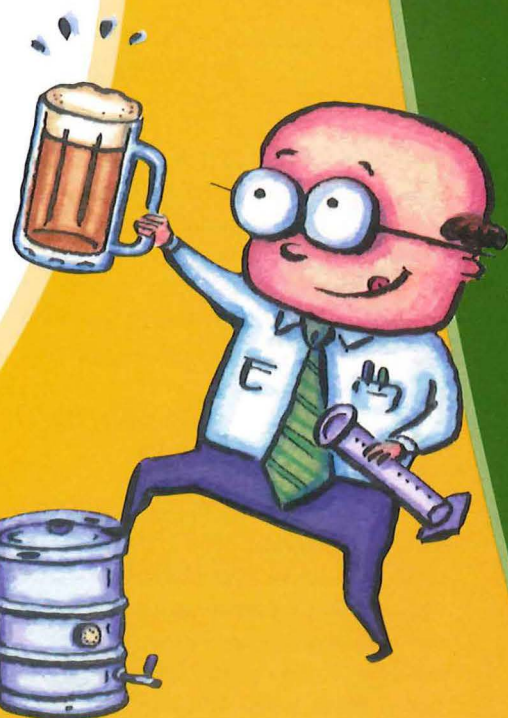
Water expands when heated, so if we add 5.23 gallons of hot water, we will be adding less than 2.5 lb of water per lb of grain. Table 1 shows how the volume of different weights of water increases with increasing temperatures. If we are measuring the volume of hot water, we could adjust for the effect of temperature on volume, although such an adjustment could be ignored since the homebrewer's ability to measure increments of one-tenth of a gallon may be inaccurate anyway. In any case, the volume of water at mash temperature would be about 5.34 gallons of hot water using the information in Table 1.

$$17.4 \text{ lb of grain} \times 0.307 \text{ gal/lb @ } 158^\circ \text{ F} = 5.34 \text{ gal}$$

See Table 1 on next page.

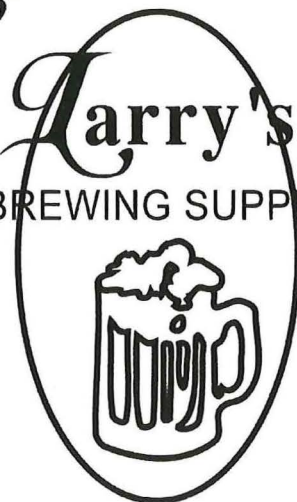
Mash Volume and Minimum Mash Tun Size

It may be necessary to estimate the volume of the mash, especially if brewing a strong beer that requires using as much malt as possible in the mash tun. The mash volume is the sum of the mash water and the volume occupied by wet grain. A rule of thumb indicates that 1 lb of grain occupies a volume of about 0.084 gallon when hydrated. Using this assumption, we can calculate the volume of the



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mash and the minimum mash tun volume to hold the mash:

Mash water volume
 + Grain volume (0.084 gal/lb of malt)
 = Mash volume
 + Excess volume (20-30% excess capacity for mixing and sparging)
 = Minimum mash tun size

If we were to mash 17.4 lb of grain with a water-to-grist ratio of 2.5 to 1, the mash volume (rounded to the nearest quart) would be:

5.25 gal water volume: (17.4 lb x 2.5 lb/gal) ÷ 8.32
 +1.50 gal grain volume: 17.4 lb x 0.084 gal/lb of malt
 = 6.75 gal mash volume
 +2.00 gal 30% excess room: 6.75 gal x 0.30
 8.75 gal minimum mash tun size

The mash volume of 6.75 gallons will fit in an 8.75-gallon mash tun, so the 15-gallon mash tun is more than adequate. Also, we will be adding a second hot water infusion, so the excess capacity in the mash tun is desirable at this point. In actuality, the heated mash water will cause the actual

mash volume to be greater than 6.75 gallons. Because we are using a 30-percent excess capacity factor, we need not be concerned with adjusting the mash volume for thermal expansion.

Sparge Water

After determining the volume of mash water, establishing the volume of sparge water is quite straightforward. We start with the ending cool wort volume and add back all the water lost from evaporation, absorption and transferring. After we have established the total amount of water we need, we subtract the amount of mash water to determine the amount of sparge water.

Ending kettle volume, cool
 + Kettle evaporation (typically 5-15%/h)
 = Starting kettle volume, cool

+ Water absorbed by grain (0.115 gal/lb)
 + Mash water evaporation, equipment losses (2-5%)
 = Total minimum water
 - Mash water
 = Minimum sparge water

Applying this method to our example below, we determine that we need a minimum of 9.25 gallons of sparge water. Since our estimate will not predict perfectly what will happen, it may be prudent to provide more sparge water than actually estimated, e.g. 10 gallons or more.

10.00 gal ending kettle volume, cool
 + 2.00 gal total evaporation of 17%, explained later: [10 gal / (1 - 0.17)] - 10 gal
 = 12.00 gal starting kettle volume, cool
 + 2.00 gal wort absorbed by grain: 17.4 lb x 0.115 gal/lb
 + 0.50 gal water lost by evaporation/equipment: 10 gal x 5%
 = 14.50 gal minimum water for mashing and sparging
 - 5.25 gal mash water
 = 9.25 gal sparge water, minimum

Obviously, if more mash water is used, the amount of sparge water will decrease by a corresponding amount. Also, a thick mash will maximize the volume of beer that can be produced, since more malt will fit in the mash tun, but more sparging will be required. A thick initial mash is helpful when additional hot water infusions will follow (e.g. 2 lb water to 1 lb



TABLE 1. POUNDS OF WATER AND EQUIVALENT VOLUMES AT ROOM, MASH, AND BOILING TEMPERATURES

Lb of water	Gal at 68° F	Gal at 158° F	Gal at 212° F
1.75	0.210	0.215	0.219
2.00	0.240	0.245	0.250
2.25	0.270	0.276	0.281
2.50	0.300	0.307	0.313
2.75	0.331	0.337	0.344
3.00	0.361	0.368	0.375
3.25	0.391	0.399	0.406
3.50	0.421	0.429	0.438
3.75	0.451	0.460	0.469
4.00	0.481	0.491	0.500

grain). When decoction mashing, a thinner mash is beneficial to ease mixing (e.g. 3 lb water to 1 lb grain).

Minimum Kettle Size

The 12.0 gallons of cool wort before boiling determined above is based on volume at room temperature, which will occupy only 96 percent of the boiling wort volume because the wort will expand as its temperature increases. Dividing the room temperature volume by 96 percent will give a close estimate of the boiling volume equal to 12.5 gallons (12.0 / 0.96). Since we need about 20- to 25-percent excess capacity in the brew kettle for boiling, the brew kettle must be at least 15 gallons (12.5 gal x 1.2). So, the wort will just fit in our 15-gallon kettle.

$$(12.0 \text{ gallon cool wort} \div 0.96) \times 1.2 = 15 \text{ gallon kettle volume}$$

In the next For Geeks Only installment of Basic Brewing Calculations we will take a look at water treatment and pH.

Steve Holle is author of *A Handbook of Basic Brewing Calculations*. He is a member of the Brewers Association, Master Brewers Association of the Americas and Beer Judge Certification Program, and is an associate member of the Institute and Guild of Brewing, London. He lives in Kansas City, Mo. ☺

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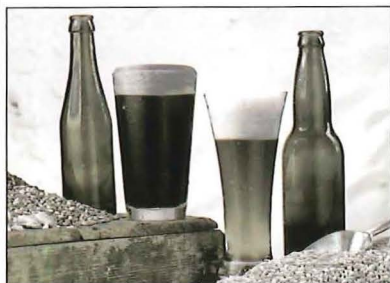
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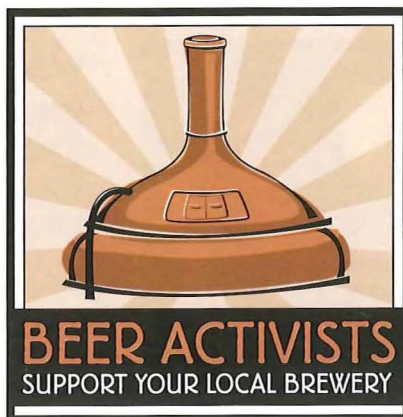
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Texas Microbreweries Get Political

Craft breweries have had a tough time in Texas. Of the 20 microbreweries that opened in this state since 1985, only five are open today. Brewpubs have done even worse. In Houston alone, only one of the 16 brewpubs that opened is brewing today. Quite a bit has been made of this being light beer country and there is some truth to that, but there is also a very large beer enthusiast population. So why have craft breweries suffered?

One significant issue is Texas law. States with the most vibrant craft brewery movements have laws that allow brewpubs to distribute and microbreweries to sell beer directly to the public. Texas prohibits both of these activities. This makes profitability for craft breweries, especially the smallest ones, much more difficult.

So we got together with the other Texas microbreweries to make a run at changing these laws. We fully realized that the odds were against us: we had no experience at this, no deep pockets for political contributions or lobbyists, and the beer wholesaler lobby was strongly opposed to our proposal. What we felt we had on our side was a reasonable proposal and the support of a strong network of beer enthusiasts.

Our strategy was to create a lot of buzz around our proposed bill. We were able to get a large number of political bloggers to write about our endeavor. Interestingly, politicians and reporters on the political beat closely follow blogs. This helped get us on the map at no cost, other than some pizzas for a blogger happy hour. We also sent out press releases that generated quite a bit of TV and newspaper coverage.

Next we contacted all of our state representatives and senators seeking a sponsor for the bill. What we heard was a mantra:



**IF AND WHEN WE DO SUCCEED,
IT WILL BE THE SUPPORT AND
VOICES OF THE HOMEBREW
AND BEER ENTHUSIAST
COMMUNITY THAT WILL
PUT US OVER THE TOP.**

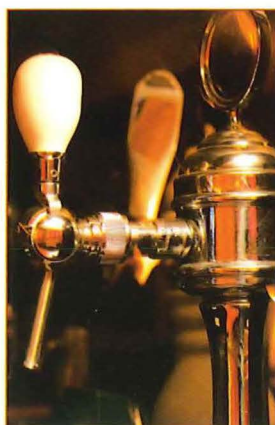
"What you are asking for sounds reasonable. Let us check with the beer wholesaler lobbyist to see what our position is." I was dumbfounded.

We did get a sponsor, Jessica Farrar, our district rep. She and her staff have been supportive and helpful. She filed the bill and it was assigned to the Licensing and Administrative committee. This is when we really started asking for beer enthusiasts' support. We sent out e-mails to our customers and asked the Brewers Association if they would be willing to send an alert to the American Homebrewers Association list. They did and we received a great response. Unfortunately, the chairman of this committee, as I was actually told by one of his staffers, receives a lot of money from beer wholesalers. Our bill is currently languishing in committee.

Are we disappointed if we don't succeed this year? Sure, we'd love to win in our first attempt. But our plan is to make several attempts. Each year if we mount a credible campaign, our chances will get better. And we'll learn more about the process. If and when we do succeed, it will be the support and voices of the homebrew and beer enthusiast community that will put us over the top.

So if you receive a call to arms from your craft brewing community, write a letter, make a phone call. It's easy and it does make a difference, even when it feels like tilting at windmills.

Brock Wagner is founder of Saint Arnold Brewing Company in Houston, Texas.



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